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APA Handbook of Clinical Psychology

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CHAPTER 1

EARLY HISTORY OF CLINICAL PSYCHOLOGY (1896–1949)

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The beginning of professional clinical psychology has often been traced back to August 1949, the date of the American Psychological Association (APA) Conference on Graduate Education in Clinical Psychology held in Boulder, Colorado (Baker & Benjamin, 2005). Of the more than 70 resolutions that emerged from the Boulder conference, the most important one was the unanimous recommendation to train clinical psychologists as both researchers and practitioners. This approach has come to be known as the scientist–practitioner or Boulder model of training (Raimy, 1950).

The Boulder model, however, was far from the first graduate training model for clinical psychology. Since the turn of the 20th century, numerous academic and applied psychologists, as well as psychological organizations, had proposed models guiding the training and education of clinical psychologists (Farreras, 2001, 2005). These early training proposals attempted to define the nature of clinical psychology, created standards for the emerging field, revealed tensions between psychology and psychiatry, and eventually helped to establish the identity and legitimacy of clinical psychology (Baker & Benjamin, 2000).

With the establishment of membership requirements to psychological organizations; codes of ethics; and certification, accreditation, and legislative efforts, the proposals were illustrative of psychologists' attempts to professionalize the budding field of clinical psychology. These proposals also created an image of scientific status that would set clinical psychologists apart from other mental health practitioners (Farreras, 2005).

In the late 1890s and early 1900s, the practicing psychologist was not someone who specialized in psychotherapy but was rather someone who administered mental tests to diagnose and classify sensory and learning disabilities in children (Sokal, 1982). During the first two decades of the 20th century, the terms "applied psychologist," "consulting psychologist," "school psychologist," "psychoclinicist," and "clinical psychologist" were used interchangeably to refer to the psychologist who engaged in mental testing in various settings: schools, juvenile institutes, courts, universities, hospitals, and vocational guidance bureaus (Fagan, 1986; Farreras, 2015b). The different labels resulted from a lack of professional identity stemming from the fact that no single organization represented them, and no standard set of guidelines existed that delineated the training and credentials they needed. Applied psychologists obtained doctorates in general experimental psychology (training them to conduct research), and they would then try to obtain clinical expertise on the job in hospitals, clinics, and institutions for the "intellectually impaired" (Frank, 1986b; Poffenberger, 1938). Lightner Witmer and John Edward Wallace Wallin were the first American psychologists to change that by proposing the first training models in clinical psychology.

EARLY BEGINNINGS (1896–1917): INDIVIDUAL PROPOSALS FOR CLINICAL PSYCHOLOGY

Lightner Witmer

Witmer followed James McKeen Cattell's advice and returned from Wilhelm Wundt's laboratory in Leipzig to lead the University of Pennsylvania

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psychology laboratory in the fall of 1892, at 25 years of age. That same year he became one of the charter members of the APA, founded by G. Stanley Hall (1844–1924), along with psychologists of established status such as William James (1842–1910) and his own mentor, Cattell (Camfield, 1973).

Hall had originated the child study movement in the 1880s that had led to a variety of social reforms aimed at children. It is within this context that Witmer first offered a child psychology seminar during the 1894–1895 academic year. In July 1896, he taught the first clinical psychology course (McReynolds, 1987).

The clinical training at that time consisted of examining children as well as courses in child psychology. The examinations occurred in Witmer's Psychological Clinic, established in 1896 as the first psychological clinic in the country. There, Witmer applied scientific psychology to practical problems in therapeutics and education. Witmer's Psychological Clinic became the model that other university clinics followed throughout the country at a time when no formal clinical doctoral programs existed (Moore, 1944).

In March 1907, Witmer published the first journal in clinical psychology, *The Psychological Clinic*, and the first article introduced the new profession of clinical psychology. Independent of medicine and education, this new profession would be academically and scientifically based, and would require doctoral-level training in the "prevention, diagnosis, and treatment of mental and behavioral deviations" (McReynolds, 1997, pp. 129–130; Witmer, 1907a).

Witmer made no distinction between applied and basic science. He believed any course of training should be tailored to those seeking its practical application as well as those seeking to engage in research (Witmer, 1907b, 1911). In 1907, he proposed a 13-course sequence of training for graduate education in clinical psychology. Five practical courses centered around child development, and the remaining eight centered around the science of psychology and conducting research while working in applied settings (Witmer, 1907b).

John Edward Wallace Wallin

Wallin was born on January 21, 1876, on a farm in Page County, Iowa (Farreras, 2015b). He earned his Bachelor of Arts degree from Augusta College in Illinois in 1897 and his PhD degree under George Trumbull Ladd at Yale University in 1901 (Wallin, 1955). Having visited Witmer's Clinic, Wallin followed up on his pioneering work by strongly advocating for more training for clinical psychologists. Like Witmer, Wallin believed clinical psychologists should be both scientists and practitioners.

Accordingly, he published an article in 1911 in which he posited three main criteria that a successful clinician should meet: proper temperament, acumen, and experience (Wallin, 1911, 1914). Except for the last requirement, it is clear that the first two—character and acumen—would be hard to assess and even to teach. As Wallin himself admitted, the only adequate training available at that time consisted of an apprenticeship with one of the dozen or so existing clinicians (Wallin, 1911, 1961b). As a result, he modified his criteria repeatedly throughout the mid-to-late 1910s to reflect more academic background and practical experience than personal qualities.

Wallin's focus on proper training for clinicians was crucial at the time. The compulsory schooling laws of the early 1900s resulted in the widespread use of testing to segregate children for either special education or institutionalization. Immigrants arriving at Ellis Island were given tests to identify the feebleminded, who were then sent back to Europe. World War I also provided an opportunity for extensive occupational and intelligence testing of recruits. As a result, the predominant occupation for clinicians in the early 20th century was that of mental tester (Fagan, 1986). Three quarters of those administering mental tests at schools, institutions, and courts, however, were teachers and principals without a college degree or physicians with no psychological training. Most of them had simply taken a 6-week-long course on test administration (Wallin, 1914, 1955).

Wallin became the central figure in elucidating the training and expertise of legitimate clinicians as distinguished from the amateur *Binet testers* (after the Binet–Simon Intelligence Test; Binet & Simon, 1905; Wallin, 1914). In Wallin's view, although the Binet testers may have been qualified to administer tests, they were not qualified to diagnose and treat as a result of the tests' findings (Wallin, 1913b, 1919b).

The Binet testers' lack of qualifications brought disrepute to the budding field of clinical psychology in the eyes of academic psychologists as well as of psychiatrists, who already viewed the rapid development of psychological clinics throughout the country as an invasion of their domain. Wallin could sympathize with the psychiatrists' perception of clinicians as competitors, but he believed clinical psychologists' tasks were complementary to those of physicians. He shared Witmer's biopsychosocial view of mental illness, and he welcomed physicians' input on medical matters (Wallin, 1919b). Although Wallin encouraged interspecialty cooperation, he nonetheless resented the medical profession's monopoly of the field and the condescension that psychiatrists exhibited toward clinicians without a medical degree. As a result, Wallin pushed for higher standards of training that would convince both psychiatrists and Binet testers of psychologists' scientific status (Wallin, 1955, 1960).

Wallin drafted a resolution that the APA adopted in 1915 whereby the APA "discourages the use of mental tests for practical psychological diagnosis by individuals unqualified for this work" (Ogden, 1916, p. 49). The resolution was not well received by the medical community, as clinicians and Binet testers had always worked in subordinate roles to physicians (Cornell, 1917; Wallin, 1919b). William Burgess Cornell, then the medical director of the New York City Children's Hospital and School, published an article in the *New York State Journal of Medicine* denouncing psychologists' lack of training and denouncing the 1915 resolution (Cornell, 1917).

Despite Cornell's objections, laws enacted in Illinois, California, Kansas, and Oregon between 1915 and 1917 began legitimizing clinicians as providing "expert testimony" with regard to the institutionalization of "feeble-minded" individuals (Farreras, 2014; Reisman, 1991). The medical profession again reacted immediately. The New York Psychiatrical Society (1917) published an official report in the leading medical and psychological journals, laudatory of psychologists' application of psychological knowledge to everyday life but denouncing their attempts to diagnose, treat, and institutionalize without proper medical supervision.

AMERICAN ASSOCIATION OF CLINICAL PSYCHOLOGISTS (1917–1919)

Wallin's resolution (Ogden, 1916) represented APA's first attempt at regulating psychological practice, but it was not enforceable, and APA was not equipped to keep out unqualified practitioners (Fernberger, 1932). Between 1906 and 1916, APA tried to restrict its membership to those with academic degrees who published research (Fernberger, 1932). This effectively ruled out philosophers and educators from membership, and it also raised the standards of membership so that amateur Binet testers could not become members (Napoli, 1981). As an organization, however, APA was not vigorously addressing how to improve clinicians' low professional status.

The founding of the *Journal of Applied Psychology* was an expression of clinical psychologists' need for an outlet. Its first volume was published in March 1917 and was edited by G. Stanley Hall, John Wallace Baird, and L. R. Geissler, who privately financed the journal until it became self-supporting (Hall, Baird, & Geissler, 1917). Its purpose was to highlight the work of applied psychologists in various fields.

Several practicing psychologists also gathered at the 1916 APA meeting to discuss establishing an association that would better represent clinical interests (Wallin, 1938, 1960, 1961a). As a result, the first professional organization to represent clinical psychologists, the American Association of Clinical Psychologists (AACP), was founded at the subsequent APA meeting in 1917, with Wallin as chair (Shields, 1975; J. P. Symonds, 1937a; Wallin, 1955). In contrast to the APA by-laws that stressed advancing psychology as a science, the AACP focused on the application of psychology as a science and on elevating the standards of those engaged in clinical work (Routh, 1994; Wallin, 1960). Forty-six psychologists joined the association; all of them had PhD degrees in psychology and were actively engaged in clinical work ("Notes," 1918; Routh, 1994; P. M. Symonds, 1940).

The first symposium on clinical psychology as an applied science, scheduled to be delivered at the 1918 APA meeting, was instead published as three articles in the March 1919 volume of the *Journal* *of Applied Psychology*. The three articles were by Arnold Gesell (from the Connecticut State Board of Education), Henry Goddard (from the Bureau of Juvenile Research in Columbus, Ohio), and Wallin (at the Psycho-Educational Clinic and Special Schools in St. Louis, Missouri). Gesell restricted his article to the definition of clinical psychology, its relationship to the medical field and amateur Binet testers, and how it differed from psychotechnology (Gesell, Goddard, & Wallin, 1919).

Goddard's (1919) article pointed out that whether clinical psychology was defined as the *application* of psychology or the *practice* of psychology, it would still divide the membership of the existing APA. Goddard opposed creating a separate organization from the APA and instead advocated for a new division within the APA to ward off "innumerable charlatans practicing under the name of psychologists" (p. 84).

Wallin had the most to say. He believed clinical psychologists required training above what was typically obtained through the PhD degree in experimental psychology, which prepared individuals for careers in research and teaching. He had in mind the training proposal he had published earlier (Wallin, 1913a) and believed that an association like the AACP, requiring high membership and training standards, would be the avenue toward professional recognition (Wallin, 1919a).

Many APA members strongly opposed the establishment of the AACP, viewing it as a competing faction. Conflict or duplication of activities between the AACP and the APA would have also not been desirable. The APA section advocates eventually won; the AACP dissolved in December 1919 and became the Clinical Section of the APA (Gesell et al., 1919; Wallin, 1938). Membership to the Clinical Section required a PhD degree in psychology and published (or near-publication) research contributing to the mental testing or clinical psychology literature (Wallin, 1927).

These high standards in practicing psychologists' first professionalization attempts did not appease the medical field. Psychiatrists had recently recovered from their own battles for status with another specialty in the medical field: neurology. Although psychiatrists in the mid-to-late 1800s were associated with practice in institutional settings such as hospitals, improvements in psychiatric theory and practice led to a shift from such institutions to community settings around the turn of the 20th century. In the beginning, they appreciated the skills of other mental health providers who had more experience working in the community and who were willing to bring their skills to the mental health team. However, as other professionals began to organize and expect autonomy and authority, tensions rose (Grob, 1983, 1991).

The New York Psychiatrical Society did not prove to be the only organization upset over the purported overstepped boundaries of the clinical psychologist. The National Committee for Mental Hygiene (NCMH) was also medically dominated, and psychologists were viewed as mere technicians. Clifford W. Beers had founded the NCMH in 1909, a year after the success of his autobiography *The Mind That Found Itself* (Beers, 1908). Mental illness prevention and asylum care were considered to belong within the medical realm, so even though individuals with varied backgrounds joined the mental hygiene movement, physicians and psychiatrists were the ones leading it (Napoli, 1981).

For the first decade of its existence, the NCMH established psychopathic wards and outpatient clinics in hospitals, and it surveyed the country's mental health facilities (Komora, 1928). A bias was soon apparent, however, in the lack of representation and employment of clinical psychologists in these various settings (Franz, 1917). As the clinics expanded from preventing delinquency to preventing home or school maladjustment, they began overlapping with psychological clinics run by psychologists, not physicians (Franz, 1917; Wallin, 1955).

Psychiatrists did not intend to prevent psychologists from engaging in applied work; the number of cases available so overwhelmed the small number of psychiatrists that they more than welcomed practitioners in allied fields, so long as these practitioners worked under the psychiatrists' supervision. In contrast to Witmer's team approach, however, in which the psychologist was the leader of a trio containing a psychologist, a psychiatrist/physician, and a social worker, the NCMH team approach expected and proclaimed that the psychologist would administer tests, the social workers would take case histories, and only the psychiatrist would determine and provide the treatment (Dickinson, 1933; Routh, 1994). The tensions between psychiatry and psychology continued throughout the first two decades of the 20th century, but they did not prevent psychologists from continuing to aim for higher professional standards and doctoral training.

GEISSLER'S AND HOLLINGWORTH'S TRAINING PROPOSALS

Following in Witmer's and Wallin's footsteps, a third proposal for training emerged in 1918 from L. R. Geissler at Clark University, one of the founders of the *Journal of Applied Psychology*. Geissler (1918) called for uniform training for clinical psychologists at the undergraduate level. More than half a dozen psychologists responded in writing to Geissler's proposal, many taking issue with the lack of emphasis on the need for practical experience in applied settings, doubting the practicality of the suggested courses, and expressing concerns about the lack of state legislation and license issuance (Hall, Baird, & Geissler, 1918).

As one of the founding members of the AACP, Leta Hollingworth (1886–1939) also issued a response and recommended standardizing graduate, not undergraduate, study. Because the academic PhD degree did not ensure competency in the specific areas of clinical psychology, Hollingworth (1918) suggested conferring to doctorates a diploma or certificate indicating one's area of specialty (e.g., diploma in clinical psychology) as opposed to Geissler's blanket denomination consulting psychologist. She also disapproved of labeling those with Bachelor of Arts and Master of Arts degrees as psychologists, as that would create an influx of job seekers that would not improve the status of the field (Hall et al., 1918). Hollingworth was the first to propose the Doctor of Psychology (PsyD) degree, which would take 7 years: 4 years of college, 2 years of graduate work, and a 1-year long internship (instead of research). Although academic psychologists would probably find the matter of certification unimportant, the doctoral degree was of paramount importance to the progress of clinical psychology. The intention was to encourage the public to seek services from those holding the title of "doctor" as well as to provide a comparable level of training between psychologists and psychiatrists. This first proposal for a PsyD degree was neither discussed nor developed at the time, however.

THE APA CLINICAL SECTION (1919–1937)

As a section of the academic parent organization, the Clinical Section of the APA was successful in presenting scientific papers at the annual conferences but not at achieving the goals it had set out to accomplish. Far from enjoying the legal and social status of psychiatrists, clinical psychologists watched as quacks and charlatans rose to prominence through self-help courses and mail advertisements (Burnham, 1987). Lacking state licensure, clinical psychologists attempted to self-impose uniform high standards that would distinguish real psychologists from fraudulent ones through certification (Napoli, 1981).

Certification, however, required a consensus over the criteria that would be used regarding training and experience, which was lacking at the time. Because 84% of the APA members in 1917 held the doctoral degree, it is not surprising that they believed that such a degree should be the minimum requirement for certification (Cattell, 1917). Requiring the doctorate, however, would rule out hundreds of individuals already engaged in psychological work—a move that could either cost them their jobs or their job titles.

The APA had independently appointed a Committee on Qualifications for Psychological Examiners and other Psychological Experts in 1917, chaired by Major Melvin E. Haggerty, that had submitted a report in 1918 (Fernberger, 1932; Gesell et al., 1919). With no way to enforce the resolution of the report, however, the committee was discharged in 1919, and a Committee of Five was appointed, chaired by Bird T. Baldwin, to determine how best to certify psychologists (Langfeld, 1920; Sokal, 1982).

The Committee of Five's first report in 1920 favored certification and recommended the establishment of a Standing Committee on

Certification of Consulting Psychologists (SCCCP) to issue certificates (Fernberger, 1932; Sokal, 1982). In 1921, the SCCCP, chaired by Frederic Lyman Wells, recommended that the APA approve a new section—the Section of Consulting Psychologists—for members of the Clinical Section to whom certificates were to be issued (Fernberger, 1932). Such certificates required that the members be APA Members, have a PhD degree, and focus on mental testing as their field of expertise (Boring, 1923; "Notes and News," 1922).

In an article published in the *Journal of Applied Psychology*, Edgar A. Doll (1889–1968), then a psychologist at the New Jersey State Department Institutions and Agencies, questioned requiring a doctoral degree "as a *sine qua non* in the 'certification' of a clinical psychologist" (Doll, 1920, p. 88). Although it provided general training, which was desirable, it did not guarantee clinical ability, and it did not provide the necessary technical ability. Doll believed clinical experience could only be obtained through an internship, not in the classroom, and thus could be obtained independently of the degree. As a result, he advocated for special certification rather than requiring the PhD degree, allowing psychologists to prove their ability and expertise in clinical psychology. His recommendations were not pursued.

With only 25 certificates issued between 1922 and 1926, the APA's certification plan did not bring about the benefits that the Clinical Section hoped for (Anderson, 1924, 1925; Boring, 1923; Fernberger, 1927). Doubts emerged with regard to whether the APA was the proper entity to monitor and control professional standards and behavior, and the SCCCP thus suggested discontinuing the practice in 1927 (Fernberger, 1932; Sokal, 1982).

Extensive discussion over this drastic move and several attempts to save certification ensued, but to no avail. Academic psychologists, tolerant but not supportive of actions toward clinical professionalization, clearly still held the reins of the APA. The high standards for training and experience required for certification, and the lack of need by such highly qualified psychologists to be certified in the first place, led to the APA's failure to control professional psychologists through certification. Ironically, these well-trained psychologists were not the ones who needed the certification; it was the amateur Binet testers whom the APA could not control, as they did not qualify for APA membership (Fernberger, 1932; Napoli, 1981).

Around this time, the Associate grade of membership was approved by the APA in 1924 (Anderson, 1924, 1925). In contrast to the usual tightening of membership requirements, the need to expand the APA membership suddenly emerged for two reasons. First, numerous doctoral students were emerging from graduate programs and were not being represented by the APA. APA membership until then had required publications beyond the dissertation, but some were engaged in psychological work that did not involve research. The lower Associate grade of membership would now represent them (Anderson, 1924, 1925). Second, with the start of the new *Psychological Abstracts*, and the purchase of the *Psychological Review* publications, the APA needed to refill its treasury; lowering the scholarly requirements of membership to include Associates would bring in dues that would accomplish this goal (Anderson, 1925).

Practicing psychologists were aware of the financial benefit they provided to the APA but nonetheless appreciated now being able to join a national association. Associate membership did not carry much voice or power, however, as Associates were not allowed to vote or hold office in APA, even though the number of APA Associates surpassed that of APA Members within 4 years (Napoli, 1981).

The lower standards for the Associate membership led to an increase in standards for Members. A 1927 by-law amendment required publications beyond the dissertation to qualify for Member, and a 1928 amendment stated that no one could be a Member or Associate of the APA's Clinical Section without first being a Member or Associate of the APA (Fernberger, 1927, 1929; Miner, 1932). The result of both of these amendments was the exclusion of many practicing psychologists who did not conduct research.

LOYAL CRANE'S PROPOSAL FOR TRAINING

The training and qualifications of practicing psychologists remained an important issue throughout the 1920s. In December 1925, the *Journal of Abnormal and Social Psychology* published “A Plea for the Training of Psychologists,” in which Loyal Crane (1925) bemoaned the lack of social and professional recognition, the lack of earning power enjoyed by consulting psychologists, as well as the medical profession’s condescension of and the lay public’s negative image of psychologists. He attributed this state of affairs to the lack of a social and legal definition of what a psychologist was, emphasizing how even the possession of a PhD degree was no guarantee of the competence of a clinical psychologist.

To clarify and improve the psychologist’s status, Crane suggested a 4-year postgraduate course of study that would lead to a PsyD degree. This represented the second plea—after Hollingworth’s (1918) initial plea—for a separate doctoral degree for practicing or clinical psychologists. Crane’s proposal also fell on deaf ears. (For a description of the development of the PsyD degree, see Peterson, 1992; see also Volume 5, Chapter 4, this handbook.)

THE GREAT DEPRESSION AND ITS EFFECTS

Psychology had aided the World War I war effort by screening for occupational skills and testing the intelligence of new recruits. Differences in status were evident, with test developers and researchers enjoying higher status, whereas lower status was accorded to the test administrators. Professional psychology boomed following World War I in the form of intelligence testing and child welfare research. In contrast to other helping professions that started in the market place, psychology had its roots in the ivory tower of universities, wherein the focus was on academics (Furumoto, 1987; Tyron, 1963).

A deep division between academic and professional psychology existed in the 1920s after World War I. Only one fifth of clinical psychologists belonged to the APA (Furumoto, 1987). Because women had been hardly involved in the war effort, they were unable to benefit from the new-found contacts established then. With increased competition for scarce academic positions, women turned toward the more bountiful—but lower status—applied jobs outside of academia: as mental testers, school psychologists, social workers, and counselors (Furumoto, 1987). Professional psychology was female-dominated, whereas academic psychology remained male-dominated. During the first half of the century, diversity issues focused on women and Jewish psychologists. Ethnic minority psychologists (e.g., African American, Hispanic) only reached sufficient numbers to affect discourse and practice in the 1960s.

Throughout the 1920s and the Great Depression that followed the stock market crash of 1929, American psychology witnessed an expansion as individuals entered the field believing the academic world would be immune to the economic consequences. As a result, there was an increase in doctorates and masters in psychology that led to an overcrowding of trained personnel. By 1930, there were twice as many PhDs as there had been in 1920. One of the repercussions of such overcrowding was academic unemployment that led budding psychologists to seek applied positions (Diamond, 1935). While the APA membership had increased five-fold between the wars, the number of applied jobs had increased 30-fold (Furumoto, 1987).

In 1931, the APA Clinical Section appointed a Committee on Standards of Training for Clinical Psychologists, chaired by Andrew W. Brown from the Institute for Juvenile Research in Chicago. The committee surveyed 800 psychologists engaged in clinical work and published detailed information about the gender and educational distribution of clinicians involved in clinical work, research, and personnel work, as well as of those working in psychological clinics at schools or universities nationwide (APA Clinical Section Committee, 1935a, 1935b; Town, Merrill, & Brown, 1933).

Although the APA did not explicitly interest itself in matters pertaining to clinical psychologists, rising academic unemployment did force APA to study the employment scene for psychologists. In 1933, a Committee on Standard Requirements for the PhD in Psychology, headed by Walter Hunter from Clark University, was established to survey the situation (Paterson, 1933). In line with the eugenic sentiment prevalent up to the 1920s, the Committee published two reports in the *Psychological Bulletin* on the standards for the PhD degree and on favoring restricting the production of PhD graduates as a means to curb unemployment (Boring et al., 1934; Poffenberger et al., 1933).

There were other attempts to address the existing large unemployment rates. The journal *Psychological Exchange* was published by two APA Associate Members in an effort to broaden the scope of psychology to include applied problems that were of interest at the time (Powell, 1932). Furthermore, the Psychologists' League, an organization of left-wing psychologists, was created in 1935 (and existed until 1941) as a direct consequence of the Depression and widespread unemployment. The Psychologists' League sought to employ thousands of underutilized psychologists—many of whom only had Master of Arts degrees and were female and/or Jewish and who dominated the field of applied psychology in the 1930s—through the Works Progress Administration, placing them in educational, vocational, health care, and legal facilities (Finch & Odoroff, 1939, 1941; Pickren & Dewsbury, 2002; Psychologists' League, n.d., 1937).

THE ASSOCIATION OF CONSULTING PSYCHOLOGISTS (ACP; 1930–1937)

The creation of the APA Clinical Section had been the first hopeful indication that clinical psychologists would have a voice in the academically dominated APA. The membership requirements for the Clinical Section included a PhD degree in psychology and published research in clinical psychology (Wallin, 1927). The exclusion of clinical practitioners whose positions did not require such research, and the certification fiasco of the 1920s, led to increased dissatisfaction with the Clinical Section and its lack of representation of clinical interests (Routh, 1994). The chasm between academic and clinical psychologists was growing, and dissatisfied practitioners were again looking elsewhere for representation (Nawas, 1972).

David Mitchell, a graduate of Witmer, founded the first state psychological association, the New York State Association of Consulting Psychologists (NYSACP), in 1921. His NYSACP was to become the strongest of about a dozen state associations active during the 1920s and 1930s. Mitchell, considered to be one of the first psychologists in private practice and one of the founding members of the earlier 1917 AACP, had established the NYSACP to continue to promote high professional standards among consulting psychologists (McCarthy, 1956; Wallin, 1960).

The NYSACP began with 31 active members (McCarthy, 1956). Throughout the 1920s, psychologists and physicians in the state of New York were listed as certified examiners of "mental defect," and Mitchell was involved in efforts to legislate psychologists' training and qualifications (McCarthy, 1956; Wallin, 1927). The first school psychologists in New York City were NYSACP psychologists who examined more than 1,000 children in New York City before being assigned to a public school (McCarthy, 1956).

By 1930, the growth in interest and membership led the NYSACP to reorganize as the ACP, with Douglas Fryer from New York University as its first president (McCarthy, 1956; J. P. Symonds, 1937b). The Association of *Clinical* Psychologists had actually been the association members' preferred name, but it was believed to have too strong a medical connotation as well as to be too exclusive of the interests of psychologists in the areas of industry and marketing (Poffenberger, 1938). After a long debate, the term *consulting psychologist* was chosen instead to represent the psychologist who "was qualified to engage in independent practice, whether the nature of the practice be clinical, industrial, educational, or some combination of these" (Routh, 1994, p. 28).

The ACP's broadened purpose now included training standards, membership, licensure and certification, training standards, ethics, and public relations (McCarthy, 1956). In December of 1932, it published an undergraduate training proposal that consisted of courses in psychology and the natural sciences, and a graduate training proposal that consisted of 15 required and supplementary courses in psychology (ACP, 1932).

The ACP's membership was restricted in two ways: by geography and academic preparation. The ACP limited its membership area to within 100 miles of New York City. There were two classes of membership: Members and Associates. Members had a minimum 2 years of graduate study in psychology and 2 years of experience. Associates had at least 1 year of graduate study and 1 year of experience (McCarthy, 1956).

These membership requirements soon changed. With the stock market crash of 1929, psychologists who had hoped to ride out the economic consequences in academia now entered the applied field, leading to an overcrowding of trained personnel (Diamond, 1935). The ACP tightened its membership requirements by requiring a PhD degree and 2 years of experience for Members, and a master's degree and 1 year of experience for Associates (McCarthy, 1956). For anyone who wanted to be considered a psychologist, the ACP now required a minimum of a master's degree. Despite the tightening of membership requirements, the 1934–1935 *Yearbook* included 234 members (Brotemarkle & Kinder, 1937).

To establish the ACP's legitimacy and trustworthiness, the ACP also published a Code of Professional Ethics under the chairmanship of Warren Coxe (1933). The ACP's primary mission was to promote human welfare, and, in contrast to charlatans, ACP psychologists would guarantee their services to the public (Napoli, 1981). They were also expected to warn the public of any malpractices, to protect client confidentiality, to determine fees on a sliding scale, not to criticize colleagues' services publicly, and not to accept or provide commissions (Farreras, 2015a). Because there was no way to enforce the code beyond the ACP membership, however, the ACP began seeking to expand its base (Napoli, 1981).

THE AMERICAN ASSOCIATION OF APPLIED PSYCHOLOGISTS (AAAP; 1937–1945)

The 1930s were viewed as the dawn of a golden age in applied psychology (McCarthy, 1956). Because the APA resisted pursuing applied matters, such as certification and legislation, applied psychologists began looking toward a national organization that would legitimize their profession and create and enforce high standards (Farreras, 2015a). In 1936, the ACP invited representatives from 14 regional and state organizations to attend the 1936 APA meeting so as to discuss the creation of a national organization (Farreras, 2015a).

The AAAP was formally established on August 31, 1937, with Fryer as its first President (Fryer, 1937; National Committee for Affiliation of Applied and Professional Psychology, 1937). Of the 135 members of the APA Clinical Section, 70% voted to disband as a section and joined the AAAP on September 1st, believing the AAAP would better meet their professional needs (Greene, 1937; "News Notes," 1937). The day after, the ACP also voted to disband in favor of the AAAP (Napoli, 1981), bequeathing *The Consulting Psychologist* to the AAAP, which began publishing the journal in January of 1937 under the new name, the *Journal of Consulting Psychology* (Cattell, 1937). In 1968, this journal became today's *Journal of Consulting and Clinical Psychology*. Other regional organizations also disbanded to join the AAAP.

The AAAP consisted of four semiautonomous sections—Clinical, Consulting, Educational, and Business and Industrial Psychology—and was concerned with the application of psychology as a science, ensuring professional competence and determining professional standards in clinical and other applied areas of psychology (Wallin, 1960). Toward this goal, the AAAP imposed rigid membership requirements. Agreeing on what the standards for membership would be, however, had been a thorny issue, with the requirement of a PhD degree for membership hotly debated.

The first 1937 proposal for membership suggested two membership levels: Fellow and Associate. Fellow status required the PhD degree in psychology and either 4 years of practical or teaching experience or published research in applied psychology, whereas Associate status required a master's degree in psychology and 1 year of practical or teaching experience under the direction of a PhD psychologist (or research in applied psychology; Fryer, 1937). Most believed that those standards were too low, however, so later that same year new membership criteria required that Associate status require the PhD degree ("Application for Membership in the A.A.A.P.," 1937; English, 1938).

Despite the high membership requirements, the AAAP grew quickly, surpassing 400 members by September 1938. Almost 60% of the AAAP members were APA Members and Associates. Requiring the PhD degree, which was a research-oriented degree devoid of the real-world clinical problems that applied psychologists needed for their work, created a problem for an organization striving to represent applied practicing psychologists.

FIRST CONFERENCE ON THE TRAINING OF CLINICAL PSYCHOLOGISTS

In March 1941, Donald Lindsley (1907–2003), director of the Psychological and Neurophysiological Laboratories of the first residential treatment center for children, the Emma Pendleton Bradley Home in Providence, Rhode Island, invited Chauncey McKinley Louttit (1901–1956), then executive secretary of the AAAP, as well as 15 other psychologists, to attend a conference to discuss the problems and methods of clinical psychology and the training that people entering the field would need (Capshew, 1999; Lindsley, 1941). To Louttit's chagrin, all 17 psychologists were APA Members (only two thirds of whom were also AAAP Fellows; Louttit, 1941).

The conference's consensus was that the clinical psychologist's most common tasks involved diagnosis (testing), research, therapy, and teaching. As a result of this conference, David Shakow from Worcester State Hospital, one of the conference participants, presented a proposal for graduate training that was circulated among the other participants for comments (Shakow, 1942). The conference attendees, particularly the AAAP Fellows, believed academic and institutional psychologists' interests were too strongly represented (at the conference and in the proposal), to the exclusion of other applied psychologists' interests found in the school systems and community mental hygiene clinics (Louttit, 1941). Shakow modified his proposal to reflect less of a reliance on the medical model and on psychiatric institutions as internship sites and more of an emphasis on research and not just service. Shakow's plan was 4 years long and culminated in a PhD degree, with the first 2 years devoted to coursework, the 3rd year devoted to a clinical internship, and the 4th year devoted to completing a dissertation.

Shakow also proposed establishing a specialty board—an American Board of Clinical Psychology—that would consist of AAAP leaders certifying individuals who passed a specialty examination in clinical psychology and who had a certain number of years of clinical experience, as evidence of achievement in the field of clinical psychology. His final recommendation was the appointment of a joint AAAP–APA Committee on Professional Training for Clinical Psychology that would oversee a small number of students undergoing his proposed training at an experimental group of institutions. If successful, the committee could then educate other universities as to how to establish similar training programs in clinical psychology. Following extensive discussions and committee reports, the Committee on Professional Training in Applied Psychology was established in 1941 with Bruce Moore from the Pennsylvania State University as chair (Louttit, 1942). It began with three subcommittees representing the applied sections of the AAAP, and it published a program of professional training in clinical psychology in early 1943. It was then enlarged to seven subcommittees that would encompass all areas of applied psychology (Bryan, 1944; Louttit, 1942).

THE APA REORGANIZATION

In August 1940, almost a year after England and France declared war on Germany, the National Research Council sponsored a Conference on Psychology and Government Service intended to mobilize psychologists during World War II (Capshew & Hilgard, 1992). Representatives from APA, the AAAP, the Society for the Psychological Study of Social Issues, the Society of Experimental Psychologists, the Psychometric Society, and Section I (Psychology) of the American Association for the Advancement of Science agreed to create a central Emergency Committee in Psychology, chaired by Karl Dallenbach (1895–1969). Under the administration of the National Research Council, it would coordinate various activities of psychologists in the military, government, and volunteer organizations.

As chair of the Emergency Committee's Subcommittee on Survey and Planning, Robert Yerkes (1876–1956) proved to be instrumental in the APA's reorganization. He recruited and united leaders in both applied and academic psychology in one common front for national service during wartime. Many of these individuals had participated in psychological services during World War I, were actively involved in professional organizations of psychologists, and represented all major areas of interest in applied and academic psychology. In June 1942, the subcommittee recommended creating an American Institute of Psychology and holding an Intersociety Constitutional Convention to discuss planning such an institute (Boring et al., 1942).

Each of the six societies represented in the Emergency Committee as well as three additional ones—the National Council of Women Psychologists (a 200-member group represented by Alice Bryan), the National Institute of Psychology (consisting of prominent experimentalists), and the Psychology section of the American Teachers Association (an African American organization)—were invited to the convention that was held in New York City in May 1943. Three proposals for a national association were proposed, but the modification of the APA by-laws toward a more inclusive organization that would allow interest group autonomy through a divisional structure was the most popular (Capshew & Hilgard, 1992; Poffenberger & Bryan, 1944).

The main grievances against the proposal included the lack of voting privileges for APA Associates, the neglect of women and African Americans in the APA, and the overall unresponsiveness to professional interests of psychologists (which had earlier led to the creation of other organizations such as the AACP, ACP, and AAAP). The committee suggested expanding the purpose of the APA from the advancement of psychology as a science to the advancement of psychology as a science and as a profession serving society by promoting human welfare (Capshew, 1999; Capshew & Hilgard, 1992). It established general membership classes (Fellow and Member to replace Member and Associate) and section representation according to size (sections being replaced by divisions with at least 50 members). Although some applied psychologists believed their voice would once again be silenced and unrepresented under the APA umbrella, the AAAP and APA officially approved the reorganization by-laws in September 1944, and the reorganized APA was successfully and formally inaugurated on September 6th, 1945, shortly after the end of World War II (Bryan, 1944; Capshew & Hilgard, 1992; O'Shea & Rich, n.d.; Poffenberger & Bryan, 1944).

WORLD WAR II AND ITS AFTERMATH

Psychologists during World War I had expanded their role as testers in school settings to testers of recruits during the war. For more information on the role and influence of American psychologists during the war, see Camfield (1969), Carson (1993), Von Mayrhauser (1989), and Samelson (1977). World War II, however, saw a further expansion of psychologists' duties. With more than a million soldiers discharged for neuropsychiatric reasons, and 3,000 psychiatrists nationwide, the number of psychological casualties in World War II was so overwhelming that psychiatrists had to request psychologists' aid, not only to test them but also to treat them (Brand & Sapir, 1964; Farreras, 2005). Psychologists were now involved in psychological evaluations, training techniques, and individual and group psychotherapy (Farreras, 2005).

The sudden demand for psychological services during and following the war, however, highlighted the paucity of trained mental health providers in general and psychologists' meager clinical training in particular. This lack of personnel and training led to a new national awareness of mental illness, its problems, its costs, and the need for effective treatment (Crawford, 1992). Because psychiatric training was so time-consuming and prepared so few psychiatrists at any one time, the government initiated training stipends and grants for other mental health providers, particularly clinical psychologists. The Veterans Administration and the U.S. Public Health Service's Division of Mental Hygiene (precursor to the National Institute of Mental Health) approached the APA requesting lists of institutions that could provide doctoral training in clinical psychology (Brand & Sapir, 1964; Farreras, 2005). By 1947, there were 200 students enrolled in 22 APA-accredited institutions.

World War II provided the necessary impetus for the establishment and standardization of clinical training criteria (Frank, 1986a, 1986b). The increased interest, focus, and bountiful governmental financial support for the development and expansion of formal graduate training in clinical psychology empowered the APA to apply for a $32,000 grant from the U.S. Public Health Service's Division of Mental Hygiene to fund the Conference on Graduate Education in Clinical Psychology to be held in August 1949 in Boulder, Colorado (Felix, 1949; Hilgard, 1948; Wolfle, 1949). This conference became known as the Boulder Conference, and it was instrumental in the formal professionalization of the field of clinical psychology, as discussed in the following chapter.

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CHAPTER 2

HISTORY OF CLINICAL PSYCHOLOGY FOLLOWING WORLD WAR II

Ingrid G. Farreras, Donald K. Routh, and Robin L. Cautin

The post-war period was a time of ferment in clinical psychology. Pre-war clinical psychologists mainly gave tests. After the war they emerged in a far larger arena, engaging in basic and applied research and facing a challenge to develop the requirements of a major profession in the mental health field. World War II provided the impetus for psychologists to establish and standardize training in clinical psychology. Systems were developed for licensing and board certification. Employment opportunities, both public and private, proliferated. Clinical psychology became international instead of only existing in the United States. After many years of neglect, the field came to recognize the ethnic and cultural diversity within the country and the need to be sensitive to the varying clinical approaches within these diversities.

It has been 70 years since the end of World War II, when more than a million soldiers were discharged for neuropsychiatric reasons. The 3,000 psychiatrists of that era looked down on clinical psychologists as "technicians." However, the number of psychological casualties in World War II was so overwhelming that psychiatrists had to request psychologists' aid not only to test but also to treat them (Brand & Sapir, 1964; Farreras, 2005). Thus, psychologists became involved in psychological evaluations, training techniques, and individual and group psychotherapy. The war's demands and effects on the budding profession of clinical psychology were important historical factors in shaping the emergence of the profession.

In this chapter, we discuss the evolving training required for the expanding roles of clinical psychologists. We also address the boundary and professionalization issues vis-à-vis other mental health professionals, as well as the conflicting missions within various professional organizations and the American Psychological Association (APA). In addition, with a discipline founded on scientific research, we review a number of psychologists who explored clinical areas that had direct relevance to professional roles.

CLINICAL TRAINING AND ACCREDITATION

As a result of the significant number of war casualties and the equally significant shortage of personnel in mental health, graduate programs needed to accommodate the hundreds of veterans returning from World War II to pursue or continue their graduate work in psychology. Talk of such clinical training had already been initiated within the APA. Robert Sears (1908–1989), Director of the Iowa Child Welfare Research Station, had read David Shakow's (1942) training proposal and had urged the creation of an APA committee on clinical training

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(separate from the joint American Association of Applied Psychologists [AAAP]–APA committee described in Chapter 1, this volume; Sears, 1943). Sears believed that Shakow emphasized applied psychologists working exclusively in psychiatric institutions and was dissatisfied with the narrow, basic training he had proposed.

In 1945, Sears—representing the Committee on the Graduate and Professional Training of Psychologists (CGPTP) that APA had established 2 years earlier—surveyed 32 universities that offered doctoral clinical training. His aim was to collect information regarding minimum standard curriculum and facilities so that he could compile clinical training recommendations, which the universities could then use to build or shape their existing programs (Farreras, 2005; E. Guthrie, 1944).

The Veterans Administration (VA)

In 1945, the Veterans Administration (VA; now the Department of Veterans Affairs; see Chapter 23, this volume) approached the APA and requested a list of institutions that could provide doctoral training in clinical psychology (Brand & Sapir, 1964; Farreras, 2005). By February 1946, Daniel Blain (1898–1981), Neuropsychiatry Director of the VA, sent the psychology departments the VA's proposed training program for clinical psychologists; a proposal that resembled Shakow's proposal on internship training except that 50% of the time had to be spent working with VA patients (APA and AAAP Committee on Graduate and Professional Training, 1945; VA, 1946; Wolfle, 1946). Students were to be accepted first into the psychology departments, and when their names were forwarded to the VA for approval, they would be assigned to one of four ranks with respective salaries and have all tuition expenses and other perks paid by the VA. The program was to begin in September 1946.

In February 1946, as Blain was circulating the VA training proposal to graduate schools, Sears wrote to APA Executive Secretary Dael Wolfle (1906–2003) with a list of 27 doctoral institutions he could mail to James Miller, Chief Clinical Psychologist at the VA, broken down into three groups depending on the quality and number of clinical facilities and staff available (Sears, 1946b). Concern over complaints from the institutions, however, led Sears to publish this list in the *American Psychologist* in May 1946, under his own name and with the schools listed only in alphabetical order (Sears, 1946a).

The publication of alphabetized institutions still led to disputes. The VA funding was only helping those institutions that already had the best and largest programs, and institutions not included on the list were clamoring to get on it. Academics seeking VA funding but not wanting to compromise their hegemony in the department also underscored the need for a foundation in general psychology, independent of specialization, as opposed to training in clinical psychology alone (Farreras, 2005).

Because the VA funding had changed the resources available at institutions in terms of personnel and internship facilities, the CGPTP was reconstituted in September 1946, with Sears as the new chair (Farreras, 2005). Sears mailed more questionnaires to gather new data, to which there was still institutional opposition: some felt the list threatened smaller colleges and universities that could not compete with the large universities obtaining all of the funding; they were also worried that the good facilities and best applicants would be steered away toward the larger universities (Sears, 1947). The APA and the VA acknowledged these complaints but essentially ignored them and continued with the accreditation. The APA was not about to give up such a lucrative and prestigious operation. Forty institutions replied by January 1947, and the 27 that met almost all of the criteria set forth by the CGPTP were passed onto the VA (Sears, 1946a). By 1947, there were 200 students enrolled in 22 APA-accredited institutions.

The CGPTP also began collaborating with Robert H. Felix (1904–1990), Director of the Division of Mental Hygiene of the U.S. Public Health Service (PHS), who requested a similar list of accredited institutions. In contrast to the VA, however, the PHS also requested a list of unaccredited institutions with minor deficiencies they could financially support until they became accredited (Sears, 1947; Shakow, 1978; Wolfle, 1947). In 1947, Sears sent the PHS the VA list of 27 institutions plus an additional list of nine institutions that needed improvement. Soon there were 464 students studying at

36 APA-accredited institutions (Farreras, 2001). In other countries, such as Great Britain, it was the new National Health Services rather than the Veterans' Health Facilities that supported the training and the practice of clinical psychologists.

American Board of Examiners in Professional Psychology

The growing demand for clinical psychologists also prompted the APA to establish the American Board of Examiners in Professional Psychology to certify clinical psychologists with advanced practice skills, analogous to board certification in medical specialties. Before World War II, there was no workable system for recognizing such level of competence in clinical psychology.

At first, a "grandfather clause" permitted distinguished clinical psychologists to be given diplomas on the basis of their experience. APA Council would choose nine APA Fellows (who represented the areas of psychology that provided professional services to the public) who would award diplomas to accomplished psychologists in clinical, counseling, or industrial psychology (Crawford, 1992). Such "accomplishment" was originally defined by 5 years of professional experience but quickly changed to APA membership (which required a PhD in psychology); satisfactory professional, moral, and ethical standing; and passing a written and oral examination, in addition to the 5 years of experience (Poffenberger et al., 1950; Reisman, 1991).

The name of the organization was subsequently changed to American Board of Professional Psychology (ABPP), and the examinations were made less formidable so that the number of diplomas awarded increased considerably. The APA 1949–1950 directory lists more than 12.5% of its 6,735 members as diplomates, with 68% in clinical, 18% in counseling, and 14% in industrial (Crawford, 1992). The following decade saw an almost doubling of ABPP diplomates, mostly in clinical psychology (Wallin, 1960).

The VA eventually granted salary increases to psychologists who attained an ABPP diploma, and the possession of one was a routine requirement for those who wished to serve as Directors of Clinical Training. Diplomas were subsequently developed for many other clinical specialties in psychology, including clinical child psychology, clinical neuropsychology, clinical health psychology, and psychoanalysis.

Beyond such credentialing, the first psychology licensing law in the United States was passed in Connecticut in 1945 (Heiser, 1945). After Missouri passed its licensing law in 1977, all states provided licensing of professional psychologists, including those in clinical psychology (see Volume 5, Chapter 7, this handbook).

APA Committee on Training in Clinical Psychology (CTCP)

The VA and the PHS were clinical psychologists' largest employers. The VA's and PHS's interest in and funding of graduate training in clinical psychology empowered the APA to appoint the CTCP in 1947, which would replace Sears's CGPTP. Chaired by David Shakow (1901–1981), the important difference between the two committees was that the CTCP no longer obtained its information by mailing questionnaires to institutions but instead visited and evaluated the institutions in person (Farreras, 2005).

The CTCP's first report on 4-year doctoral programs was published in December 1947 in the *American Psychologist* and was based on Shakow's internship proposal of 1945 (APA and AAAP Committee on Graduate and Professional Training, 1945; APA CTCP, 1947). In contrast to the 1945 year-by-year description report, the 1947 report recommended an illustrative model of clinical training composed of six broad areas of study that would not be determined by the practices that had resulted from the increased VA funding (Farreras, 2001, 2005).

Some universities did not take kindly to this ideal model recommended by the CTCP (Farreras, 2001). Some institutions that had been accredited by Sears's CGPTP now found they did not meet the CTCP's more rigorous standards for accreditation that included campus visits. Others believed the ideal model would take longer than 4 years to complete and was not illustrative of clinical training. Institutions were nonetheless forced to adopt it to be accredited (Farreras, 2001, 2005). The committee was so opposed to publishing any differentiated list of accredited institutions, however, that the CTCP only listed them in alphabetical order (APA CTCP, 1949).

THE BOULDER MODEL OF TRAINING IN AMERICAN CLINICAL PSYCHOLOGY

Despite their controversial status at the time, the APA CTCP's 1947 and 1949 reports are considered the foundation of the scientist–practitioner (or Boulder) model of graduate training in clinical psychology. In that model, clinicians are trained as both researchers and practitioners. The CTCP's proposals for a 4-year doctoral program (which included a 1-year internship) set the stage for this training model as well as represented the APA's first attempts at accreditation of institutions for doctoral training in clinical psychology (Maher, 1991; Nawas, 1972).

The Boulder model derives its name from a PHS-sponsored Colorado Conference on Graduate Education in Clinical Psychology that APA held in August 1949, in Boulder, Colorado, to discuss the graduate education and training needed for clinical psychologists (Farreras, 2005; Strickland, 1988). The directors of the then 43 APA-accredited universities, as well as representatives from internship training centers and related professions, composed the 73 individuals invited to the Boulder conference (Raimy, 1950).

The discussions centered around four fundamental issues, which were published in book form (Raimy, 1950). The first issue focused on the professional services and research contributions that clinical psychologists could offer to meet societal needs. The second issue concerned the fluidity required of professional training to reflect society's changing needs, as well as theoretical and technical changes within the field. The third issue addressed the kinds and levels of training that should be required, and the last issue highlighted problems regarding professional ethics (Raimy, 1950).

About 70 resolutions were proposed at the Boulder, Colorado, conference. Given that some participants believed that research would weaken the necessary training in diagnosis and treatment, whereas others believed diagnosis and treatment would dilute good research training, it is somewhat surprising to find a unanimous recommendation to train clinical psychologists equally as both researchers and practitioners (Farreras, 2001).

As a result, the 4-year doctoral program that was proposed entailed a firm foundation in science, research methodology, and theory during the 1st year, practicum and internship training during the 2nd and 3rd years, and the completion of the doctoral dissertation during the fourth and last year (Reisman, 1991). Whereas other mental health professions focused their students' training on applied aspects, psychologists trained aspiring clinicians in both scientific research and clinical work in hopes of providing them with what they had historically lacked: higher status and prestige. This resolution not only benefited clinical psychology by way of governmental financial support and backing as a profession, but it also served the governmental agencies by training personnel to address the pressing mental health needs of the country (Baker & Benjamin, 2000).

There were positive and negative consequences of the scientist–practitioner model established at the Boulder conference. A positive consequence was that the Boulder model bridged the academic versus practitioner rift by terming both "psychologists," independent of their work setting (Frank, 1984). The scientist–practitioner model provided a way for academics and practitioners to find common ground through a shared methodology (Frank, 1984). The APA's reorganization in 1945 led to expansion in its mission from the advancement of psychology as a science to include its advancement as a way to promote human welfare. Practitioners were expected to be psychologists first and clinicians second, thus allowing for all PhD students to be trained in research. Research played a unique role for clinical psychologists following World War II. In addition to being qualified to assist psychiatrists in the treatment of war neuroses, psychologists also wanted to establish an identity independent of the authority of the psychiatrist. Toward this goal, psychologists included research as a significant component of the new training model (Frank, 1984). The focus on research would not only enable clinical psychologists to shed the reputation of being "technicians," but it would also lead to their being the only mental health professionals advancing knowledge through research at a time when there was widespread ignorance about mental health (H. C. Ellis, 1992; Strupp, 1982; Tyron, 1963).

A negative consequence of the scientist–practitioner model was that academic psychologists were now faced with the burden of training doctoral students for careers in teaching, research, as well as practice. This created problems on a variety of levels. The most pragmatic one was that there was a shortage of qualified faculty who could do so (Rosenzweig, 1950). In addition, this upset a long-standing tradition of academic dominance in the field. Prior to World War II, academic psychologists had been the dominating faction, seeing themselves as "basic" and "pure" scientists who conducted research that legitimized psychology as a science. To many of the academic psychologists, clinical psychology was viewed as a lower and baser calling, ordinarily relegated to women or Jewish minorities who were not as welcome in the ivory tower (Finison, 1978; Tyron, 1963; Winston, 1998).

The increasing professionalization of clinical psychologists threatened the traditionalists' stronghold. The reorganized APA of 1945 had already attempted to establish and accredit formal PhD training in clinical psychology, but external factors such as governmental agencies and outside funding markedly accelerated the professionalization in academic departments. Suddenly, these departments were being evaluated by outside committees that not only evaluated the departments the academics held dearly but also forced an imbalance in favor of the clinical faculty by granting or withdrawing funding from students, facilities, and fellowships, depending on whether they met the accreditation criteria (Tyron, 1963). This created tension with the academic psychologists, who were concerned that external forces might come to control their programs, determine their curricula, and threaten the future of their traditional experimental programs (Baker & Benjamin, 2000).

A larger negative consequence of the scientist–practitioner model was its uncritical acceptance of the medical model. The APA CTCP's (1947) report is viewed as the backbone of the model, and that report primarily reflected David Shakow's 20 years of work experience at Worcester State Hospital. According to former APA President George Albee (1921–1993), such an unquestioning acceptance of the medical model and the psychiatric worldview led psychology to function as an ancillary profession to psychiatry (Albee, 2000).

THE NATIONAL INSTITUTE OF MENTAL HEALTH (NIMH)

The PHS's Division of Mental Hygiene had been following principles that would lead to a national mental health program: the recognition and treatment of the mentally ill, the investigation of the nature and etiology of mental disorders, the training of personnel to work in the field of mental hygiene, the development of methods to reduce mental illness, the search for solutions to the economic problems resulting from mental disorders, and the uprooting of the community sources of mental illness (Brand & Sapir, 1964).

World War II interrupted the development of the national mental health program. The extreme number of war discharges and casualties demonstrated "the tremendous toll mental illness took on the national welfare" (Brand & Sapir, 1964, p. 7). By August 1945, more than a million men had been rejected for service. In addition, 44,000 of 74,000 VA hospital beds (60%) were filled with neuropsychiatric patients alone by April 1946, costing at least $40,000 per veteran (J. G. Miller, 1946). Eight million Americans—or 6% of the American population—were found to be suffering from some mental disorder, and the economic consequences were staggering. Professional personnel, however, were seriously lacking. Knowledge of and research on the etiology, treatment, and prevention of mental disorders were also significantly lacking (Brand & Sapir, 1964). Toward the end of the war, this lack of personnel, knowledge, understanding, and treatments led to a new, national awareness of mental illness, with its problems, its costs, and the need for effective intervention (Crawford, 1992).

Robert H. Felix combined his background in epidemiology, community-based mental health training, and public health to draft a bill for a National Neuropsychiatric Institute that was passed in Congress in 1946 (Cameron, 1978). The bill focused on three needs: research, training, and community services. The bill sought to establish a National Advisory Council and a National Neuropsychiatric Institute that would accomplish these three goals. The Neuropsychiatric Institute would help conduct and fund research on the understanding and treatment of mental illness; would fund the training of mental health professionals through individual fellowships, institutional grants, and state aid; and would help expand existing community services and establish additional clinics and treatment centers (Brand, 1965; Farreras, Hannaway, & Harden, 2004).

President Harry Truman signed the bill on July 3, 1946, but the name was changed from the National Neuropsychiatric Institute Act to the National Mental Health Act. The institute's name was also changed to the NIMH, and it was not officially funded and formally established until April 15, 1949 (Felix, 1975; Grob, 1991). It differed from all the other institutes of the National Institutes of Health (NIH) in providing major support for clinical training, in having a major program in mental health services, and in the importance of the behavioral sciences in its programs. It also differed from the other three institutes in the NIH in its optimistic mission of promoting mental health, as opposed to focusing on disease conditions (Farreras et al., 2004).

The NIMH had one intramural program that conducted research at the institute's own laboratories and in the field. It also had three extramural programs that implemented grants: a Research Grants and Fellowships branch, a Training and Standards branch, and a Community Services branch (Farreras et al., 2004). The Research Grants and Fellowships branch provided grants to individuals and institutions for the support of mental health research throughout the country. Given the lack of knowledge at the time about the etiology, prevention, and treatment of mental disorders, NIMH decided that it would fund research from any field related to mental illness so long as it contributed toward answering such questions (Brand, 1965; Brand & Sapir, 1964). Felix, who became the first NIMH Director, felt strongly that mental health research should be multidisciplinary and never directed research. A 1952 analysis of the first 5 years of the NIMH research grant program revealed that more than five million dollars were spent on 165 projects focusing on the etiology of mental illness, development or evaluation of treatment methods, normal child development, studies of the nervous system, and the relation of environmental stress to mental health and illness (Brand, 1965; Brand & Sapir, 1964).

The Community Services (Research Utilization) branch provided grants-in-aid and other assistance to help states develop and strengthen their mental health programs. The Training and Standards branch provided grants to individuals and institutions for training of mental health providers so as to increase their supply nationwide (Brand & Sapir, 1964). All four key professions in mental health—psychiatry, psychology, social work, and psychiatric nursing—were to be represented and developed (although psychology, social work, and psychiatric nursing training stipends never exceeded two thirds of the amount awarded to psychiatry; Brand & Sapir, 1964; Cameron, 1978; Felix, 1975).

This Training and Standards branch was the one responsible for funding the training of clinical psychologists. Similar to the NIMH's philosophy in the research arena, the NIMH's philosophy in the training arena was that the government should provide individuals and institutions the maximum amount of freedom and not hamper their progress by directing or regimenting their activities (Brand & Sapir, 1964).

Uniquely positioned to know what was important for mental health and the alleviation of mental disorders, psychologists benefited from this golden age for their discipline, marking the formal beginning of modern clinical psychology (Rice, 2005). By 1953, psychologists were receiving funding for psychological science and training from the NIMH, the Office of Naval Research, the Department of Defense, the National Science Foundation, and other federal agencies (Capshew, 1999; Reingold, 1994; Rice, 2005). By 1959, universities (where most psychologists were employed) were receiving almost $500 million for research (Grob, 1991; Kidd, 1959).

As the dominant force in U.S. mental health by the 1960s, the NIMH became the largest federal supporter of psychology, as it turned to psychologists to take a leading role in mental health research (Grob, 1991; Pickren, 2005; Schneider, 2005). Four psychologists became deputy directors of the institute, psychologists composed the main professional group in the extramural NIMH programs, and psychologists received the greatest number of research grants (55% compared to 12% from psychiatry) and the largest number of research dollars from the institute (Grob, 1991; Rice, 2005). Psychologists—applied and academic—shaped research and practice training agendas, the direction of mental health research, and the development of psychotherapy. They emerged as the leading mental health professionals through their leadership in the institute and in the institute's laboratories and branches (Pickren, 2005). No longer mere testers of children in school settings or of recruits during the war, clinical psychologists' roles now extended to treatment, research, and prevention, as can be seen in the sections following a commentary on the evolving role of assessment.

AMERICAN DEVELOPMENTS IN CLINICAL PSYCHOLOGICAL ASSESSMENT

Clinical psychologists after World War II continued to be involved in assessment. Indeed, the most influential intelligence test to this day—the Wechsler Adult Intelligence Scale (Wechsler, 1955)—was developed by David Wechsler (1896–1981), who was president of the APA Division of Clinical and Abnormal Psychology in 1948–1949. Unlike the Stanford–Binet Intelligence Scales first published in 1916, the Wechsler Adult Intelligence Scale provides 10 subtests (instead of a single measure of IQ) that assess verbal and performance IQ. It was standardized on almost 3,000 American and Canadian adults ranging from 16 to 90 years of age, as raw scores tend to decline after about 23 years of age, particularly on performance subtests (Wechsler, 1958).

Another type of assessment that became particularly prominent after World War II was projective testing, including notably the Rorschach Inkblot Test, developed by Swiss psychiatrist Hermann Rorschach (1884–1922), and the Thematic Apperception Test, developed by clinical psychologist Henry A. Murray (1893–1988; Morgan & Murray, 1935).

One of the most influential personality tests, the Minnesota Multiphasic Personality Inventory (MMPI), was developed by clinical psychologist Starke R. Hathaway (1903–1984) and psychiatrist J. C. McKinley (1903–1984; Hathaway & McKinley, 1940, 1942). The clinical scales of the MMPI actually measure psychopathology rather than personality per se. The scales were empirically derived by contrasting the responses of persons with different mental disorders with those of a control group and then cross-validating them with additional groups. In addition, "validity" scales were developed to detect lying or other types of biased responding. Today, the MMPI can be scored and interpreted by computer.

TREATMENT TRENDS IN AMERICAN CLINICAL PSYCHOLOGY

Post-World War II clinical psychology was shaped by many influences. Riding the tails of President Franklin D. Roosevelt's New Deal policies, the NIH appropriations during the 1940s and 1950s rose on the belief that the government could and should play a positive role in the health (including mental health) of its citizens (Pickren, 2005). The end of World War II brought about an economic resurgence and population growth. After years of war-related rationing, prosperity ushered in a phenomenal growth in construction and consumerism, as returning soldiers and their new spouses moved into new suburban housing. However, this post-war "good life" coexisted with the recent memories of the war as well as with the intense fear over nuclear war that resulted from the bombing of Nagasaki and Hiroshima in August 1945. The use of atomic weapons, the fear of radiation poisoning, and the panic surrounding the proliferation of nuclear weapons during the 1950s contributed to the belief in the collapse of civilization. American psyches, infused with anxiety about the future, were primed for the advent of mental health professionals (Pickren, 2005).

Psychoanalysis reached the peak of its popularity and cultural influence during these post-World War II years (Hale, 1995). The failure in the 1930s and 1940s of purely somatic treatments, Freud's death in 1939 (which led to bitter factional splintering), and the Nazi oppression led to a wave of Freudian disciples emigrating to the United States and rising to command the discipline, shifting the center of its gravity to the United States by 1942 (Hale, 1995). World War II had provided military leaders in the medical establishment (e.g., Menninger, Kubie, Lewin, Zilboorg) with a unique opportunity to study how soldiers broke, and psychoanalysis seemed like a psychosomatic model that American psychiatrists could adopt to treat these "nervous" casualties (Hale, 1995). Following the war, Menninger, a leading military psychiatrist, spread the influence of psychoanalysis by filling senior leadership positions, training psychiatric recruits, and introducing psychoanalytic doctrine in diagnostic manuals (Hale, 1995).

Prior to the war, the American Psychoanalytic Association had decreed that psychoanalysis was a psychiatric specialty (i.e., thus requiring a medical degree) and forbade any of its members to train psychologists unless they signed an agreement to use such training strictly for research purposes. Despite this prohibition, several prominent clinical psychology training programs, such as the one at the University of Michigan, required its trainees to undergo psychoanalysis. Theodore Reik (1888–1969), a psychologist who was trained in psychoanalysis in Europe, founded the National Psychological Association for Psychoanalysis in the United States to provide psychoanalytic training for psychologists, in defiance of the American Psychoanalytic Association's decree (Malcolm, 1981). In 1984, members of the APA's Division of Psychoanalysis (Division 39) formed the Group for the Advancement of Psychoanalysis and Psychotherapy in Psychology. In 1988, the Psychoanalytic Institutes agreed to settle a lawsuit brought by four psychologists from the Group for the Advancement of Psychoanalysis and Psychotherapy in Psychology that permitted qualified students from all mental health fields access to psychoanalytic training programs.

Popular culture was also saturated with psychoanalytic ideas and terms. The bleak view of human nature in psychoanalysis and its stringent treatment expectations, however, proved to be too pessimistic and demanding for Americans. Its popularity enabled the creation and acceptance of more appealing talk therapies during the 1950s. Clinical psychologists pounced on this new need by producing new psychotherapies—behavioral, humanistic, cognitive—that were easier to understand and, preferably, scientifically based (Pickren, 2005).

Instead of emphasizing underlying conflicts, as psychoanalysis did, behavior therapy focused on quick, behavior-specific change. Beginning with work in the mid-1950s by Joseph Wolpe (1915–1997), behavioral techniques such as reciprocal inhibition, systematic and in vivo desensitization, flooding and implosion, and token economies emerged during the 1960s to extinguish unwanted behaviors or to teach new, desired behaviors (Ayllon & Azrin, 1968; Emmelkamp, 1982; Wolpe, 1954, 1958).

Humanistic theories emerged in the 1950s and 1960s, partially in response to the psychoanalytic and behavioral views of human behavior (as products of biology or environment) that were pessimistic and deterministic. Although originally trained in psychoanalytic techniques, Carl Rogers (1902–1987; e.g., Rogers, 1951) developed a client-centered therapy with a more optimistic growth perspective, wherein clients could reach self-actualization through self-exploration. Rogers was a pioneer in conducting systematic research on psychotherapy, introducing innovative methods such as the use of wait-list control subjects and recorded therapy sessions, later transposed into verbatim transcripts. He was president of the APA Division of Clinical and Abnormal Psychology in 1949–1950, and he was one of the founders of humanistic psychology. His work continues to be influential in the development of motivational interviewing, a powerful treatment for alcoholism (among other problems) supported by controlled studies (W. R. Miller & Rollnick, 1991).

Cognitive therapies, developed in the mid-1950s through early 1970s, expanded the behavioral focus from observable behaviors to patients' beliefs and interpretations. The main goals of cognitive therapies were to help patients identify maladaptive thoughts, challenge them, and replace them with alternative, adaptive thoughts. Important figures within this perspective were Albert Bandura (born in 1925), who studied the effect of self-efficacy beliefs on adaptive behaviors and developed social learning theory to explain vicarious learning (e.g., Bandura, 1977, 1986); Albert Ellis (1913–2007), who developed rational-emotive therapy that would challenge patients' irrational thoughts about themselves and the world (e.g., A. Ellis, 1962); and Aaron Beck (born in 1921), whose cognitive therapy focused on correcting faulty thinking behind patients' symptoms (e.g., Beck et al., 1979).

The large infusion of funds from federal agencies, Cold War fears, the cultural opening for psychotherapy, the rapid growth of suburbs, and rampant consumerism created a context for the emergence of psychotherapy in the 1950s. NIMH funding provided the support that made possible the training of clinical psychologists adept in the new psychotherapies. By the end of the 1950s, most Americans had come to equate clinical psychologists with assessment and psychotherapy.

Throughout the latter half of the 20th century, the employment settings of clinical psychologists extended from institutional settings to community centers to private practices. This movement was stimulated by the licensure of psychologists, which now includes all the states in the United States (see Volume 5, Chapter 7, this handbook) and most nations throughout the world. Practice competencies have also expanded to include psychotropic prescription authority, legalized currently in three states—New Mexico (2002), Louisiana (2004), and Illinois (2014)—and being pursued in many other states as well. Training and practice guidelines have been published for the appropriate use of psychotropic medications by psychologists (APA Division 55 [American Society for the Advancement of Pharmacotherapy] Task Force on Practice Guidelines, 2011). These developments are discussed in detail in later chapters of this handbook.

THE APA SOCIETY OF CLINICAL PSYCHOLOGY

The first of the APA sections—the Clinical Section, established in 1919—became the Division of Clinical and Abnormal Psychology in 1945 (after the APA reorganization) and was renamed the Division of Clinical Psychology (Division 12) in 1955, and the Society of Clinical Psychology in 1998. By 1948, it had 482 members; by 1951, the number exceeded 1,000 and grew to 6,800 members in 1996. Thereafter the membership declined, along with practically that of all of the divisions of the association, due to the increasing number of divisions (such as the Division of Child Clinical, Division of Psychotherapy, and Division of Clinical Neuropsychology) and the attraction of other niche organizations (e.g., Society for the Exploration of Psychotherapy Integration). As of this writing, the clinical division membership is near 3,500. The Division 12 newsletter expanded to a more formal publication, *The Clinical Psychologist*, which became a model for other divisions formalizing their newsletters.

Important journals also had their origins in professional organizations. The *Journal of Consulting and Clinical Psychology* had its roots in the Association of Consulting Psychologists of the 1930s (Routh, 1994; see also Chapter 1, this handbook), and *Psychotherapy* emerged from the beginnings of Division 29 (Psychotherapy). In 1969, *Professional Psychology* became an official APA journal, and two recent spin-off journals—*Psychological Services* and *Training and Education in Professional Psychology*—have met the increased demand for publication outlets in the field (Benjamin et al., 2003). The most recent addition to research-oriented clinical journals is *Clinical Psychological Science*, published by the Association for Psychological Science, with Alan Kazdin (born in 1945) as its founding editor. The Association for Psychological Science (formerly the American Psychological Society) was formed in 1988 by a group of academic and research psychologists who broke away from the APA (Cautin, 2009a, 2009b).

Division 12 today consists of eight sections. In 1962, it established its first section (Section 1)—an interest group concerned with clinical child psychology. This section published a newsletter that was later transformed into the *Journal of Clinical Child Psychology* (now the *Journal of Clinical Child and Adolescent Psychology*; Routh, Patton, & Sanfilippo, 1991).

Another influential section of the Division of Clinical Psychology, founded in 1966, was Section 3, originally given the cumbersome title of the Section for the Development of Clinical Psychology as an Empirical-Behavioral Science but now named the Society for a Science of Clinical Psychology (Houts, 2008; Routh, 1994). The Division of Clinical Psychology also addressed the growing diversity of clientele and psychological services by establishing further sections that focused on women, ethnic minorities, and older adults.

DEINSTITUTIONALIZATION AND COMMUNITY MENTAL HEALTH CENTERS IN THE UNITED STATES

The deinstitutionalization of chronically mentally ill patients from inpatient care to community care had a profound impact on the delivery of mental health services. In the United States it occurred in two waves after World War II. The first wave began in the mid-1950s, after the discovery of chlorpromazine (Thorazine) in 1952. Originally developed as a surgical anesthetic, it was quickly applied to agitated psychotic patients for its sedating quality. The resulting decreased need for restraining and isolating patients who were treated with chlorpromazine and similar first-generation antipsychotic medications led to the belief that severely mentally ill patients could be treated pharmacologically as well as in the community, as opposed to in hospital wards.

By the mid-20th century, state mental hospitals had become seriously underfunded, understaffed, overcrowded, and unsanitary (Deutsch, 1948; Goffman, 1961). Offering no more than custodial and often abusive care with no expectation of recovery, the dissatisfaction with such appalling conditions reached an all-time high in the late 1950s (Braun et al., 1981). Civil rights advocates, patient rights advocates, the American Psychiatric Association, and President John F. Kennedy's administration all contributed to the environment necessary for political reforms of the mental health system (Bachrach, 1976; Bockhoven, 1972; Grob, 1983).

The second deinstitutionalization wave thus began in the 1960s. In 1955, the Mental Health Study Act had authorized a national assessment of the human and economic problems resulting from mental illness. Following a 6-year study, the Joint Commission on Mental Health and Illness, under NIMH auspices and at President John F. Kennedy's request, called for reforms in 1961 that would reintegrate mentally ill patients into the community. The Mental Retardation Facilities and Community Health Centers Construction Act of 1963 established a nationwide system of federally funded community mental health centers (CMHCs) that would care for and prevent the rehospitalization of discharged hospital patients, as well as prevent the hospitalizations of new patients. With a stated goal of 2,000 CMHCs by 1980, these centers would provide five services: inpatient services, outpatient services, partial hospitalization, emergency services, and consultation and educational services (Stockdill, 2005). By treating patients on an outpatient basis, such patients were expected to return to independent living and once again become a part of the community. CMHCs would also administer the treatment facilities and the sheltered housing that patients would rely on as they transitioned and adjusted to the community.

Community Mental Health Centers

Although in favor of the creation of the CMHCs, the American Medical Association vigorously opposed that they be federally funded, fearing that it would lead to socialized medicine (Albee, 2005; Goldman, Feder, & Scanlon, 1986). Community members were also resistant to the idea of creating CMHCs in their own back yards. States, however, welcomed the federally funded initiative, as the new legislation on minimal standards of care in state hospitals would have raised state-funded hospital care costs significantly (Grob, 1983).

Clinical psychologists played a critical role in the CMHC movement, ensuring that psychologists were appointed as CMHC directors and, as NIMH extramural professional staff, ensuring a steady flow of training money (see Chapter 21, this volume). Congress introduced a 1965 amendment that allowed for staffing grants to be made directly to CMHCs, bypassing state governments and limiting state control of them (Stockdill, 2005).

CMHCs did not receive all the promised federal funding or the anticipated local revenues, however. State governments took advantage of the large-scale hospital deinstitutionalization, as it led to huge reductions in state hospital expenses, but they rarely transferred those savings onto the CMHCs. When federal funding for CMHCs ended, the states rarely assumed that responsibility (Baer, 1980; Stockdill, 2005).

When President Lyndon Johnson's administration introduced the country's first public health insurance programs—Medicare and Medicaid—in 1965, these federal subsidies allowed for the creation and expansion of nursing and group care homes in the community. Patients who were older adults or who were chronically mentally ill could live in these nursing and group care homes as an alternative to the state mental hospital (Goldman et al., 1986; Shadish, Lurigio, & Lewis, 1989).

President Richard Nixon's and Gerald Ford's administrations attempted to control and phase out the federal funding of CMHCs during the 1970s as well as to reduce the research and training budgets of the NIMH (Albee, 2005). President Jimmy Carter's administration attempted to turn his predecessors' efforts around by establishing the Commission on Mental Health and the Commission on Prevention in 1977 and 1978, respectively, that would inform the president on what the nation's mental health needs were and how to strengthen primary prevention efforts at NIMH (Albee, 2005). The reports identified up to 15% of the population needing mental health services (but only one fifth of it receiving them) and also identified children, adolescents, older adults, and minorities as underserved populations, all of which led to increased federal support for CMHCs (Albee, 2005). The APA exerted influence in highlighting psychologists' importance and contributions in the reports of the Commission on Mental Health and the Commission on Prevention. APA's policy was that mental health coverage should be included in any national health insurance, that psychologists should be recognized as independent mental health providers, that patients should have a choice among various mental health professions and treatment settings, and that mental health services should be assessed and evaluated on the basis of research (Pallack, 1992).

Although the resident population of state mental hospitals declined more than 50% by 1980, the CMHCs were unable to care for the hundreds of thousands of seriously mentally ill patients discharged from the state mental hospitals (Stockdill, 2005). Medicaid and Medicare offered little coverage for mental disorders, and private insurance covered mostly inpatient services only (thus also leading to a wealthier inpatient population; Dorwart et al., 1989). During President Ronald Reagan's administration, NIH staff positions were drastically reduced, the NIMH training program ended, and CMHCs were irreparably crippled (Pallack, 1992; Pickren, 2007; Schneider, 2005).

Deinstitutionalization had multiple consequences (Baer, 1980; Foley & Sharfstein, 1983). By the 1990s, nearly one third of the homeless population in the United States had severe mental illness compounded with substance-use problems. Although antipsychotic medication reduced the agitation of chronic mental illness, it did not teach patients the social and occupational skills they needed to adjust in the community. Nonetheless, outpatient treatment afforded patients the opportunity to live independently, attend school, or hold a job better than hospitalization did (Kiesler, 1982).

President Ronald Reagan's administration in the 1980s ushered in a funding shift away from mental health toward a war on drugs (Humphreys & Rappaport, 1993). It curtailed NIMH support for training as well as for research in the social and behavioral sciences (Schneider, 2005). The deemphasis on the effects of environmental stressors such as poverty, social stress, and exploitation resulted in a blending of primary, secondary (treatment), and tertiary (rehabilitation) prevention and was supplanted by a brain-based etiological theory of mental illness (Albee, 2005).

Underserved Groups

Various groups have woefully inadequate access to psychological services. The severely mentally ill is one example. The most effective advocacy for the mentally ill who were deinstitutionalized came from the families of the patients, not from psychology or any mental health disciplines. The National Alliance for the Mentally Ill organized itself and effectively lobbied NIMH and other government agencies to act on behalf of their family members. Indeed, the remaining NIMH training grants are targeted to certain priority populations of underserved persons, such as people with severe and persistent mental health problems.

Institutions for persons with intellectual disabilities have also, over the past several decades, discharged the majority of their residents. Recently, the emphasis is on "normalization," community care, and attention to family. Although APA and several of its divisions have advocated for these individuals (see Volume 4, Chapter 13, this handbook), the most effective advocacy for individuals with intellectual disabilities has come from parent groups such as the Association for Retarded Children, later called the Association for Retarded Citizens (and still more recently, simply the ARC), and also the Association for the Severely Handicapped.

Still another neglected group is children who are termed as being "severely emotionally disturbed." This category has been hard to define precisely. It includes many children who are involved in the special education system (in classes for the emotionally disturbed), in the child welfare system (physically abused, sexually abused, neglected), in foster care because of family dysfunction or breakdown, or in the juvenile justice system (emotionally disturbed or dependent offenders). This heterogeneous group is also a priority in terms of NIMH training grants.

Finally, immigrant and racial/ethnic minorities are the least likely to have access to and benefit from health services (U.S. Department of Health and Human Services, 2001, 2011). With the exception of the National Alliance for the Mentally Ill Multicultural Action Center established in 2002, members of these groups do not have significant parent groups lobbying for health services on their behalf (as do the prior groups discussed), and they rely more on family and social and religious communities than they do on health care professionals (Ali, Milstein, & Marzuk, 2005; Erickson & Al-Timimi, 2001). Various reasons contribute to this situation: stigma related to mental health, cultural mistrust of health care professionals, and a paucity of minority mental health providers (Aloud & Rathur, 2009; M. Shea & Yeh, 2008; Townes, Chavez-Korell, & Cunningham, 2009).

CLINICAL RESEARCH IN AMERICAN CLINICAL PSYCHOLOGY

For 60 years, the field of psychotherapy research has attempted to establish itself as an objective science answering the questions of how and why psychotherapy works and with whom. Rosner (2005) has thoroughly documented the NIMH's influence on clinical research between 1948 and 1980 on psychotherapy. Between 1949 and 1977, the federal government spent more than $55 million on approximately 530 psychotherapy research grants, supporting an estimated 75%–85% of all large-scale psychotherapy studies in the United States. The changing federal government priorities in its allocation of mental health research dollars have been central to the evolution of psychotherapy research.

David Shakow's Psychoanalytic Film Study

Shakow's psychoanalytic film study was the first effort to film an entire course of psychoanalysis for such research purposes. Conceived at the height of American optimism about the clinical effectiveness of psychoanalysis in the post-World War II years, many believed the new psychoanalytic psychotherapies could successfully treat the normally neurotic individual as well as the "shell-shocked" soldier (Rosner, 2005).

In 1948, Shakow suggested that film offered researchers the opportunity to establish a rigorous and objective method for measuring psychoanalytic processes, as the material would then not be as susceptible to the biased interpretations of therapist researchers. Toward that goal, he selected Paul Bergman, a psychoanalyst who had been at the Menninger Clinic, to serve as the analyst to be filmed, and a middle-aged woman experiencing marital difficulties as the patient (Rosner, 2005). The film study began in late 1958, and by 1963—when the patient ended treatment—they had collected more than 600 sessions. The film study was euphemistically known among his colleagues as "Shakow's folly." The analysis of the film was excruciatingly time-consuming—with only a fragment of the first session taking 4 months to analyze—and Bergman himself began modifying his technique from standard psychoanalytical practice when he saw it was not leading to successful treatment. Shakow's psychoanalytic film study nonetheless reflected Congress's generosity in supporting what could be the creation of an objective, psychotherapeutic science. The study also fueled a debate concerning the proper methodology upon which it should rest: the subjective judgment of the expert clinician (clinical prediction) or statistically controlled designs (statistical prediction; Cronbach & Meehl, 1955; Meehl, 1954).

The NIMH also funded three influential conferences that psychotherapy researchers from both perspectives could attend. The proliferation of therapy forms and techniques by the time of the third conference in 1966 highlighted a decrease in research grants for psychoanalysis and clinical prediction in favor of grants focused on behavior therapy, therapist–patient interactions, and psychopharmacology in relation to psychotherapy (Rutherford, 2003, 2009).

With increased pressure for practical applications and decreased intramural funding due to the financial strain of the Vietnam War, the NIMH shifted its support for psychotherapy research by the early 1970s from the intramural to the extramural program (Rosner, 2005). Funding for psychoanalytic projects markedly declined in favor of the more observable and quantifiable behavior therapy that had emerged in the mid-1960s. Between 1947 and 1984, the allocation of research funding for behavior therapy projects increased from 8% to 75%, particularly after the success of token economies in the late 1960s and 1970s (Paul & Lentz, 1977; Rosner, 2005; Rutherford, 2009).

The NIMH Collaborative Study

In the 1970s, as Congress established criteria for reimbursement for medical treatments, it pointed to the lack of quantifiable data supporting the safety and efficacy of psychotherapy. Between the mid-1960s and 1980, the medical and marketplace consensus was moving toward randomized controlled (clinical) trials (RCTs) as the most appropriate design for establishing the safety and efficacy of medical treatments (Rosner, 2005). The Food and Drug Administration and NIMH adopted RCTs for pharmacology and psychotherapy research, respectively. Psychiatrist Gerald L. Klerman's (1928–1992) influence (as head of the Alcohol, Drug Abuse, and Mental Health Administration) persuaded the American Psychiatric Association's *DSM–III* Task Force during the late 1970s to eschew the psychoanalytic language and psychosomatic etiological model of the time in favor of a biomedical model that highlighted descriptive and observable symptoms that would work together with RCT protocols. Within this context was born the first, multisite, manualized, RCT treatment study that became the benchmark for psychotherapy outcome research designs after 1980 (Rosner, 2005).

In 1976, NIMH began sponsoring the most extensive study on the effectiveness of psychotherapy conducted to that date (Elkin et al., 1989; Imber et al., 1990; M. T. Shea et al., 1992). The NIMH Treatment of Depression Collaborative Research Program consisted of 250 patients, mostly women, who were moderately to severely depressed and who were receiving services at three facilities with 28 therapists trained in different schools of psychotherapy. Using a double-blind design, patients were randomly assigned to 50-min, weekly, audiotaped and videotaped cognitive behavioral therapy, interpersonal therapy, tricyclic antidepressant imipramine plus general clinical management, or placebo pills plus clinical management sessions for 4 months. The RCT allowed for the results to be compared quantitatively. More than half of the patients in all three treatment groups improved, compared to just one third of the patients in the placebo group. Although the medication group saw faster improvement, the improvement was matched by the psychotherapy groups by the end of the 4 months.

This ability to quantifiably compare and assess the efficacy of different psychotherapies resulted in the establishment of RCTs as the methodological norm and the benchmark for NIMH-funded psychotherapy research. NIMH began offering workshops on how to create manualized, RCT protocols that would win NIMH funding, and clinical psychologists hoping for NIMH funding began to orient their psychotherapy research toward RCTs and specific

DSM categories (Parloff & Elkin, 1992; Rosner, 2005). This has resulted in today's emphasis on evidence-based practices (Pickren, 2007).

Other Clinical Research

The early topics of clinical psychologists' research included basic psychological science as well as research in psychopathology. Researchers included Julian Rotter (1916–2014), Walter Mischel (born in 1910), Leonard Eron (1920–2007), and Urie Bronfenbrenner (1917–2005). Rotter's (1954) social learning theory included his influential theory of internal versus external locus of control. Mischel's (1968) *Personality and Assessment* pointed out the rather low correlations among measures of the "same" behavior in different situations, bringing into question the concept of personality as traditionally conceived (i.e., trait vs. state). He also contributed ingenious longitudinal studies on children's resistance to temptation, including the famous marshmallow test of self-control (Mischel & Ebbesen, 1970). Eron is well known for his longitudinal research on children's aggression, identifying the stability and predictability of aggressive behavior between 8 and 30 years of age, as well as the strong intergenerational findings in which children who were strongly punished not only were more aggressive but also grew up to be parents who punished their own children harshly (Huesmann et al., 1984). Bronfenbrenner is known for his conceptualization of the role environmental context plays in children's behavior (e.g., Bronfenbrenner, 1979). Bronfenbrenner's (1970) *Two Worlds of Childhood: USA and USSR* showed how teachers and other school officials could wield peer influence to conform to social rules.

Psychopathology researchers have included Paul Meehl (1920–2003), Sarnoff Mednick (born in 1928), Martin Seligman (born in 1942), Edwin S. Shneidman (1918–2009), Norman Farberow (born in 1918), Gerald R. Patterson (born in 1926), Virginia Douglas (born in 1927), Russell A. Barkley (born in 1949), Marsha M. Linehan (born in 1943), and Stanley Sue (born in 1944). Meehl (1954, 1962) did much to persuade clinicians of the importance of genetics in the etiology of schizophrenia, and of the superiority of actuarial prediction over clinical prediction. Over the span of two decades, Mednick (e.g., Mednick, Parnas, & Schulsinger, 1987) used large-scale epidemiological methods to detail the psychiatric history of families of individuals with schizophrenia, alcoholism, and other such disorders through thorough hospital and community records in Denmark. Seligman (1975) drew convincing analogies between the behavioral animal model and depression in humans by studying dogs' reactions to shuttle-box avoidance learning (learned helplessness) with experimental psychologist R. L. Solomon (1918–1995). From this he developed and revised a theory of depressogenic attributional style that predicted which people would be most likely to respond to stress with depressive episodes. Shneidman and Farberow, codirectors of the NIMH-funded Los Angeles Suicide Prevention Center, carried out original research on suicide prevention by studying a large collection of suicide notes (e.g., Shneidman, 1985). Shneidman also established the journal *Suicide and Life Threatening Behavior* in 1968.

Patterson (1974) was a pioneer in the direct observation of family interaction. He developed a coercion theory to conceptualize the role of the family in the development of children's aggressive behavior, and he conducted controlled research on behavioral interventions with these children and their families. Douglas's (1972) research was partially responsible for changing mental health professionals' concept of hyperactivity in children to one of "attention-deficit disorder." As another authority on attention-deficit/hyperactivity disorder, Barkley (1990) carried out research on family interventions with children and adolescents with attention-deficit/hyperactivity disorder as well as on Ritalin, to disentangle the direction of effect in parent–child interaction. As Ritalin normalized children's behavior, mothers tended to back off in their attempts at control, suggesting that it was abnormal child behavior rather than family discipline that caused the problem originally.

Linehan and colleagues (Linehan, 1993; Linehan et al., 2006) developed dialectical behavior therapy, an effective treatment for borderline personality disorder, with an emphasis on suicidal behavior and substance dependence. Sue (e.g., Sue et al., 1991) has researched the disparities in health care available and delivered to ethnic minority groups and has highlighted the importance of cultural competency matching between therapists and clients.

This handful of exemplars demonstrates the growth and strength of research in clinical psychology, a discipline that prides itself on its scientific underpinning and evidence base.

CLINICAL TRAINING IN THE UNITED STATES, REVISITED

The long-term and large-scale federal funding for psychological science after World War II led to an unprecedented expansion of clinical psychology. Between 1948 and 1986, it received more than $231 million in training money, which translated into a remarkable number of graduate students, faculty members, and departments of psychology nationwide (Pickren, 2007; Schneider, 2005). With the GI Bill and the VA and PHS programs training clinical psychologists, clinical psychology became appealing to returning soldiers, as evidenced by the almost 300% increase in the APA's Division 12 membership by 1960. Similar unprecedented growth occurred in related areas of applied psychology, such as counseling and school psychology (Pickren, 2004; Tyron, 1963); indeed, three quarters of all psychology doctorates today are in these health service fields (APA, 2014).

Although federal funding played a major role in expanding the number of clinical psychologists in the discipline, it also brought about increased oversight of training and direction of psychological services and research. This influence affected the development of the discipline, the national organization (APA), as well as the importance of ethnic diversity for all those involved (Geiger, 1993; Pickren, 2004).

Graduates soon began complaining that their clinical programs—despite APA accreditation—were not doing a good job of training them in practice (Pottharst & Kovacs, 1964). The "ideal" Boulder model of training was not ideal for those pursuing practice careers (Levy, 1962; Peterson, 1992). This led to a tumultuous 1960s decade in which criticisms over the weaknesses of the Boulder model, over the lack of Medicare coverage for psychological services, over tension with psychiatry, over CMHC leadership, and over the discipline's uncertain direction as a mental health profession all converged (Pickren, 2007). The civil rights movement also highlighted minority rights and representation, not only across the country but in organized psychology as well (Benjamin & Crouse, 2002; Clark & Clark, 1939, 1940; Pickren, 2004).

Recruitment and retention of minority graduate students and faculty in psychology departments became paramount. These efforts were aided through organizations that represented the interests and needs of ethnic minorities, such as the Association of Black Psychologists (established in 1968), the Association of Psychologists por la Raza (established in 1970), the Asian American Psychological Association (established in 1972), the Society of Indian Psychologists (established in 1973), the National Hispanic Psychological Association (now the National Latina/o Psychological Association, established in 1979). Funding agencies, such as the NIMH and the Ford Foundation, were under pressure from the minority associations and were instrumental in bringing about change by funding conferences to brainstorm ideas on how to increase minority participation in psychology and by establishing minority fellowships (Pickren, 2004).

The Association of Black Psychologists worked to make training programs more relevant to minority students (R. V. Guthrie, 2004; Pickren, 2004; Simpkins & Raphael, 1970). Their efforts coincided with existing attempts within APA to meet professional needs better. The generous federal support of mental health professionals had dramatically increased their power within the traditionally academic APA, to the point where the academicians lost their hegemony, and practitioners began demanding that their professional needs be met (Pickren, 2007).

The NIMH funded the 1965 Conference on the Professional Preparation of Clinical Psychologists in Chicago that paved the way for the Doctor of Psychology (PsyD) degree (Peterson, 1966). Almost half a century after the first proposals for a PsyD degree (see Chapter 1, this volume), the University of Illinois was the first institution to offer such a degree in 1968 (Parloff & Elkin, 1992).

In 1973, the NIMH funded the APA Levels and Patterns of Professional Training in Psychology Conference in Vail, Colorado, to determine the appropriate entry level for professional psychology practice. The conference, however, became better known instead for legitimizing and advancing the PsyD. In contrast to Boulder's scientist–practitioner model, the Vail model emphasized a practitioner–scholar role in which clinical psychologists would be primarily trained to provide psychological services to the public. Since the Vail conference, 64 PsyD programs have been established (Norcross & Sayette, 2014).

The flexibility of the PsyD degree fit well with demands from minority groups for clinical training that was sensitive to their ethnic experience and communities (Simpkins & Raphael, 1970; Williams, 1974). PsyD programs responsive to the changing demographics of the country were able to adapt their curriculum and training to such needs, toward a more inclusive and culturally sensitive psychology (Hall, 1997; Pickren, 2004; Stricker et al., 1990). The election of African American Kenneth B. Clark (1914–2005) as APA President in 1970 helped focus psychologists' attention on social responsibility during the 1970s (Pickren, 2007).

The ethnic minority professional groups served as models for female and gay and lesbian psychologists, who formed similar associations. It is the historically marginalized groups' resistance that forced changes in the training, practice, and theory of mainstream clinical psychology (Pickren, 2007). In these days of increased globalization, multicultural psychology has expanded greatly beyond the Eurocentric psychology of the discipline's birth (Pickren, 2007).

In addition to the Boulder and Vail models, there is now a "clinical scientist" model. One of the architects was Richard McFall (born in 1939), a professor at Indiana University, who published "A Manifesto for a Science of Clinical Psychology" (McFall, 1991). In McFall's view, a psychological clinical scientist is one who is engaged in scientific research, often with colleagues in basic science areas of psychology, related to psychopathology, assessment, or treatment. As such, the clinical scientist devises interventions, evaluates their efficacy, and trains professionals to use them appropriately but is not otherwise involved in service delivery, which has increasingly been taken up by master's-level social workers, counselors, and assorted therapists.

A new system of accreditation was devised specifically for clinical psychological scientists to augment APA accreditation. It was founded in 2008 as the Psychological Science Accreditation System. To date, it has accredited 21 doctoral and internship programs. The Psychological Science Accreditation System has been awarded recognition by the Council for Higher Education Accreditation but not from the Department of Education.

INTERNATIONAL CLINICAL PSYCHOLOGY

After World War II, clinical psychology began to expand internationally, although clinical psychology training does not exist in universities in all countries. Some European countries, such as those in Scandinavia, operate PhD training programs in clinical psychology. Likewise, the standard degree in the United Kingdom is the Doctor of Clinical Psychology. Training is supported by the National Health Service, which is also the principal employer of clinical psychologists there.

In many other European countries, the standard of training is roughly equivalent to a U.S. master's degree, with additional professional training—for example, cognitive behavior therapy—being provided outside the university system. In these countries, doctoral training is intended strictly for those aspiring to academic and scientific careers (Donn, Routh, & Lunt, 2000). In Latin America, clinical training equivalent to a U.S. master's degree allows the graduate to practice psychology.

INTO THE PRESENT

After World War II, clinical psychology evolved from a small, master's-level profession administering tests in the United States to a larger, doctoral-level profession providing comprehensive services across many countries. It changed from a do-it-yourself form of training into a well-funded, systematic, and accredited system. Clinical psychologists were depicted in movies, hosted television shows, and became sought-after "experts" in the fields of mental health, substance abuse, behavioral medicine, interpersonal relationships, self-help, and dozens of other areas concerning health and well-being.

At present, about 240 APA-accredited clinical psychology doctoral programs (both PhD and PsyD) graduate more than 3,600 new doctorates a year; 75% of whom are female, and 74% of whom are Caucasian (7% Asian, 5% Hispanic, 5% African American, and 4% Native American and multiple ethnicities). Of the 63% who were employed full-time, their primary setting was in human services (37%; only 6% in private practice); academia (32%); business, government, and other settings (21%); and schools and other educational settings (8%). Twenty-four percent were working in postdoctorates. Approximately 51,000 (58%) of APA members are licensed (Michalski et al., 2011; Norcross & Karpiak, 2012).

The scope and breadth of this handbook attest to the growing impact of clinical psychology on the domain of health, including the preservation of good health, and the prevention and remediation of ill health. The future of clinical psychology is addressed in Volume 5, Chapter 29, this handbook. What lies ahead is a testament to the many clinicians and researchers who have devoted their careers to the ever-expanding field of clinical psychology.

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CHAPTER 3

INFANT MENTAL HEALTH

Joy D. Osofsky

It is important for clinical psychologists to gain increased understanding that our youngest children can suffer from mental health disorders and that therapeutic services can be effectively applied in the earliest years of life. In this chapter, I provide a definition of infant mental health and a brief history of its development. Then, I elaborate on information about ways to conduct assessments and evaluations followed by descriptions of therapeutic services. Clinical psychologists can conduct and research treatments for children in the earliest years of life, both to prevent the onset of more serious disorders later in childhood and to optimize the development of the child.

DEFINITION OF INFANT MENTAL HEALTH

Infant mental health is defined as the developing capacity of the infant (from birth to 3 years of age) to experience, express, and regulate emotions; form close and secure relationships; and explore the environment and learn—all in the context of cultural expectations (Zero to Three, 2012). The field of infant mental health is multidisciplinary and requires expertise and conceptualization from a variety of perspectives, including clinical practice, research, and public policy. At least two major organizations, Zero to Three and the World Association for Infant Mental Health, have furthered education and knowledge in this field across clinical disciplines that include clinical psychology, social work, counseling, psychiatry, and pediatrics. Zero to Three is a national nonprofit organization that provides professionals, parents, and policy makers the knowledge and skills to nurture early development. The World Association for Infant Mental Health is a global professional organization designed to promote the mental well-being of infants throughout the world and to generate and disseminate knowledge. Areas of emphasis include not only clinical work but also early intervention, early care and education, and parenting (Osofsky & Thomas, 2012). The field of infant mental health has been described as one that is interdisciplinary with focus on the dynamic social, emotional, and cultural forces that shape an infant's development (Fitzgerald, Weatherston, & Mann, 2011).

According to Zeanah and Zeanah (2009), infant mental health is a "multidisciplinary professional field of inquiry, practice, and policy concerned with alleviating suffering and enhancing the social and emotional competence of young children" (p. 6) that health is obviously not restricted to clinical psychology. Much like behavioral medicine, the field of infant mental health is strongly represented by clinical psychologists but not only by them. There is no specialty certification for infant mental health in psychology, and there is also not a psychology organization specifically devoted to it. Nonetheless, a review of those publishing and practicing in the field reveals the heavy presence of clinical psychologists.

Infant mental health may inadvertently be misconstrued as translating psychological problems in infancy and early childhood into "mental illness." An overall goal of infant mental health is to

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minimize the difficulties and suffering that infants may experience and to enhance their development, capacity, and competence. Many continue to believe that if infants have problems, they will "grow out of them," not understanding that babies have the capacity to experience complex emotions and be affected by them. The recognition that exposure to physical and emotional trauma during this time period can contribute to lasting consequences has influenced increased appreciation of the importance of the field and of effective therapeutic interventions.

Unlike most applications of clinical work with adults, if an infant or toddler has a mental health problem, it is often related to ongoing problems in the parent–infant relationship and is most effectively treated from that perspective. For young children, supportive relationships with adults, particularly primary caregivers, are crucial both for physical survival and healthy development. To understand the mental health of an infant, it is essential to be knowledgeable about the biological, familial, socioeconomic, and community factors that influence the baby's experiences over time within the context of important relationships with parents and other caregivers. For clinicians who practice infant mental health, focus needs to be placed on recognizing the importance of infant and toddler emotional, social, and cognitive development as well as competencies unfolding in the context of their caregiver relationships that support both the infant and the caregivers in optimizing development and functioning. As Winnicott (1964) so clearly articulated, "There is no such thing as a baby" (p. 88), meaning that if you describe a baby, you are actually describing a baby with someone because the caregiver–infant relationship is crucial in understanding infant mental health.

Infants are exquisitely sensitive and dependent on their caregiving environment; they cannot exist alone but only in a relationship, be it a good or a poor one. The cultural context of the infant relationship is important for an understanding of infant mental health in that the needs and behaviors of infants may be interpreted differently depending on cultural values and expectations. Families live in different communities and have diverse values, understanding, and expectations about their children's development. Families utilize childrearing practices that are consistent with their culture, beliefs, and how they were raised, and they express these beliefs in various ways (Ghosh Ippen & Lewis, 2011; Osofsky & Thomas, 2012; St. John et al., 2012). As Roy Muir says so cogently in the Canadian Broadcasting Corporation presentation *When the Bough Breaks*, "parenting comes naturally, but it comes naturally the way you learned it" (Canadian Broadcasting Corporation & Docherty, 1995, 60:13).

CONDENSED HISTORY

Pioneers in infant mental health must be recognized in reviewing the history and providing an understanding of where the field began and what it has become. Historical leaders include Mary Ainsworth, John Bowlby, T. Berry Brazelton, Selma Fraiberg, Serge Lebovici, Sally Provence, Rene Spitz, Daniel Stern, and Donald Winnicott, among others. Although psychologists studying infant mental health today may not be as familiar with their work, the groundbreaking contributions of these clinicians and researchers pushed boundaries so that an infant was no longer thought to be a "blank slate." Rather, these pioneers determined much about the functioning of normal infants and identified many risk factors during pregnancy, the perinatal period, and early childhood for the infant. They also highlighted that in addition to supporting the infant's potential, parents and caregivers can contribute to difficulties in development. Further, the pioneers brought attention to the importance of interventions earlier in life to prevent more serious problems later. The early scholars in infant mental health emphasized that infants need to be understood not just as individuals but also in the context of their caregiving relationships. The importance of understanding, intervening, and providing treatment from a relationship perspective continues to be a key element of infant mental health work.

Beginning in the 1940s, Rene A. Spitz (1945, 1965) provided increased understanding of the effects of extreme deprivation on infants and introduced the term *anaclitic depression* on the basis of his observations of severely deprived infants in institutions. He was referring to the emotional deprivation caused by the loss of a love object (parent) that, over time (longer than 5 months), could lead to what he called *hospitalism*. Spitz's studies were the first to show systematically that social interactions with other humans are essential for children's development. He followed two groups of children from birth to 7 years of age. The first group was raised in an orphanage with little human contact and a single nurse with changes in shifts caring for seven children. The second group was raised in a nursery in a prison where their mothers were incarcerated. The mothers were allowed to give their babies care and affection every day, and the babies could see one another and the prison staff throughout the day. By the time the babies were 1 year of age, the motor and intellectual performance of those reared in the orphanage lagged badly behind those reared in the prison nursery. The orphanage babies were less curious and playful, and they were more subject to infections. During their 2nd and 3rd years of life, the children raised by their mothers in prison walked and talked confidently and showed developmental progress comparable to that of children raised in normal family settings. However, of the 26 children reared in the orphanage, only two could walk and manage a few words. Since the time of Spitz's pioneering study, researchers and clinicians, through their research, have continued to show the catastrophic effects of sensory and social deprivation at critical periods in early childhood on children's subsequent development. Through this work, Spitz endeavored to change foundling home and institutional policies by raising public awareness of the importance of nurturing, loving relationships for young children and the devastating effects of separation and loss.

At about the same period, John Bowlby carried out his early work on delinquent and affectionless children and the effects of institutional care, leading to his book *Maternal Care and Mental Health* (Bowlby, 1951). As his work evolved, he believed that new theory was needed to understand early development, which led to his subsequent book, *Attachment: Attachment and Loss, Volume 1* (Bowlby, 1969), through which he articulated new explanatory hypotheses using evolutional biology and ethology for what is now known as human attachment. Bowlby was known as the "father" of attachment theory, and his student who became a well-known psychologist, Mary D. Ainsworth, was known as the "mother."

Attachment describes one specific aspect of the relationship between a young child and a parent with the purpose being to keep a child safe, secure, and protected. Bowlby's (1969, 1988) major contributions focused on patterns of family interactions that were involved in both healthy and pathological development and how attachment difficulties can be transmitted from one generation to the next. He proposed that attachment behavior was an evolutionary survival strategy providing protection for the infant. Bowlby believed that the earliest bonds formed by children with their caregivers have a tremendous impact throughout life. He suggested that attachment served to keep the infant close to the mother, thus improving the child's chances of survival. When Ainsworth joined Bowlby's research team at the Tavistock Clinic in London, they were investigating the effects of maternal separation on child development; through their collaboration, they developed an extensive research base to support the theoretical ideas (Ainsworth et al., 1978). Attachment theory is one of the most widely used and empirically grounded theories related to parenting and early relationships.

Ainsworth's extensive research expanded on Bowlby's original work through her groundbreaking *strange situation* studies showing the effects of a brief separation and reunion with their mothers on children from 12 to 18 months of age. She described three major styles of attachment—secure, ambivalent-insecure, and avoidant-insecure—that could be determined from the *Strange Situation Procedure* (Ainsworth et al., 1978). Main and Solomon (1986) built on this research to develop a fourth attachment style of disorganized-insecure attachment, which is frequently seen in very young children who are exposed to significant trauma.

Several scholars have proposed that the child's attachment—that is, the primary emotional relationships with parents—should be given a prominent role across different disciplines in assessing and treating early childhood problems (Lieberman & Van Horn, 2008). Further, attachment theory is crucial for understanding the effects of abuse and neglect on infants and on dysfunctional parent–infant relationships (Barnett, Ganiban, & Cicchetti, 1999; Cicchetti, Rogosch, & Toth, 2006; Osofsky, 2011). In addition, it is playing an important longitudinal role in understanding adult mental health and clinical interventions in cognitive, behavioral, and psychodynamic psychotherapy (Anda et al., 2006; Danquah & Berry, 2014).

Infant mental health theory continued to be developed by clinicians such as Daniel N. Stern, who contributed seven books in this area, including the following: *The Interpersonal World of the Infant: A View from Psychoanalysis and Developmental Psychology* (Stern, 1986), *Diary of a Baby* (Stern, 1990), and *The Motherhood Constellation: A Unified View of Parent–Infant Psychotherapy* (Stern, 1995). Stern (1995) creatively introduced an understanding of infant behavior as a *port of entry* into the parent–child system as well as the intersubjective world of the infant. He challenged widely held beliefs based on the reductionist approach of research that breaks up the whole into small pieces and promoted his belief that it was necessary to understand the whole infant. Stern emphasized the importance of infant observations and the process of affect attunement (e.g., Stern et al., 1985), both of which play key roles in interpersonal and intersubjective processes. He elaborated on the ideas developed by earlier theorists noting a paradigm shift toward a two-person psychology with the attachment domain reorienting our understanding of development and treatment. Further, from the psychoanalytic tradition, Stern believed that the nonverbal nature of the baby's world allowed for a productive reexploration of unconsciousness, especially the domain of implicit knowledge.

Infant mental health is multidisciplinary, as exemplified by the contributions of pediatricians to the field and as illustrated through the work of T. Berry Brazelton that began in the 1950s (Brazelton, 1984, 1988; Lester & Sparrow, 2010). Brazelton strived to change the prevailing view of newborns at that time when many assumed they could not see or hear. There was relatively little understanding that infants could contribute to interactions, speak through their behaviors, and play a significant role in the development of the parent–child relationship. His major achievement in pediatrics and child development was to raise that awareness as well as to focus attention on the effects of infants and young children's behaviors, activity, and emotional expressions on parents. With colleagues, he developed the Brazelton Neonatal Behavioral Assessment Scale (Als et al., 1977), which is used widely to assess the physical and neurological responses of newborns as well as their emotional well-being and individual differences. The Brazelton Neonatal Behavioral Assessment Scale not only demonstrated the capacities of newborns but also helped pediatricians, mental health clinicians, and others to learn about the importance of observations for understanding development. Later, Brazelton and his colleagues went on to develop the widely used *Touchpoints* model (Brazelton, 1992). He described Touchpoints as periods during the first years of life when children's normal spurts in development can result in disruption in the family system. The goal of the Touchpoints system is to use ongoing observations of children and family experiences to help parents learn more about these expectable developmental periods and to reduce negative interactions that can lead to problems in development such as sleep, feeding, toileting, and peer interactions.

In developing infant mental health as a clinical field, Selma H. Fraiberg played an influential role. She has been credited with coining the phrase "infant mental health" (Fraiberg, 1980) and with inspiring many major contributors to the field, first in Michigan and later in San Francisco. Her focus was in identifying and treating developmental and relationship disturbances in infants. Fraiberg's approach integrated systems theory, psychoanalytic theory, and genetic epistemology in developing the treatment method termed *infant–parent psychotherapy*. Her focus was on the treatment of infants and their parents, and her method was designed to nurture the early attachment relationship, enhance parental understanding of their infant's development and their relationship, and help them in developing ways to interrupt harmful and neglectful care. The strategies she proposed included providing developmental guidance, concrete support, emotional support, advocacy, and infant–parent psychotherapy to satisfy the social and emotional needs of both the infant and parent. Because Fraiberg often carried out this therapy in parents' homes, it was sometimes referred to as "kitchen table therapy" (Fitzgerald et al., 2011; Fraiberg, 1959, 1980). Her approach was elaborated vividly in the important article, "Ghosts in the Nursery" (Fraiberg, Adelson, & Shapiro, 1975).

KNOWLEDGE BASE AND MAJOR ACTIVITIES

Major progress has been made in the past decade in expanding evidence-based psychotherapies in the field of infant mental health. As noted, infant mental health conceptualizes treatment for the infant and parent/caregiver together with the understanding that, frequently, a major part of the problem rests in the relationship. At the same time, effective infant mental health treatments may include adjunctive work such as parental guidance, individual play therapy, and individual psychotherapy for adults who may be struggling with their own mental health disorders, most often depression and anxiety as well as, at times, personality disorders.

The theoretical knowledge base for infant mental health treatments is grounded in attachment theory and integrates psychodynamic, developmental, trauma, social learning, and cognitive–behavioral theories. Two of the most widely used evidence-based therapies are child–parent psychotherapy (CPP; Lieberman & Van Horn, 2005, 2008), using a primarily psychodynamic approach, and parent–child interaction therapy (PCIT; Brinkmeyer & Eyberg, 2003; Eyberg, 2003), using a more behavioral approach. CPP focuses on understanding the meaning of the child's behavior as a self-protective response to trauma and adversity, and it promotes parents' understanding of their child's difficult behavior through the dual lens of attachment and trauma. The overarching goal is to restore safety and the child's trust in the parents' availability as a protector. CPP encourages normal development through engagement with present and future activities, maintaining regular levels of affect arousal, and achieving reciprocity in intimate relationships. A way to gain understanding is through the development of jointly constructed meanings in the young child–parent relationship.

PCIT in contrast, is a cognitive–behavioral model characterized by highly specified, step-by-step, live-coached sessions with both the parent/caregiver and child. Parents learn specific skills through PCIT didactic sessions as they interact with their child. The evidence-based practices, CPP and PCIT, are described in more detail next.

CPP

CPP (Lieberman & Van Horn, 2005, 2008) is an intervention designed for working with infants, young children (0–5 years of age), and their families/caregivers when a traumatic event has been experienced (Toth et al., 2002). However, CPP is also used widely for relationship problems that are not necessarily trauma based. In a study involving preschool children exposed to marital violence, mother–child dyads were randomly assigned to the intervention group or a comparison group, which received case management services plus individual psychotherapy in the community for the mother and/or child at a clinic chosen by the mother. From pre- to posttest, children in the intervention group had a significant decrease in posttraumatic stress disorder symptoms relative to those in the comparison group (Lieberman, Ghosh Ippen, & Van Horn, 2006). In another study of mothers who had experienced major depressive disorder (MDD) since their child's birth, mother–child dyads were randomized to the intervention group or the MDD comparison group, which received other forms of mental health treatment (including psychotherapy and the use of antidepressants and other medication). Mothers with no current or history of MDD and their toddlers were recruited for a nondepressed control group, which received no therapy or treatment. From baseline to the postintervention assessment, the percentage of children whose category changed from insecure to secure was significantly higher for the intervention group than the MDD comparison group and the nondepressed control group (Toth et al., 2006).

If an infant is demonstrating problems with attachment, behavior, emotional regulation, and/or mental health problems, CPP is designed to support and strengthen the relationship between the young child and parents and to help the infant's or toddler's cognitive, behavioral, and emotional development. The focus is on restoring a sense of safety, attachment, and appropriate affect regulation; normalizing traumatic related responses; and jointly constructing a trauma narrative, with the goal of helping the child return to a normal developmental trajectory. It is important for the therapist to attend to the cultural values of the family as part of the treatment process in an effort to understand and be sensitive to differences in parenting practices. The major philosophy underlying CPP is that the attachment system is the organizer of children's responses and problems in infancy and that they are best addressed in the context of the attachment relationship.

One of the important CPP methods is *speaking for baby*, meaning the therapist puts into words for the parent or caregiver what the young child may be communicating through his or her behavior. This helps the parent understand that behavior has meaning and provides an avenue for the parent to gain increased understanding of his or her baby's needs without being told directly. For example, he or she can learn that behavior, even disruptive behavior, is a way for a baby to communicate (Carter, Osofsky, & Hann, 1991). Fraiberg et al.'s (1975) influential article "Ghosts in the Nursery" and, more recently, Lieberman et al.'s (2005) article "Angels in the Nursery" both recognize that the infant's positive experiences in early life play vital roles in the forming of relationships later in life.

The CPP model is broadly tailored, and its core goals can be applied with mothers, fathers, and other caregivers across diverse groups. Culture is considered to be an important aspect of context with cultural issues integrated into CPP (Ghosh Ippen & Lewis, 2011; Lewis & Ghosh Ippen, 2004; Lieberman, 1990). The treatment has been used with different cultural groups in the United States, including Latino (Mexican, Central American, and South American), African American, and Asian (Chinese, Japanese, and Vietnamese) groups. CPP has also been implemented in Israel. The research studies, including four randomized trials, have been conducted with predominantly ethnic minority clients.

PCIT

PCIT is an evidenced-based practice developed by Sheila M. Eyberg for use with young children (2–7 years of age) with significant behavior problems (Brinkmeyer & Eyberg, 2003; Eyberg, 2003). PCIT is designed to change patterns of behaviors by working through the parent–child relationship. PCIT is an assessment-driven and manualized treatment that involves direct coaching of the parent interacting with his or her young child.

There are two phases of PCIT. Caregivers are first taught skills that are associated with the phases and then coached until they achieve mastery of the skills with their child. The goals of the first phase of PCIT (Child-Directed Interaction) include the following: relationship strengthening, improvements in self-esteem, frustration tolerance, anger management, prosocial behaviors, and decrease in negative behaviors. After the family achieves mastery, they move to the second phase: the Parent-Directed Interaction. Here, the focus is on increasing consistency, predictability, and parents' follow-through on an effective positive discipline program with the goals of improving parents' abilities to give effective commands, set appropriate limits, implement contingency management, problem solve discipline situations, and decrease remaining negative child behaviors. Gradual generalization from clinic-based "minding" exercises to "real-life" discipline is then implemented. Families successfully complete PCIT in an average of 12–15 sessions, with gains made in treatment lasting several years.

Studies of PCIT have shown significant improvements in child behaviors reported by caregivers on standardized measures (Chase & Eyberg, 2008). There have been similar findings related to reductions in parenting stress (Harwood & Eyberg, 2006) and maternal depression (Kaminski et al., 2008) as well as generalization to school and to untreated siblings. Recent studies have examined the effectiveness of PCIT with populations beyond those with only externalizing behavior problems. In a randomized controlled trial of families with a history of child physical abuse and neglect, those receiving PCIT showed a re-report rate of less than 20% at 2 years posttreatment; this was significantly lower than the other conditions (treatment as usual, family preservation, and wrap-around services; Chaffin et al., 2004).

PCIT has been successfully tailored to different cultural groups. These include Mexican Americans (McCabe & Yeh, 2009), Native Americans (BigFoot, 2008), and African Americans (Querido, Warner, & Eyberg, 2002). The adaptations try to address concerns about the stigma associated with mental health services as well as different ways of disciplining children.

Other Treatment Approaches

Other therapeutic approaches are used within the infant mental health field. Several of the frequently used treatments are listed below:

- Watch, Wait, and Wonder (Muir, Lojkasek, & Cohen, 1999), while similar to CPP, is a child-led psychodynamic psychotherapy that specifically and directly uses the infant's spontaneous activity in a free play format to enhance parental responsiveness, the child's sense of self and self-efficacy, emotional regulation, and the child–parent attachment relationship. Watch, Wait, and Wonder provides space for the infant/child and parent to work through developmental and relational struggles through play.
- The interaction guidance (McDonough, 2004) model incorporates principles of a family system theory into a multigenerational transactional preventive intervention. The resulting approach focuses treatment on the infant–caregiver relationship rather than on either the infant or the caregiver alone apart from the environmental context. Videotaped observations between the dyad are used in therapeutic interventions with the parent and serve as the therapeutic port of entry.
- Floortime (Greenspan, 1999; Greenspan & Weider, 1997) focuses on developing meaningful adult/child interactions to promote cognitive, social, and emotional development. The goal is to help the child take more initiative, become more flexible, tolerate frustration, sequence longer actions that require planning in the execution, communicate through gestures and words, and take pleasure in learning.
- Minding the Baby (Slade et al., 2005) is an interdisciplinary, relationship-based home visiting program initiated to help young, at-risk new mothers keep their babies (and themselves) "in mind" in a variety of ways. The intervention uses mentalization to develop mothers' reflective capacities and seems particularly well suited to highly traumatized mothers and their families, as it addresses the particular relationship disruptions that stem from mothers' early trauma and derailed attachment history.

Assessment in Infant Mental Health

Most experts in infant mental health agree that an evaluation of an infant needs to include several components that differ from those done with older children. First, as in all child treatment, it is important to develop a working relationship with the parent(s). It is also helpful to learn about the parents' cultural values involving childrearing and, in many cases, the trauma history.

There are a limited number of tests that can be administered to assess developmental functioning in infants and young children under the age of 3 years. The Bayley Scales of Infant and Toddler Development, Third Edition (Bayley, 2006), are a standard series of measurements used to assess the motor (fine and gross), language (receptive and expressive), and cognitive development of infants and toddlers from 1 to 42 months of age. This measure takes between 30 and 90 min to administer, depending on the age of the infant. The scores are used to determine the child's performance compared with norms taken from typically developing children of the same age. The assessment is often used in conjunction with the Social-Emotional Adaptive Behavior Questionnaire that is completed by the parent or caregiver. This questionnaire establishes the range of adaptive behaviors that the child can currently achieve and enables comparison with age norms.

The Wechsler Preschool and Primary Scale of Intelligence—Revised (Wechsler, 1989) can be used when the young child is 2.5 years of age, providing psychometrically sound information on motor, cognitive, language, and social–emotional development.

In addition, the Mullen Scales of Early Learning (Mullen, 1995) can be administered when a child is less than 5 years of age to assess scores on five subscales including Gross Motor, Visual Reception, Fine Motor, Receptive Language, and Expressive Language.

Parent report measures are often included in assessments of infants and toddlers. Three that are used frequently are described below:

- The Vineland Social–Emotional Early Childhood Scales are specifically developed for children ranging in ages from birth to 5 years, 11 months (Sparrow, Balla, & Cicchetti, 1998). The Vineland Social–Emotional Early Childhood Scales assess three domains, including interpersonal relationships, play and leisure time, and coping skills, which result in a social–emotional composite score. The composite score describes the infant's or toddler's ability to pay attention, recognize ways of expressing emotions, work cooperatively with others, observe and develop relationships, and manage and regulate behaviors.
- The Behavioral Assessment System for Children—Second Edition (Reynolds & Kamphaus, 2004) is a measure of a child's behavior and emotional functioning over a variety of domains that can be used for children and adults 2–21 years of age. Using parent report, the Behavioral Assessment System for Children—Second Edition measures social and emotional development, mental health, and parent–child relationships.
- The Child Behavior Checklist (Achenbach & Rescorla, 2001) is a widely used method of identifying problem behavior in children. The preschool forms and profiles span ages 1.50–5 years. The forms obtain parents ratings of 99 problem items plus descriptions of problems, disabilities, what concerns parents, and the best things about the child.

Although assessment measures and parent reports are useful, stability, consistency, and predictability in standardized developmental assessments do not occur until about 5 years of age, and parent-report measures are dependent on parent perceptions. Therefore, both a background interview and observational relationship-based assessment are recommended as standard procedure.

Background interview. A comprehensive background interview should be conducted with the parent or caregiver alone so that an infant or toddler with sufficient receptive language capacities is protected from overhearing material that is not developmentally appropriate. During the interview, it is important to obtain information regarding the biological parents' physical and mental health to help the clinician learn more about possible associations between the child's behavior problems and biological factors. Because experiences of trauma occur frequently as the reason for an infant mental health referral, Lieberman et al. (2005) emphasized that in addition to asking about a parent's history of abuse, neglect, and trauma, including the "ghosts" or negative and frightening experiences from childhood, it is also important to inquire about the "angels" or positive influences from the past. This information is helpful in working with parents because their own childrearing practices emerge from their experiences of being parented, including times of trauma and stress.

Infants and toddlers are frequently referred for mental health evaluations because they are presenting with symptoms that may relate to having experienced a traumatic event. Trauma can be understood in infancy as an exceptional experience in which powerful and dangerous stimuli overwhelm the infant's capacity to regulate emotions. A growing body of research has established that infants may be affected by events that threaten their safety or that of their parents. These traumas can be the result of intentional violence—such as child physical or sexual abuse, or domestic violence—or the result of natural disasters, accidents, or war. Young children also may experience traumatic stress in response to painful medical procedures or the sudden loss of a parent (Lieberman & Van Horn, 2005; Osofsky, 2011). A parent's ability to help an infant or toddler cope with trauma is inextricably tied to his or her own trauma history related to feelings of fear, helplessness, and inability to protect his or her very young child. When the caregiver and infant or toddler can serve as traumatic reminders to each other of the traumatic event, the relationship may be at risk for disruption, which can derail the child's normal developmental trajectory (Osofsky, 2009; Osofsky & Lieberman, 2011). For all of these reasons, it is important for clinicians to consider assessing for a trauma history in their intake with a validated measures assessment, many of which have been studied through the National Child Traumatic Stress Network (http://www.nctsn.org).

If a traumatic experience is the reason for the referral or if trauma is suspected, the clinician can also obtain a trauma history by utilizing a standardized measure such as the Life Stressors Checklist—Revised (Wolfe et al., 1996). Although some clinicians may have concerns about whether it is intrusive to ask about the parent's history, most parents respond positively, believing that the professional is being thorough; they recognize the importance of the clinician listening to what they share. As clinical psychologists know, most individuals do not spontaneously offer personal, potentially embarrassing, information during an interview; however, they generally answer in an honest manner if they are asked direct questions in a nonjudgmental fashion. As in clinical work in general, the competent infant mental health professional should feel comfortable asking personal questions as part of a routine evaluation. If asked by parents how their history is relevant to their young child's behavior, the clinician can explain that many things affect their infant's functioning, and concerning behaviors can be understood better in the context of the environment and the parents' experiences.

For a full trauma history on the infant, the clinician can use the Trauma Events Screening Inventory—Parent Report Revised (Ghosh Ippen et al., 2002). Questions regarding children's behaviors or trauma symptoms may be obtained with the Trauma Symptom Checklist for Young Children (Briere, 2005). Given that many symptom checklists do not cover the full age range—for example, the Trauma Symptom Checklist for Young Children is not standardized for children less than 36 months of age—many clinicians find the interview and observations of the parent and young child to be sufficient. It is important for "trauma-informed" clinicians to recognize that many parents do not equate the frightening experiences in their lives or those of their children as being traumatic. Thus, a parent may deny that his or her child has experienced trauma but later describe traumatic events, such as their child witnessing domestic violence or the violent death of a family member.

During the evaluation, it is also essential to achieve an understanding of the context within which the family lives by obtaining information about family dynamics and support systems. Information regarding the parent's use of community or cultural resources, such as community services and religious involvement, helps the clinician identify sources of strength for the family. Similarly, understanding how the family is affected by issues such as poverty, housing stability, access to transportation, community violence, or discrimination helps the clinician understand the barriers they face and how their environment may affect their relational functioning. Sensitivity to cultural issues is crucial for all clinical work, including infant mental health (Ghosh Ippen & Lewis, 2011; St. John et al., 2012). Clinical experience as well as some research has indicated that engagement in infant mental health interventions and services is difficult and that factors associated with poor uptake and low retention may be related to diversity, including ethnicity, socioeconomic status, and environmental context (Ghosh Ippen & Lewis, 2011). The context of service delivery may influence engagement. For infants, it is crucial that providers be sensitive to ways to engage parents because without adult engagement, it is not possible to make progress in helping the infant or toddler.

Parent–child relationship assessment. In infant mental health, observation is one of the most valuable tools for the clinician to learn about the quality of the relationship. On the basis of both attachment theory and trauma research (Cassidy & Shaver, 2008; Lieberman & Knorr, 2007; Osofsky, 2011; Osofsky & Osofsky, 2013), assessment of an infant's or toddler's functioning includes further observational evaluation within the context of their primary attachment relationship. Clinical practice guidelines promote evaluations that include both the parent and infant to provide a comprehensive picture of the young child's functioning (Cohen et al., 2010).

Because infants and toddlers often do not have extensive language to express themselves, play—especially symbolic play—is an important way to understand what they may be thinking and feeling. In many ways, play is the "language" of very young children. Further, in infant mental health, the clinician is not just concerned with the actual behaviors observed but also the representation of the relationships and the person-specific nature of interpersonal relationships. Infants or toddlers may relate very differently to the various adults in their lives; therefore, to fully evaluate the child's relationships with multiple caregivers, it is important to observe the child separately with each primary caregiver.

The Parent–Child Relationship Assessment is based on the Crowell Observational Assessment (Crowell & Feldman, 1988, 1991; Crowell & Fleischmann, 1993), which was developed for research purposes to learn more about caregiver–child interactions in preschool-age children. The Parent–Child Relationship Assessment has been adapted for use with children as young as 6 months of age, who are able to sit independently, and as old as 5 years of age (Miron, Lewis, & Zeanah, 2009; Osofsky et al., 2007). It includes free play and structured tasks as well as a brief separation and reunion. Given that both parent and child responses are observed across situations, the relationship assessment provides a comprehensive evaluation of the range of behaviors seen in the infant–parent dyad. This assessment is widely used in clinical infant mental health practices (Dickson & Kronenberg, 2011).

Adaptations for younger infants: The Still-Face Paradigm. The Still-Face Paradigm (Mesman, van IJzendoorn, & Bakermans-Kranenburg, 2009; Tronick et al., 1998; Weinberg & Tronick, 1996) is used to assess relationships for infants less than 6 months of age. The Still-Face Paradigm assesses whether parents can read and respond sensitively to their infants' cues and helps the clinician conceptualize more about the history of the parent–infant relationship. The procedure allows the clinician to assess both the infant and parent with brief periods of emotional disengagement when the parent must find alternative ways other than physical comfort to soothe the infant. If a parent has been historically emotionally available to the infant, it is expected that the infant will protest when the parent disengages and is no longer emotionally available. In contrast, an infant who has been neglected will likely not view the parent's expressionless face as something different from usual interactions.

In summary, this section provides a framework for understanding comprehensive relationship-based assessments for infants and toddlers, many of whom may have been traumatized. Ideally, the assessment will use (a) a clinical interview that includes information about the parent perception of the infant and child's trauma exposure, (b) a relationship-based observational assessment, and (c) developmental and social and emotional assessments as needed. The process of assessing the family by utilizing relationship-based measures is of therapeutic value as both the young child and parents begin to feel understood and heard. It often helps the parents begin to make their own connections and to gain an understanding of both their infant's or toddler's reactions and their own responses in relation to them.

Diagnosis in Infant Mental Health

The *Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood* (*DC:0–3*; Zero to Three, 1994) has evolved through the efforts of clinicians associated with Zero to Three. The premise for developing a classification system for young children is that infants have identifiable problems that need to be understood and that diagnosis is often helpful to guide treatment and to provide services for families. The *DC:0–3* was published in 1994 as the first developmentally based system for diagnosing mental health and developmental disorders in infants and toddlers. The diagnostic categories reflected the consensus of a multidisciplinary group of experts in early childhood development and mental health. Three years later, Zero to Three published the *DC:0–3 Casebook* (Lieberman, Wieder, & Fenichel, 1997), which contained illustrative clinical examples. In 2005, Zero to Three published a revision, the *Diagnostic Classification of Mental*

Health and Developmental Disorders of Infancy and Early Childhood, Revised Edition (*DC:0–3R*), to guide clinical formulation, enhance professional communication, and provide a basis for research evaluation. In 2010, an expert Task Force was convened to consider science-based and clinically useful changes to *DC:0–3R* drawing on input from the clinical and research literature, users worldwide, and feedback from recognized experts. An updated and revised version is expected to be published in 2016.

To complement the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (*DSM–IV–TR*; American Psychiatric Association, 2000), the *DC:0–3R* uses a multiaxial framework to allow for examination of the different areas that may influence the clinical presentation. Like the *DSM–IV–TR*, the *DC:0–3R* has five axes: Axis 1, Clinical Disorders; Axis II, Relationship Classification; Axis III, Medical and Developmental Disorders and Conditions; Axis IV, Psychosocial Disorders; and Axis V, Emotional and Social Functioning. The revision of *DC:0–3R* currently under way will take into account the changes related to young children in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (American Psychiatric Association, 2013).

As in diagnosing using other systems, multiple assessments over time are needed to provide an accurate diagnosis. The diagnostic picture should include an assessment of vulnerabilities, difficulties, and adaptations in major developmental areas. A complete evaluation would typically involve (a) parent interviews; (b) direct observations of family functioning; (c) observation of child's individual characteristics; (d) assessment of sensory reactivity and processing, motor tone, and motor planning capacities; and (e) evidence-based standardized assessments. During the evaluation, clinicians should keep in mind that many disorders have causation criteria and that age of onset, severity, duration, and course of symptoms as well as cultural components are important to diagnostic formulations and clinical interventions.

Cultural expectations must always be considered in work with young children and families. Clinicians can achieve multicultural competence with evaluations and treatments recognizing cultural diversity in parenting practices. For example, recognition needs to be given to different styles of communicating feelings between parents and across generations, variations in child discipline practices, emphasis on individual versus group expectations, and fostering or tolerance of individuality among infants. Other issues that differ across cultures relate to role of extended family (especially grandparents), filial piety, and peer relationships.

MAJOR ACHIEVEMENTS

One of the most important achievements in infant mental health is the widespread recognition that infants react to and are affected by exposure to adverse circumstances. They are affected by parental and caregiver mental disorders as well as prenatal and perinatal biological and psychological stress. Infants are not too young to have mental health problems.

Second, early interventions and services are now regarded as both necessary and effective. Providing evidence-based psychotherapies to the young children and their parents can help with current difficulties and can prevent more serious mental and physical health problems. The field of infant mental health has developed and implemented evidence-based therapies, such as CPP and PCIT.

A third landmark accomplishment is the fuller realization that early experiences can have life-long repercussions. For example, longitudinal studies have shown the impact of early trauma on the quality of attachment, cognition, social functioning, and emotional development (Masten, Best, & Garmezy, 1990; Sroufe, 2005; Sroufe et al., 2005).

A fourth accomplishment is the *DC:0–3R*, as described previously. More information than ever is now available for reliably identifying developmental and mental health disorders in young children. Crosswalks have been created to help relate *DC:0–3R* diagnoses to those in *DSM–IV–TR*. Further advances can be anticipated from the Zero to Three Committee working on updates and revisions.

FUTURE DIRECTIONS

The field of infant mental health has grown exponentially in the past decade, which has resulted in increased recognition of intervening early in children's lives to prevent more serious mental health disturbances later in life. Three of the main directions for anticipated future work are described next.

First, given the increased knowledge about the early years, more attention will be paid to developments in neuroscience, genetics, and epigenetics to learn more about factors affecting development as well as potential interventions. The integration of genetics with biological, behavioral, and social science research is now taking into account the scientific awareness that early life experiences have a potential impact not only in a person's lifetime but also on subsequent generations (Spittel, Spotts, & Deeds, 2013). Genetic epidemiologists are beginning to understand how genetic risk can be modulated by environmental factors ranging from the molecular to the cultural (McGue, 2013). The important complexities in genetics and epigenetics frequently relate to direction of effects. For example, unraveling the effects of genetics and epigenetics on the degree of impact of stress reactions and resilience on genetics and epigenetics can be anticipated.

A second key direction relates to understanding more about the effects of early childhood experiences, including health disparities, adversity, and toxic stress during the pre- and perinatal periods and throughout infancy. Negative experiences, such as traumatic exposure, abuse, and neglect, can have significant effects on both development and evolving relationships that nurture development (Anda et al., 2010; Fox, Levitt, & Nelson, 2010; Shonkoff et al., 2012). Three committees of the American Academy of Pediatrics have concluded that early experiences and environmental influences can leave an imprint on the genetic predispositions that affect emerging brain architecture and long-term health. The American Academy of Pediatrics reports (e.g., Shonkoff et al., 2012) also summarize research on the causal mechanisms that link early adversity to later impairments in learning, behavior, and well-being. Work in infant mental health will be enhanced through infusion of trauma-informed services for infants in systems of care, such as child welfare and juvenile courts (Katz, Lederman, & Osofsky, 2010; National Child Traumatic Stress Network, 2013; Osofsky, 2011). It can be anticipated that there will be further growth of interprofessional collaborations that integrate mental health services in pediatric and primary care settings to improve accessibility and quality of services as well as to reduce disparities in care.

A third direction relates to identification and implementation of infant mental health competencies for professionals at different levels of formal education (Korfmacher, 2013). There will be a growing need for more clinicians with expertise to provide services in underserved areas. In this light, clinicians will need to obtain education, training, and experience in infant mental health. With expansion of multidisciplinary and interprofessional components of infant mental health, there is currently no national licensure or credentialing for infant mental health competency. Training programs within several states and organizations have begun to establish a state endorsement process for professionals trained in infant mental health with possible state certification. The goal is to support the infant mental health field and to ensure the highest quality of services for children and families.

In conclusion, the field of infant mental health has come a long way since the pioneering work of so many remarkable theorists, researchers, and clinicians in past decades. Infant mental health is being integrated into training and clinical programs across multiple professions and throughout the world. As many in the field have stated clearly, “Babies can't wait!” Opportunities to educate and train clinicians about advances in this area are welcomed.

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CHAPTER 4

CLINICAL CHILD PSYCHOLOGY

Alan Carr

Clinical child psychology is a specialty of clinical psychology in which the primary focus is on enhancing the well-being of preadolescent children with psychological problems. There is an assumption that this involves taking account of the complex role of biological, psychological, and social systems as children develop across the life span within the context of their culture (Carr, 2006). Within this specialty, psychological assessment, treatment, and prevention methods have been developed to help children when the primary difficulty is a mental health problem. In contrast, pediatric psychology focuses on helping children when physical health problems are the main concern (see Chapter 5, this volume). Clinical child psychologists focus on children 3–13 years of age. In contrast, clinical adolescent psychologists are concerned with mental health problems in young people predominantly between 13 and 18 years of age (see Chapter 6, this volume).

CONDENSED HISTORY

The science, practice, and profession of clinical child psychology began in the early decades of the 20th century on both sides of the Atlantic (Hall & Llewelyn, 2006; Routh, 2011). The scientific foundation of modern child clinical psychology rests on a number of innovations that occurred within the psychometric, psychodynamic, client-centered, behavioral, and systemic traditions of the broader fields of clinical psychology and psychotherapy. In North America, the United Kingdom, Ireland, and elsewhere in Europe, the practice of clinical child psychology developed initially within child guidance clinics. Clinical child psychologists consolidated their professional identity though the formation of subgroups within national psychology associations.

Psychometric Tradition

There is a longstanding practice within clinical child psychology of using quantitative methods to assess children to determine their status with respect to representative samples of their peers on various psychological variables. This psychometric tradition began when Alfred Binet (1857–1911) in France developed the first intelligence tests for assessing children with intellectual and developmental disabilities (Binet & Simon, 1905). This project—along with the seminal factor analytic studies of abilities in the United Kingdom by Charles Spearman (1863–1945)—inspired Cyrl L. Burt (1883–1971) in the United Kingdom and David Wechsler (1886–1981) in the United States to develop psychometric tests of intelligence (Burt, 1909; Wechsler, 1949). These tests informed the development of modern intelligence tests, despite the fact that there has been controversy about the veracity of some of Burt's twin-study data used to support his genetic theory of intelligence (Mackintosh, 1995). Research using intelligence tests has underlined the links between intelligence and culture as well as the problems associated with using tests developed in one culture to assess the intelligence of children in another (Sternberg, 2004). Early intelligence tests paved the way for the development of psychometric instruments to assess many aspects of

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psychological functioning. Psychometric assessment of abilities, attainments, personality, psychological problems, personal adjustment, and psychosocial environment became a central and unique skill of clinical child psychologists.

Herman Rorschach (1884–1922), a Swiss psychoanalyst, in 1921 wrote *Psychodiagnostik*, a volume that formed the basis for the Rorschach Inkblot Test. This projective procedure became one of the most widely used by psychologists around the world and, in recent years, has become one of the most controversial because of the limited psychometric properties of the test (Wood et al., 2003). Clinical child psychologists are divided about whether projective tests, such as the Rorschach Inkblot Test, deserve inclusion in clinical practice.

Psychodynamic and Client-Centered Traditions

In the United States, in the United Kingdom, and throughout much of Europe, a psychoanalytic approach informed the practice of many early clinical child psychologists. This approach involved child-focused play therapy and adjunctive consultation with parents. These practices had their roots in the case study of Little Hans by Sigmund Freud (1856–1939) and in the play therapy of his daughter, Anna Freud (1895–1982). In his seminal case study conducted in Austria, Freud (1909/1977) showed how consultations with Little Hans's father were used to help the boy overcome his phobia of horses. Although Sigmund Freud did not work directly with children, his daughter Anna Freud developed a psychoanalytic approach to play therapy in her work at the Hampstead Nursery in London.

Inspired by the client-centered approach to adult psychotherapy founded by Carl Rogers, Virginia Axline (1911–1988) developed a child-centered approach to play therapy in the 1940s in the United States. This gained widespread recognition through Axline's (1964) book *Dibs in Search of Self*, and many clinical child psychologists adopted Axline's play therapy practices.

Behavioral Tradition

Modern clinical child psychology owes much to early experimental work conducted within the behavioral tradition in North America. In a seminal experiment, John Watson (1878–1958) experimentally induced a phobia of a white rat in a child he referred to as Little Albert (Watson & Rayner, 1920). This inspired Mary Cover Jones (1924) to use behavioral methods to treat another child, Peter, who had a phobia for white rabbits. These studies are the seeds from which contemporary child cognitive behavior therapy (CBT) grew. Most evidence-based treatments within the clinical child psychology specialty have developed within this tradition. These include, for example, behavioral parent training for externalizing problems and coping skills training for internalizing problems (Weisz & Kazdin, 2010).

Systemic Tradition

The systemic family therapy tradition, which emerged on both sides of the Atlantic in the 1950s, has made an important contribution to the development of modern clinical child psychology. Family therapy evolved within child guidance clinics when experimental conjoint meetings involving parents and children were held by pioneering practitioners, including John Bowlby (the originator of attachment theory) in the United Kingdom and John Bell in the United States, who viewed the child's family as both a possible cause of children's problems and as a potential treatment resource. For example, Bell described the case of a boy expelled from school for behavior problems. His treatment focused on ameliorating the family's relationship problems, not on interpreting the boy's intrapsychic fantasies—the standard psychoanalytic approach that would have been taken by most clinicians in the 1950s (Broderick & Schrader, 1991). Contemporary models of family therapy have been developed for a range of child and adolescent psychological difficulties, including conduct disorders, substance use, and eating disorders (Carr, 2012).

Child Guidance Clinics

Child guidance clinics were the service context in which clinical child psychology was first practiced. Lightner Witmer (1867–1956) at the University of Pennsylvania founded the first psychological clinic in 1896, dedicated to helping children with learning disabilities (see Chapter 1, this volume). In 1907, Witmer established the first journal of clinical psychology, *The Psychological Clinic*. By 1914, there were 26 similar clinics in the United States. In the United Kingdom, one of the earliest child guidance centers was established in 1926 in the Children's Department of the Tavistock Clinic in London. By 1939, there were 22 child guidance clinics in the United Kingdom. In the United States and the United Kingdom, the role of clinical child psychologists within child guidance clinics involved the assessment of children using psychometric instruments—the provision of some interventions including educational advice and, in some instances, psychoanalytic play therapy.

Professional Associations and Training

Training in clinical child psychology has occurred in the United States, the United Kingdom, and elsewhere within the context of generic clinical psychology training programs accredited by national psychology associations (Donn, Routh, & Lunt, 2000). In 1959, Alan Ross published the first major U.S. textbook on child clinical psychology, *The Practice of Clinical Child Psychology*. In 1962, Ross also established the Clinical Child Psychology section of the American Psychological Association's (APA's) Division of Clinical Psychology. This section became the Division of Clinical Child Psychology in 1999 and changed its name to the Society for Clinical Child and Adolescent Psychology in 2001. The APA-accredited scientist–practitioner Doctor of Philosophy programs in clinical psychology were introduced in the 1950s and were followed in the 1960s by scholar–practitioner Doctor of Psychology clinical programs. Both doctoral programs involved training in child and adult clinical psychology. In fact, more than half of APA-accredited doctoral programs in clinical psychology offer child clinical tracks, making them the most frequent tracks (Stratigis, Zimmerman, & Norcross, 2014).

The British Psychological Society established the Division of Clinical Psychology in 1966. However, the first diploma-level clinical psychology training program was established in 1947 at the Maudsley Hospital, London. By the early 1990s in the United Kingdom, the professional qualification for clinical psychologists had evolved from diploma, through master's, to the doctorate. A similar trend occurred in Ireland and is occurring in Australia, New Zealand, and Europe. In the United Kingdom, clinical psychology training covers work with children, adults, and people with intellectual disabilities.

Emergence of Evidence-Based Practice

In both the United States and the United Kingdom, evidence-based assessment and intervention have been central to clinical child psychology since the 1980s. In 1977, Smith and Glass published the first meta-analysis of psychotherapy outcome studies and concluded that there was evidence for the effectiveness of psychotherapy in treating psychological problems in both children and adolescents. Eight years later, Casey and Berman (1985) published the first major meta-analysis of psychotherapy studies focusing exclusively on children and adolescents, and they found strong support for the effectiveness of psychological interventions in young people. Once the overall effectiveness of psychotherapy had been established by these and other meta-analyses, the focus shifted to identifying which treatments were most effective for specific problems.

The APA's Division 12 Task Force on Promotion and Dissemination of Psychological Procedures (1995) identified a number of interventions for childhood psychological problems. Special issues of the *Journal of Clinical Child Psychology* (Ollendick, 1998) and the *Journal of Pediatric Psychology* (Kazak, 1999) provided more comprehensive coverage of empirically supported treatments for children's psychological difficulties. In 2008, a special issue of the *Journal of Clinical Child and Adolescent Psychology* (Silverman & Hinshaw, 2008) updated the 1998 review of the *Journal of Clinical Child Psychology*—findings from which are detailed later in this chapter.

In the United Kingdom, the National Institute for Clinical Excellence (http://www.nice.org.uk) was established in 1999, and since then it has produced guidelines for a range of psychological problems in children and adults based on systematic literature reviews. Further developments in the United Kingdom, such as the Children and Young People's Improving Access to Psychological Therapies program in 2010, aimed to up-skill clinical child psychologists and other mental health professionals in evidence-based psychological assessment and treatment skills (http://www.cypiapt.org). From the mid-1990s, edited volumes describing empirically supported interventions for treating and preventing childhood psychological problems were published on both sides of the Atlantic (e.g., Carr, 2009; Weisz & Kazdin, 2010).

KNOWLEDGE BASE

The knowledge base for clinical child psychology is represented in developmental psychopathology and the child mental health literature on classification, epidemiology, assessment, and treatment.

Developmental Psychopathology

Research from the field of developmental psychopathology indicates that a wide range of genetic and environmental, personal and contextual, as well as risk and resilience factors influence the onset and course of these disorders (Beauchaine & Hinshaw, 2013; Cicchetti & Cohen, 2006). These may be classified as predisposing, precipitating, maintaining, and protective factors, as shown in Figure 4.1. This framework offers a useful template for case formulation in clinical child psychology (Carr, 2006).

Classification

The field of clinical child psychology utilizes both categorical and dimensional approaches to classification. The *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (*DSM–5*; American Psychiatric Association, 2013) is the categorical system widely used in North America. Chapter 5 of the *International Classification of Diseases, 10th Edition* (*ICD–10*; World Health Organization, 1992; see also World Health Organization, 1996) is the categorical system widely used in Europe and internationally. Structured interviews for completion by parents and children are used to assess and diagnose childhood disorders with the *DSM–5* and *ICD–10* classification systems—for example, the Schedule for Affective Disorders and Schizophrenia for School-Age Children: Present and Lifetime Version (J. Kaufman & Schweder, 2004) and the Development and Well-Being Assessment (Goodman et al., 2000).

Despite the popularity of the *DSM–5* and *ICD–10* categorical systems, psychometric studies indicate that children's behavior problems are most parsimoniously conceptualized as falling along dimensions that are normally distributed within the population. The two broad-band dimensions that have consistently been identified in a wide range of cultural contexts are internalizing and externalizing behavior problems (Achenbach, Rescorla, & Ivanova, 2012). Internalizing behavior problems include, for example, crying, worrying, and withdrawal and are most acutely problematic for the child rather than for parents or teachers. In contrast, externalizing behavior problems, which include difficulties such as tantrums, fighting, and disobedience, are usually of most concern to parents and teachers rather than children. Achenbach and Rescorla's (2001) Achenbach System of Empirically Based Assessment (ASEBA)—which includes checklists of problems for completion by parents, teachers, young people, and other informants—is one of the most widely used approaches for dimensional assessment of behavior problems. In the United States, the National Institute of Mental Health has developed a dimensional framework known as Research Domain Criteria (RDoC; Cuthbert & Insel, 2013). RDoC will guide future U.S. research on developmental psychopathology, and this research will eventually inform future practice in clinical child psychology. The principal systems within the RDoC matrix are negative valence systems (e.g., fear, anxiety, and loss), positive valence systems (e.g., reward learning), cognitive systems (e.g., attention, perception, and working memory), systems for social processes (e.g., attachment and communication), and arousal systems (e.g., sleep–wake cycle). In each of these domains, researchers identify the genetic, physiological, and behavioral factors that constitute the systems in populations that include clinical and nonclinical cases. This body of knowledge will eventually clarify how dysfunctions in these systems lead to difficulties such as internalizing and externalizing behavior problems.

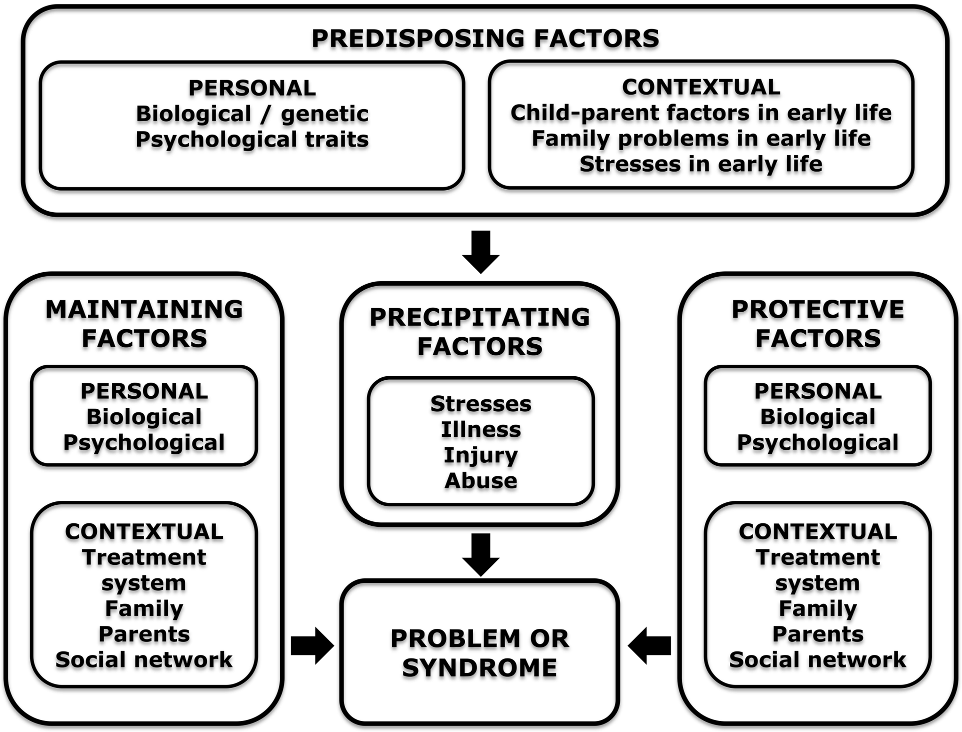

FIGURE 4.1. **Formulation model.**

Epidemiology

Reviews of major epidemiological studies of child psychopathology reflect that in Westernized countries, in any 3–6 month period, about one in four children meet the diagnostic criteria for a psychological disorder (Costello et al., 2004; Merikangas, Nakamura, & Kessler, 2009). More specifically, the prevalence of disruptive behavior disorders (including oppositional defiant and conduct disorders) is about 6.2% (with a range of 4.6%–13.8%); the prevalence of attention-deficit/hyperactivity disorder (ADHD) is about 2.7% (with a range of 0.3%–11.3%); the prevalence of any anxiety disorder is about 8.1% (with a range of 1.9%–23.8%); the prevalence of major depressive disorder is about 4% (with a range of 0.2%–17%); and the prevalence of eating disorders, autism spectrum disorders, and psychotic disorders in children is less than 1%.

The prevalence of psychological disorders varies with age and gender. From childhood to adolescence, there is an increase in rates of depression, panic disorder, agoraphobia, and substance use disorders, and there is a decrease in rates of separation anxiety disorder and ADHD (Costello, Copeland, & Angold, 2011). Disruptive behavior disorders are more common in boys, and anxiety disorders are more common in girls. Before puberty, rates of depression are similar for boys and girls, but by the end of adolescence, the rate of depression among girls is double that of boys (Merikangas et al., 2009).

Drawing definitive conclusions on the cross-cultural epidemiology of childhood psychopathology has been constrained by wide variability in types of standard interviews used for data collection and other methodological issues. In a review of international epidemiological studies of childhood psychological disorders from many countries, Achenbach et al. (2012) found that prevalence estimates varied greatly from county to country due to both actual prevalence differences and methodological variations across studies. However, in a reanalysis of ASEBA data from 44 countries, Rescorla et al. (2012) found that confirmatory factor analyses supported the ASEBA model of eight syndromes fitting within a hierarchical model beneath internalizing and externalizing behavior problem dimensions for all 44 countries. Considerable consistency was found in problems that received relatively low, medium, or high ratings as well as for age and gender effects across societies. However, there were sufficient differences between societies to warrant culturally specific norms for ASEBA instruments. This suggests that each culture may have its own idioms of distress (Nichter, 2010).

MAJOR ACTIVITIES

Clinical child psychologists practice within a range of health service contexts; in the United Kingdom and Ireland, most practice within the public health care system, whereas within the United States, most are in private practices. Clinical child psychologists practice as independent professionals and as members of multidisciplinary mental health teams. They also practice in primary care as well as in specialist secondary and tertiary care contexts. The major activities of clinical child psychologists are the assessment and treatment of children with a range of psychological problems.

Assessment Activities

Assessment is concerned with establishing a thorough understanding of the referred child's main problems, along with relevant predisposing, precipitating, maintaining, and protective factors. Assessments invariably involve parental interviews, child-centered assessment interviews, and psychological testing sessions. Observations of the child in clinic, school, and home contexts may be made. Interviews may be conducted with members of the child's social network, which may include members of the extended family; teachers; and other involved health, educational, social service, and juvenile justice professionals.

The history of the presenting problems and their treatment are invariably covered in routine intake interviews. These typically involve questions about the nature, frequency, and intensity of the problems; previous successful and unsuccessful solutions to these problems; and parents' and children's views on the causes of these problems and possible solutions that they have tried or suspect may be fruitful to explore in the future. In addition, intake interviews may inquire about children's physical, cognitive, and psychosocial developmental history as well as the family's development and functioning with particular reference to parent–child relationships, interparental relationships, and the family's wider social network. Assessment is often informed by a preliminary formulation that contains hypotheses about possible predisposing, precipitating, maintaining, and protective factors, using a conceptual framework, such as that presented in Figure 4.1. These hypotheses are based on information provided by the referrer and the psychologist's knowledge of the research literature on the particular problem in question.

For example, if a youngster presents with conduct problems, the important hypotheses to consider include the possibility that the problem is being maintained by a coercive cycle of parent–child interaction, the child's hostile attributional bias, deviant peer-group membership, or a poor fit between the child's learning needs and the school's teaching resources. If a child presents with school refusal, hypotheses deserving consideration are that the child is experiencing separation anxiety, is being inadvertently reinforced by parents for school nonattendance, has a cognitive bias for interpreting ambiguous situations as threatening, and/or is being bullied at school.

In assessing problem-maintaining factors, a clinical psychologist working from a cognitive behavioral perspective may conduct functional analyses to identify antecedents and consequences of problematic behaviors that may trigger their onset or reinforce them, or negative automatic thoughts that trigger negative mood states. Those who work from a systemic perspective may evaluate patterns of interaction within the family, school, and peer group that maintain or reduce problematic behavior, thoughts, and feelings. Those who work from a psychodynamic perspective may ask about problem episodes to identify the use of maladaptive defenses associated with the occurrence of presenting problems.

As part of general assessment procedures, a range of structured and standardized assessment instruments may be used. To determine children's level of intellectual development, especially in cases of intellectual and developmental disabilities, and patterns of intellectual strengths and weaknesses, especially in cases of specific learning disabilities, intelligence tests may be administered. Widely used tests are regularly revised and renormed and include the Wechsler Preschool and Primary Scale of Intelligence—Fourth Edition (Wechsler, 2012) for children 2.50–7.50 years of age; the Wechsler Intelligence Scale for Children—Fifth Edition (Wechsler, 2014) for children 6–17 years of age; the Stanford–Binet Intelligence Scales, Fifth Edition (Roid, 2003), for children from 2 years of age to adulthood; and the British Ability Scales—Third Edition (Elliott & Smith, 2011) for children 3–18 years of age.

Clinical child psychologists use standardized attainment tests to assess the development of language, reading, spelling, and arithmetic skills, in which problems in these areas are of concern—for example, in neurodevelopmental disorders such as language disorder, ADHD, or dyslexia. The Wechsler Individual Achievement Test—Third Edition (Wechsler, 2009) and the Kaufman Tests of Educational Achievement—Second Edition (A. Kaufman & Kaufman, 2004), which are periodically restandardized, are among the most commonly used psychometric attainment tests administered by clinical child psychologists to assess the achievements of school-age children. A range of tests are used to assess language in preschool children (Kelley, Jones, & Fein, 2004). When children have traumatic brain injury, or neurodevelopmental disorders, clinical child psychologists use a range of neuropsychological tests to assess deficits in attention, executive function, memory, and other cognitive processes (Miller, 2013). Clinical child psychologists invite parents, teachers, or caregivers to complete adaptive behavior scales to evaluate life skills in cases of intellectual and developmental disabilities (Kamphaus, 2003). The Vineland Adaptive Behavior Scales—Second Edition (Sparrow, Cicchetti, & Balla, 2005) are one of the most widely used instruments in this domain.

To determine the nature and severity of behavioral problems, parents, teachers and children may be invited to complete normed behavioral checklists, such as those included in the ASEBA, the Strengths and Difficulties Questionnaire (Goodman, 2001) assessment system, or the Behavior Assessment System for Children—Second Edition (Reynolds & Kamphaus, 2004). When assessments of the severity of particular target symptoms (such as depression or anxiety) are required, problem-specific, self-report normed scales—such as the Depression and Anxiety scales in the Beck Youth Inventories pack (Beck, Beck, & Jolly, 2005) for children 7–18 years of age—may be used. To determine psychiatric diagnoses, structured clinical interviews—such as the Development and Well-Being Assessment as well as the Schedule for Affective Disorders and Schizophrenia for School-Age Children: Present and Lifetime Version—may be used for school-age children, and the Preschool Age Psychiatric Assessment interview (Egger & Angold, 2004) may be used for preschoolers.

In conducting assessments, clinical child psychologists take account of cultural factors. For example, they are sensitive to the language, cultural belief systems and norms, and the idioms of distress specific to clients' culture (Nichter, 2010). They use culturally appropriate testing materials and test norms when available.

Psychological assessment of children with a view to developing a comprehensive formulation often involves a process of recursive reformulation. That is, interviews and tests are used to check out the accuracy of preliminary formulations and hypotheses, and then information from tests and interviews are used to modify preliminary hypotheses and formulations to improve their accuracy. In practice, the first round of interviewing and testing may not only lead to a modification of the preliminary formulation but may raise further hypotheses that need to be checked out with further interviews or tests. The process comes to an end when a formulation has been collaboratively constructed by the psychologist and clients that fits with significant aspects of the child's problems, with parents' and social network members' experiences of these problems, and with available knowledge about similar problems described in the scientific literature. This formulation is a minitheory that explains key factors that may have contributed to the development and maintenance of the presenting problem, explains important protective factors, and suggests avenues for intervention. In addition to providing information for formulation, the process of assessment also serves as a way for the psychologist, child, parents, and members of the child's social network to build working alliances that are essential for effective therapy (Carr, 2009).

Formulation example for oppositional defiant disorder. John is a 5-year-old boy with a difficult temperament and specific learning difficulty, and these predispose him to have difficulty with rule-following and with learning to read at school. In situations where he is tired, hungry, excited, or overly academically challenged, he has great difficulty following instructions from parents and teachers. He believes that such instructions are personal criticisms rather than requests for cooperative behavior. At home and at school, his parents and teachers typically respond to his uncooperative behavior by inadvertently reinforcing it. They either offer explanations and attention, which positively reinforces his lack of cooperation, or they withdraw, which negatively reinforces his lack of cooperation by removing what he perceives to be an aversive stimulus (i.e., instructions and directions for rule-following). On the positive side, John's parents and teachers are highly motivated to resolve the problem, and John had relatively good premorbid adjustment prior to entry to primary school, which precipitated the onset of his current difficulties. The main goal for John is to learn self-soothing skills for containing his frustration and negative affect when he is tired, hungry, excited, or overly academically challenged. The main goal is for John's parents and teacher to agree on a plan to provide John with greater support at home and school to help him with his reading; to minimize situations where he is asked to do challenging academic work when he is tired, hungry, or excited; to reinforce him for using self-soothing skills for containing negative affect; and to give him brief periods of time-out when his behavior is oppositional or aggressive.

Formulation example for oppositional separation anxiety. Paula is a 9-year-old girl who has had difficulty attending school for 3 months. On those mornings when her father has left early for work and her mother has taken her to school, she has noticed her mother's intense concern for her well-being when she complained of mild headaches or stomach aches. In response to this, Paula has had thoughts about possible dangers that may befall her mother while she is at school. These thoughts have led to strong feelings of anxiety, headaches, and abdominal pains. When she has insisted that she could not attend school because of these feelings and symptoms, her mother has comforted her and returned her to bed, thereby inadvertently reinforcing the separation anxiety. With regard to protective factors, it is noteworthy that this pattern did not occur when Paula's father brought her to school, probably because he did not display intense concern for Paula's well-being or reinforce school avoidance. Paula is a very bright girl (with a full scale IQ in the high average range and attainments above the 90th percentile) and is aware of the differences in the levels of anxiety she experiences when her mother or father is bringing her to school. Paula may have been predisposed to developing separation anxiety because of a genetic vulnerability to anxiety (suggested by a family history of anxiety disorders) and a family culture, particularly within the mother's family of origin, in which there is a high sensitivity to illness. The main goal is for Paula, her parents, and her teacher to agree and implement a return-to-school plan and for Paula to learn anxiety-management skills to help her tolerate the anxiety associated with this process.

Psychological Treatments

Psychological treatments hail from diverse theoretical orientations and typically entail conducting a series of sessions with the child as well as linking, as appropriate, with parents and members of the child's wider network, including school teachers and other involved professionals. Most treatments also involve regular monitoring of the child's main problem by the child, parents, and, in some instances, other members of the child's social network. Usually specific treatment procedures are based on a psychological theory of problem formation and resolution, and in the case of evidence-based treatments, the procedures are specified in a treatment manual. In the following sections, evidence-based treatments for a number of relatively common child mental health problems are presented, along with a description of these problems and factors associated with them.

Externalizing behavior problems are evident in children diagnosed with oppositional defiant disorder, conduct disorder, and ADHD as well as in some young people diagnosed with substance use problems. These conditions are of particular concern to clinical child psychologists for a number of reasons (Kazdin, 1995; Pliszka, 2008). They are prevalent and entail high economic and social costs. Many children with these disorders have comorbid academic, social, emotional, and relationship problems. When they reach adulthood, a significant proportion of children with these conditions show poor psychological, social, and occupational adjustment. Many adults who had childhood externalizing behavior problems are frequent users of physical and mental health services and have frequent involvement with courts and prisons. Externalizing behavior problems have a high rate of intergenerational transmission.

Oppositional defiant disorder, conduct disorder, and substance use disorder. Oppositional defiant disorder involves persistent rule-breaking and aggression confined to the home context, whereas with conduct disorder, children and adolescents engage in antisocial behavior not just at home but also at school and in the wider community (American Psychiatric Association, 2013; World Health Organization, 1992). Oppositional defiant disorder and conduct disorder are maintained by child-focused factors (such as self-regulation and social skills deficits and deviant peer group membership), problematic parenting practices, and family network disorganization. Clinical child psychologists use empirically supported treatment programs to address each of these sets of factors (Eyberg, Nelson, & Boggs, 2008; Waldron & Turner, 2008). Child-focused programs help children develop self-regulation and social problem-solving skills, and they reduce contact with antisocial peers. Parent-training programs enhance parenting practices. Family-based programs improve the quality of parent–child relationships; decrease family disorganization; reduce children's involvement in antisocial peer groups; and coordinate families' networks of health, education, social service, and justice professionals. The duration of treatment is usually matched to the severity, chronicity, and complexity of the child's problems and may range from weekly sessions over 3–4 months for less severe cases to multiple sessions per week over a year for more severe cases. Sessions may be conducted in various contexts, including consulting rooms, schools, community settings, or clients' homes. Child-focused skills development programs and parent-training programs may be conducted in individual or group formats.

Examples of child-focused interventions that meet APA criteria for well-established or probably efficacious treatments (Eyberg et al., 2008) include anger control training (Larson & Lochman, 2011), Kazdin's (2010) problem-solving skills training, and Webster-Stratton and Reid's (2010) Incredible Years child training program. In these programs, children learn to use self-regulation and social problem-solving skills. Self-regulation skills include self-talk and various coping strategies. Problem-solving skills include framing problems in solvable ways, generating solutions, weighing pros and cons of each possible solution, making decisions, and evaluating outcomes of these decisions. During treatment, psychologists model, shape, and reinforce skills and give corrective feedback. Games and role-play situations are used for skills training, beginning with simple situations and moving on later in treatment to complex interpersonal anger-provoking social situations or situations in which children are being invited into antisocial peer group situations. Children practice skills learned during treatment in vivo between sessions, and then they review these experiences in later sessions.

Examples of evidence-based, parent-focused programs that meet APA criteria for well-established or probably efficacious treatments include Forgatch and Patterson's (2010) Oregon model for parent management training, Zisser and Eyberg's (2010) parent–child interaction therapy, Sanders and Murphy-Brennan's (2010) suite of Triple P programs, Kazdin's (2010) parent management training, and Webster-Stratton and Reid's (2010) suite of Incredible Years parent-training programs. A critical element of all behavioral parent-training programs, which derives from Patterson's seminal work at the Oregon Social Learning Center, is helping parents develop skills for increasing the frequency of children's prosocial behavior (through attending, reinforcement, and engaging in child-directed interactions) and for reducing the frequency of antisocial behavior (through ignoring, time-out, contingency contracts, and engaging in parent directed interactions; Forgatch & Patterson, 2010).

Immediate feedback, video feedback, and video modeling have been used to facilitate skills development in various parent-training programs. With video feedback, parents learn child management skills by watching videotaped episodes of themselves using parenting skills with their own children. In Zisser and Eyberg's (2010) parent–child interaction therapy, parents are directly coached in child-management skills through a "bug in the ear" while the therapist observes their interaction with their children from behind a one-way mirror. In Webster-Stratton and Reid's (2010) Incredible Years program, parents learn child management skills through viewing video clips of actors illustrating successful and unsuccessful parenting skills. The effectiveness of behavioral parent-training programs may be enhanced by concurrently engaging children in child-focused programs that aim to remediate deficits in self-regulation and problem-solving skills (e.g., Kazdin, 2010; Webster-Stratton & Reid, 2010).

Whereas parent-training programs have been developed primarily for treating preadolescent children, the treatment of adolescents—11 years of age and older—is the primary focus of family-based approaches. Most empirically supported family interventions for adolescent conduct disorder target both conduct problems and substance use, and they take account of the fact that the majority of children and adolescents with substance use disorders have comorbid conduct disorders. Brief strategic family therapy (Robbins et al., 2010), functional family therapy (Alexander et al., 2013), multisystemic therapy (Henggeler & Schaeffer, 2010), and multidimensional family therapy (Liddle, 2010) are examples of family interventions for adolescent substance use disorders that are well-established or probably efficacious by APA criteria (Waldron & Turner, 2008). Furthermore, the efficacy of these family-based approaches in ameliorating externalizing behavior problems is supported by meta-analytic evidence (Baldwin et al., 2012).

These family intervention programs have much in common. All involve a series of conjoint family sessions in which parents and adolescents participate. In these sessions, family members develop a shared understanding of how externalizing behavior problems and substance use are maintained by the way in which young people and their parents interact with each other and with members of their wider social network, including the young person's peer group and involved professionals. The development of joint communication, negotiation, and problem-solving skills is facilitated. Psychologists support parents and adolescents in using these skills to strengthen their relationships, agree on house rules and related rewards and sanctions, enhance parenting practices, and help teenagers reduce their antisocial behavior and substance use. To support this process, conjoint family sessions may be supplemented with meetings attended by various network members, including adolescents; parents; and involved professionals from education, health, social services, and justice agencies. Treatment intensity is matched to problem severity, and in some treatment models—for example, multisystemic therapy—a 24/7 on-call service is provided.

Attention and overactivity problems. ADHD (American Psychiatric Association, 2013) and hyperkinetic disorder (World Health Organization, 1992) are characterized by persistent overactivity, impulsivity, and difficulties sustaining attention that are typically present from early childhood. The Conners 3rd Edition rating scales (Conners, 2008) are particularly useful in assessing the presence and severity of ADHD. Functional analysis may be used to identify antecedents and consequences of target problem behaviors that trigger and reinforce them and to inform behavioral interventions. Vulnerability to ADHD, unlike oppositional defiant disorder and conduct disorder discussed in the preceding section, is largely constitutional, although parenting style, educational placement factors, and children's self-regulation and social skills affect the course of the disorder (Thapar et al., 2013).

To improve the adjustment of children with ADHD, clinical child psychologists use behavioral parent training, behavioral classroom management, and behavioral child-focused skills training programs to target these three domains. All three types of programs were classified as well-established therapies by APA criteria in Pelham and Fabiano's (2008) review. Behavioral parent-training programs, as described in the previous section, enhance parenting practices and lead to improved adjustment, particularly within children's families. Behavioral classroom management programs equip teachers with skills to help children with ADHD improve their school-based adjustment. Intensive child-focused skills training programs help children improve their adjustment in peer group settings.

With behavioral classroom management programs, psychologists advise classroom teachers on the use of contingency management procedures—such as reward programs, point systems, and time-out—to modify specific target behaviors (Du Paul & Stoner, 2003). They also help teachers to use parent–teacher liaison meetings and daily report card systems so children can be reinforced at home for engaging in positive behavior at school.

Office-based weekly CBT and social skills training is ineffective in treating ADHD (Pelham & Fabiano, 2008). However, intensive child-focused skills training programs, conducted in summer camp settings, help children improve their peer-group adjustment (Pelham et al., 2010).

Although behavioral programs alone have been shown to improve the adjustment of children with ADHD, in clinical practice, they are often offered in combination with stimulants, such as methylphenidate (Hinshaw, Klein, & Abikoff, 2007). Methylphenidate has an immediate effect on the symptoms of ADHD. However, symptoms return once children stop taking medication. Also, methylphenidate adversely affects growth. For these reasons, behavioral programs alone, or multimodal programs in which the dosage of medication is kept to a minimum, are arguably preferable to long-term use of high doses of methylphenidate (Brown et al., 2006).

ADHD is a chronic neurodevelopmental disorder, and so psychological services are optimally provided within the context of a chronic care model of service delivery. Evidence-based clinical child psychology services for children with ADHD should involve multimodal treatment that includes family, school, and child-focused behavioral programs combined with stimulant therapy, spanning at least 6 months, in the first instance. For effective long-term treatment, infrequent but sustained contact with a multidisciplinary service over the course of the child's development should be made available so that at transitional points within each yearly cycle (such as entering new school classes each autumn) and at transitional points within the lifecycle (such as entering adolescence, changing school, or moving to a different house) increased service contact may be offered.

Treatment of Internalizing Behavior Problems

Internalizing behavior problems are evident in children diagnosed with anxiety and depressive disorders. These disorders are of particular concern to clinical child psychologists because if untreated they may lead to the development of a socially restricted lifestyle, may lead to academic underachievement, and may persist into adulthood. Depression also increases the risk of self-harm and suicide.

Anxiety disorders. Anxiety disorders in children include selective mutism, separation anxiety disorder, phobias, social anxiety disorder, generalized anxiety disorder, panic disorder, obsessive compulsive disorder (OCD), and posttraumatic stress disorder (PTSD; American Psychiatric Association, 2013; World Health Organization, 1992). All are characterized by excessive fear of particular internal experiences or external stimuli or situations as well as avoidance of these. The feared stimulus in selective mutism is speaking to teachers and other unfamiliar adults; for separation anxiety, it is separation from parents; and for phobias, it is specific creatures (e.g., animals), events (e.g., injury), or situations (e.g., meeting new people). In generalized anxiety disorder, children believe that many aspects of the environment are threatening, and they also fear that they are losing control of the worrying processes. In panic disorder, somatic sensations of arousal, such as increased heart rate, are perceived as threatening because they are expected to lead to a full-blown panic attack. With PTSD, internal and external cues that remind the child of the trauma that led to the condition elicit anxiety. With OCD, stimuli that evoke obsessional thoughts elicit anxiety. For example, situations that are believed to carry risk of contamination may evoke obsessional ideas about cleanliness and anxiety about contamination. A wide range of psychometrically robust and clinically useful child- and parent-report screening instruments for childhood anxiety disorders is also available (Hunsley & Mash, 2008).

Anxiety disorders are maintained by cognitive, behavioral, and social factors (Essau & Ollendick, 2013). Some of the more important cognitive factors are a perceptual bias and hypervigilance for threatening stimuli, cognitive distortions—notably, catastrophizing about the consequences of entering anxiety-provoking situations—and inaccurate and untested beliefs about the dangerousness of anxiety-provoking situations or stimuli. Negative reinforcement of avoidance of anxiety-provoking stimuli is the main behavioral process that maintains anxiety disorders. That is, when children avoid anxiety-provoking stimuli, this reduces anxiety and brings a sense of relief that strengthens the avoidant behavior. With regard to social factors, childhood anxiety disorders are maintained by interactions with parents, teachers, and peers, which inadvertently reinforce children's anxiety-related cognitive processes and avoidant behavior.

Both individual and group-based CBT programs that target cognitive, behavioral, and social factors that maintain childhood anxiety disorders are demonstrably effective, and they have been classified as well-established or probably efficacious by APA criteria (Barrett et al., 2008; Manassis, 2013; Silverman, Ortiz, et al., 2008; Silverman, Pina, & Viswesvaran, 2008). These programs involve children learning relaxation and other coping skills to manage anxiety associated with exposure to feared situations. In these programs, children also identify a range of feared situations and organize these into a hierarchy from the least to the most anxiety-provoking. Concurrently, parents are trained to prompt their children to enter increasingly anxiety-provoking situations, reward their use of anxiety-management skills, ignore their avoidant or anxious behavior, and manage their own anxiety. Exposure to anxiety-provoking situations may be imaginal, in vivo, or media/virtual reality assisted. This anxiety management treatment approach was systematized in the 16-session Coping Cat program for treating separation anxiety, social anxiety, and generalized anxiety disorders in children (Kendall, Furr, & Podell, 2010). Many current evidence-based anxiety management programs for children and their parents are based on the same principles (e.g., Iizuka, Barrett, & Morris, 2013).

CBT programs have been developed for specific anxiety disorders, including selective mutsim, school refusal, OCD, and PTSD. With selective mutism, children are unable to speak to teachers or adults with whom they are unfamiliar. In a systematic review of 23 case studies and uncontrolled single group outcome studies (Cohan, Chavira, & Stein, 2006), tentative support was found for CBT programs that involve anxiety management training, gradual exposure to anxiety provoking social situations such as speaking in school, and concurrent shaping and reinforcement of successive approximations to appropriate speaking behavior in classroom situations. By APA criteria, this treatment protocol would be classified as experimental.

School refusal is often a manifestation of separation anxiety disorder. Systematic reviews have concluded that behavioral family therapy leads to recovery for more than two thirds of cases, and this improvement rate is significantly higher than that found for individual therapy (Heyne & Sauter, 2013). Effective treatment begins with assessment of factors within the family and school context that inadvertently trigger anxiety or reinforce avoidance of school entry. In light of a formulation based on this assessment, children, parents, and teachers are helped to collaboratively develop a return-to-school plan. This includes coaching children in relaxation and other coping skills for managing anxiety associated with school attendance as well as identifying a hierarchy of increasingly anxiety provoking stages through which they will progress in a planned way. Parents and teachers are trained to reinforce children for using anxiety management skills during this gradual return to school plan. Treatment spans a number of weeks with initial intensive contact followed by regular weekly meetings. By APA criteria, this treatment protocol would be classified as possibly efficacious.

Children with OCD engage in repetitive rituals to reduce anxiety associated with cues such as dirt or lack of symmetry. In severe cases, children's lives become seriously constricted due to the time and effort they invest in compulsive rituals. Also, family life comes to be dominated by attempts to accommodate to, or prevent, these rituals. A series of trials has shown that exposure and response prevention programs—with and without selective serotonin reuptake inhibitors, such as Sertaline—are effective in alleviating symptoms in 40%–85% of cases of pediatric OCD, are more effective than selective serotonin reuptake inhibitors alone, and meet the APA criteria for a probably efficacious treatment (Barrett et al., 2008; Moore et al., 2013). Effective programs span about 14 sessions and include both child-focused and family interventions. Exposure and response prevention is the principal child-focused element of the program. With this, children are helped to construct hierarchies of increasingly anxiety-provoking cues (e.g., a list of increasingly "dirty" situations). They are exposed to each of the cues in these hierarchies, commencing with the least anxiety-provoking. During exposure, they resist urges to engage in compulsive anxiety-reducing rituals (e.g., hand washing) until habituation occurs. They initially learn relaxation and coping skills to help them manage anxiety evoked by the exposure and response prevention process. Family intervention involves psychoeducation about OCD and its treatment. It also includes helping parents and siblings support children with OCD to complete exposure and response prevention exercises and to avoid inadvertently reinforcing their compulsive rituals.

PTSD is characterized by anxiety-provoking intrusive memories and images of traumatic events, the use of various coping strategies to avoid these intrusive experiences or cues that elicit them, and hyperarousal. Trauma-focused CBT is one of treatments of choice for children with PTSD, and it meets the APA criteria for a well-established treatment (Leenarts et al., 2013; Silverman, Ortiz, et al., 2008). Trauma-focused CBT spans 12 weeks and involves concurrent sessions for children and their parents as well as periodic conjoint parent–child sessions (Cohen, Mannarino, & Deblinger, 2006; Deblinger & Heflinger, 1996). The child-focused component involves anxiety management training in which children learn relaxation and coping skills. They then use these skills to manage anxiety associated with exposure to a hierarchy of increasingly anxiety provoking trauma-related cues and traumatic memories to facilitate trauma processing and habituation. As part of this process, children are helped to write and repeatedly reread, and reedit, a narrative of their traumatic experiences. This narrative work exposes children to traumatic memories in a controlled way and also helps them to modify trauma-related cognitive distortions. Concurrent work with parents and conjoint sessions with children and parents focus on helping parents create a secure and safe home environment for their children as well as manage their children's posttraumatic behavior problems appropriately.

When PTSD occurs as a result of intrafamilial sexual abuse, children learn assertiveness and safety skills, and they address victimization, sexual development, and identity issues in child-focused sessions. With regard to family work, it is essential that offenders live separately from victims until they have completed a treatment program and have been assessed as being at low risk for reoffending. Concurrent work with nonabusing parents and conjoint sessions with abused children and nonabusing parents focus on helping parents to develop supportive and protective relationships with their children and to develop support networks for themselves.

Depressive disorders. Major depressive disorder is an episodic condition that, in children, is characterized by low or irritable mood, loss of interest in normal activities, and most of the following symptoms: psychomotor agitation or retardation, fatigue, low self-esteem, pessimism, inappropriate excessive guilt, suicidal ideation, impaired concentration, and sleep and appetite disturbance (American Psychiatric Association, 2013; World Health Organization, 1992). Episodes may first appear in middle childhood and last from a few weeks to a number of months and recur periodically over the lifecycle with interepisode intervals varying from a few months to a number of years.

By APA criteria, CBT has been classified as a well-established treatment for depression in both children and adolescents, and interpersonal therapy has been classified as a well-established treatment for depression in adolescents only (David-Ferdon & Kaslow, 2008). CBT programs target cognitive and behavioral factors that maintain depression (Verduyn, Rogers, & Wood, 2009), whereas interpersonal therapy aims to modify social factors that maintain low mood (Jacobson & Mufson, 2010). In CBT, children learn to challenge pessimistic beliefs and to entertain alternative optimistic ways of interpreting life events. Children also are helped to increase the rate of pleasant events in their lives and to use social skills or problem-solving skills to provide them with positive experiences. In interpersonal therapy, the focus is on helping young people identify and address social factors that maintain their low mood. Grief, interpersonal conflicts, role transitions, social skills deficits, and challenges associated with parental separation are the main social factors considered in interpersonal therapy. In both CBT and interpersonal therapy for depression, treatment spans about 4 months. Young people are offered psychoeducation, and they learn mood-monitoring skills. In some programs, parents are provided with psychoeducation, and they are helped to support their children's recovery from depression.

There is emerging evidence from initial controlled trials that attachment-based family therapy may be an effective intervention for depressed adolescents 11 years of age and older (Diamond, Diamond, & Levy, 2014). With this approach, in a series of conjoint family sessions and individual sessions with the depressed adolescent and parents, treatment progresses through stages that focus on reframing depression as an attachment problem, repairing parent–adolescent attachment, and building family competency. By APA criteria, attachment-based family therapy is currently an experimental treatment, but it has the potential to develop its evidence-based due to its emergence from a robust research program.

In some instances, particularly in cases of moderate to severe depression, clinical child psychologists may provide psychological interventions for a depressed child within the context of a multimodal program that includes antidepressant medication and psychotherapy (Ahn, Yakutis, & Frazier, 2012). Such programs are based on a growing body of evidence for the effectiveness of antidepressant medication in moderate to severe childhood depression. However, optimism about the effectiveness of antidepressants for children is tempered by controversy over increased suicide risk associated with antidepressant use in young people.

Treatment of Ethnic Minority Children

An important concern for clinical child psychology is the effective treatment of ethnic minority youths. A growing body of research informs practice in this area. A review of studies of the effects of psychological interventions on children and adolescents from ethnic minority groups, principally African Americans and young people of Hispanic/Latino ethnicity, found that a number of the evidence-based treatments outlined in earlier sections of this chapter were probably or possibly efficacious (Huey & Polo, 2008). Examples include multisystemic therapy for African American youths with conduct disorder and brief strategic family therapy for Hispanic/Latino youths with conduct disorder; combined behavioral treatment and stimulant medication for African American and Hispanic/Latino children; trauma-focused CBT for African American children; and CBT for Hispanic/Latino young people with depression. In most studies in which the effects of ethnicity on outcome were examined, ethnicity did not adversely affect children's capacity to benefit from treatment.

Other Activities

Although assessment and treatment are the main activities of clinical child psychologists, they also engage in a range of other activities, including prevention, forensic work, consultancy, and research.

Prevention. Prevention programs have been developed for children at risk of a wide range of disorders. They include the provision of support services and training to young disadvantaged parents or parents of vulnerable infants; preschool intervention and parent training for children with neurodevelopmental disorders such as autism spectrum disorders; and school-based interventions for children at risk for anxiety, depression, or victimization. All of these sorts of prevention programs are distinctive insofar as they are based in psychological theory. For example, the Penn Resilience Program, a school-based intervention, is based on Seligman's theory of learned optimism, and it prevents depression in children at risk for mood disorder by helping them develop an optimistic (rather than a pessimistic) cognitive style as well as social and problem-solving skills (Brunwasser, Gillham, & Kim, 2009).

Forensic work. In the forensic domain, clinical child psychologists provide courts with reports on complex child and family assessments in cases of child welfare or maltreatment, parental separation or divorce, and offending behavior. With regard to child welfare and maltreatment, psychological assessments address questions such as factors that contributed to maltreatment, supports required by families to reduce the risk of further maltreatment, and treatment required to help children recover from maltreatment. With regard to parental separation and divorce, psychological assessments address questions such as the optimal custody, access, and coparenting arrangements for children following parental separation. Forensic psychological assessments of children who have engaged in offending behavior throw light on factors that contributed to this behavior as well as the supports and treatment required by children and families to reduce the risk of further offending behavior.

Consultancy. Clinical child psychologists offer consultancy to colleagues in a variety of contexts, including multidisciplinary teams attached to inpatient and outpatient facilities, schools, foster parents, and residential child care staff. In all of these contexts, the consultation process involves providing colleagues with a distinctly psychological perspective on understanding and ameliorating children's difficulties.

Research. Clinical child psychologists conduct research programs to expand the scientific knowledge base for the specialty of clinical child psychology. This research includes studies of the epidemiology of childhood psychological problems to throw light on the incidence of and prevalence of childhood mental health problems. It includes studies in developmental psychopathology concerned with the identification of biological, psychological, and social risk and protective factors associated with psychological disorders. Clinical child psychologists also conduct research on innovative assessment, treatment, and prevention procedures.

KEY ACHIEVEMENTS

The major achievements of clinical child psychology include bringing attention to childhood disorders, establishing multifactorial frameworks for conceptualizing children's mental health problems, developing psychometric assessment instruments, developing evidence-based treatments and prevention programs, and providing and offering general and specialty training in clinical child psychology. Today, there is widespread recognition that childhood disorders merit psychological investigation. A PsycLIT search in 2014 identified more than 54,000 publications with the term "childhood disorder" in the abstract.

Theory

Within clinical child psychology, theories that attempt to account for childhood psychological problems in terms of single factors such as genetics, early trauma, family adversity, recent stressful life events, reinforcement contingencies, cognitive styles, temperament, personality traits, and coping strategies have given way to complex multifactorial theories and conceptual frameworks (Beauchaine & Hinshaw, 2013; Cicchetti & Cohen, 2006). These complex theories point to the role of biological, psychological, social, and cultural risk and protective factors at various stages in the etiology of childhood disorders, and they have implications for multielement treatment and prevention programs that target specific factors within these etiological models (Carr, 2002, 2006).

Assessment

Within clinical child psychology, assessment instruments with strong psychometric properties have been developed to assess intelligence, achievements, neuropsychological functioning, adaptive behavior, behavior problems, temperament, personality, attachment, and other aspects of children's functioning (Saklofske, Reynolds, & Schwean, 2013). Because these instruments are reliable, valid, and normed, many are useful for making clinical decisions about treatment needs of children with psychological difficulties and for monitoring treatment-related changes.

Prevention and Treatment

Evidence-based treatment and prevention programs have been developed for a number of common childhood psychological problems (Carr, 2002; Silverman & Hinshaw, 2008). A series of meta-analyses involving more than 200 studies and 11,000 cases shows that between two thirds and three quarters of children with psychological problems improve with psychological intervention and that effect sizes for child psychotherapy are similar to those found in meta-analyses of adult psychotherapy studies (Carr, 2009).

Training

In the United States, specialty training in clinical child psychology is provided by more than half of APA-accredited doctoral programs in clinical psychology (Stratigis et al., 2014). In the United Kingdom and Ireland, clinical child psychology is an integral part of the nonspecialist clinical psychology training model used in these countries.

FUTURE DIRECTIONS

The next decade will see significant developments in clinical child psychology in the areas of theory, assessment, prevention, treatment, and training. More detailed multifactorial theories will be developed for specific problems. These theories will include more precise predictions about the relative contributions of predisposing, precipitating, maintaining, and protective factors in biological, psychological, and social domains (Beauchaine & Hinshaw, 2013). These models will contain greater detail about interactions among factors—for example, Gene × Environment interactions—and greater detail about links between genetic factors, neurobiological processes, and psychological processes (Dodge & Rutter, 2011). These multifactorial theories will inevitably lead to the development of integrative models of psychotherapy practice as well as models for integrating psychological and psychopharmacological treatments (Brown et al., 2006; Norcross & Goldfried, 2005).

There will be an increase in the use of computers, tablets, smartphones, and other information technology (IT) devices to support psychological assessment procedures. The administration, scoring, interpretation, and reporting of results using IT devices will continue to become increasingly sophisticated and user-friendly for psychologists and clients. For example, the Psychological Corporation has developed a system for administering, scoring, interpreting, and reporting a range of widely used tests (including the Wechsler Intelligence Scale for Children) using two computer tablets (http://www.pearsonclinical.com.au/home). With this system, cases of traditional testing materials, manuals, record forms, stopwatches, and calculators are no longer required because all of these functions are contained within the IT system. IT-supported testing systems have the potential to lead to fewer errors and to be more time efficient, and there is some evidence from the adult literature that clients preferred them to traditional assessment procedures (Bush et al., 2013).

Prevention and treatment programs will increasingly be conceptualized within a stepped care model (O'Donohue & Draper, 2011). Within stepped care, highly intensive interventions are offered only when cases have multiple, complex, severe, or chronic difficulties, or after cases have failed to respond to interventions of lower intensity. Brief assessment with the provision of bibliotherapy or computer-based intervention with minimal psychologist contact are examples of low-intensity interventions, suitable for patients with mild problems or those at-risk of developing problems. Time-limited, group-based skills training programs for children or parents are examples of interventions of intermediate intensity. High-intensity interventions involve the provision of longer term or inpatient-based programs to individual children and their families. Stepped care services in which clients with greater need receive more intensive treatment take account of variability in case complexity, the high demand for clinical child psychology, and the scarcity of these services. In this context, the development of low-intensity, web-based interventions requiring minimal therapist contact will be prioritized. The computer-based version of the Coping Cat anxiety management program for children is a good example of such an intervention (Kendall et al., 2010).

To facilitate decision making about movement from lower to higher levels of stepped care service delivery models, web-based systems for regularly administering brief assessment instruments to clients and for providing periodic feedback to psychologists on the severity clients' main problems are particularly helpful. Systems like these have been developed for fine-tuning psychotherapies to clients' needs so as to prevent deterioration and dropout (Sexton, Patterson, & Datchi, 2012).

For complex cases that do not respond to low or moderate intensity treatment, enhanced treatments will be developed to match with clients' vulnerabilities, needs, cultural backgrounds, and goals. For example, particularly vulnerable children from poorly resourced families with complex needs and multiple goals require intensive services that address children's and parents' needs and goals. This may involve combining child, parent, and family-focused interventions, as occurs, for example, in multisystemic therapy and multidimensional family therapy for adolescent conduct and substance use problems (Henggeler & Schaeffer, 2010; Liddle, 2010). This may also involve combing psychological and pharmacological interventions—a strategy that has proven particularly effective in ADHD and major depressive disorder (Brown et al., 2006). When ethnic minority children and families have difficulty engaging with services or responding to treatment, culturally adapted treatments that include procedures for enhancing engagement will be developed. There will also be scope for matching clients with therapists from the same ethnic minority group, although research findings on the effects of ethnic matching of clients and therapists on outcomes in adults with mental health problems are highly variable (Cabral & Smith, 2011).

Dissemination of evidence-based psychological therapies will increase and will build on recent progress in this area (Herschell, McNeil, & McNeil, 2004). The development, evaluation, and refinement of dissemination systems will facilitate the introduction of evidence-based practices into the curricula of graduate clinical psychology training programs, continuing professional development programs for experienced clinical child psychologists, and staff training programs for clinical teams in community settings (Southam-Gerow et al., 2012; Tabak et al., 2012). To be effective, these systems will have to address ideological, economic, cultural, and practical barriers to the introduction of evidence-based practices. They will also have to include initial training and ongoing supervision processes that lead to the sustained delivery of evidence-based treatments with a high degree of fidelity. Multisystemic therapy (Henggeler & Schaeffer, 2010), functional family therapy (Alexander et al., 2013), the Incredible Years (Webster-Stratton & Reid, 2010), and the Oregon model (Forgatch, Patterson, & Gewirtz, 2013), parent-training programs are examples of empirically supported treatments that have well-developed dissemination systems. In disseminating evidence-based training, it will be important to include cultural adaptations of these programs within the dissemination process. Effective adaptations take account of the norms, values, world views, and explanatory models for presenting problems of ethnic minority cultures as well as the use of culturally appropriate metaphors and symbols in treatment (Cabassa & Baumann, 2013).

The way in which current training in treatments operates requires a significant time commitment because psychologists who work with a range of client groups have to undergo training in a variety of treatments. The packaging of a set of transdiagnostic clinical skills into modules that may be applied across a range of problems and the delivery of training and supervision in developing these skills using the Internet may prove to be a useful dissemination strategy. There is some evidence that clients show more rapid recovery when experienced therapists are trained using a transdiagnostic modular system rather than a series of individual treatment manuals for treating mixed caseloads of children with various internalizing and externalizing behavior problems (Weisz et al., 2012). The developments outlined earlier will further consolidate the position of clinical child psychology as a vibrant specialty within the profession and science of clinical psychology.

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CHAPTER 5

PEDIATRIC PSYCHOLOGY

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This chapter provides an overview of pediatric psychology, including a description of professional organizations and a summary of the history of the field. Three key components of the knowledge base of pediatric psychology are presented: (a) child development and normative competence, (b) coping and adapting in child health, and (c) the importance of families and other systems in working with children in health care. These are followed by a description of pediatric psychology settings and activities. Evidence-based practice and key contributions of pediatric psychologists are presented, with emphasis on the role of families and the impact of culture and diversity. The integration of science and practice is a theme illustrated with examples from asthma, diabetes, cancer, abdominal pain, and obesity. The chapter concludes with a discussion of future directions in pediatric psychology.

DEFINITION

Pediatric psychology is a specialty addressing physical, cognitive, social, and emotional functioning and development as they relate to health and illness in children, adolescents, and families. As articulated in the mission statement of the Society of Pediatric Psychology (SPP; Division 54 of the American Psychological Association [APA]), pediatric psychologists promote the health and psychological well-being of children, youths, and their families through science and an evidence-based approach to practice, education, training, and advocacy.

Pediatric psychologists collaborate with pediatricians across nearly all major components of children's health. Many activities are related to chronic pediatric health conditions, such as diabetes, sickle cell disease, or cystic fibrosis. Pediatric psychologists concern themselves with medical conditions that previously resulted in child death but now have increased likelihood of survival, albeit with medical and psychosocial sequelae, such as cancer, premature birth, or congenital heart disease. Other potentially life-threatening health situations, such as injuries, are also important areas of work for pediatric psychologists. Pediatric psychology also focuses on assessments and interventions for behavioral, cognitive, and neurodevelopmental disorders. Prevention and health promotion provide many additional opportunities for pediatric psychologists, as have the application of behavioral interventions to medical treatment, such as coping with pain or addressing challenges in adherence to treatment, across conditions. Finally, pediatric psychologists join pediatricians in advocacy for children's health across health care, educational, and social service systems.

PROFESSIONAL ORGANIZATIONS AND PUBLICATIONS

The SPP provides the major professional home for pediatric psychologists. SPP offers many opportunities for members, including a newsletter (*Progress Notes*), an annual conference, a mentoring program, and special interest groups. SPP sponsors

http://dx.doi.org/10.1037/14772-005
APA Handbook of Clinical Psychology: Vol. 1. Roots and Branches, J. C. Norcross, G. R. VandenBos, and D. K. Freedheim (Editors-in-Chief)

APA Handbook of Clinical Psychology: Roots and Branches, edited by J. C. Norcross, G. R. VandenBos, D. K. Freedheim, and M. M. Domenech Rodríguez

two scholarly journals. The *Journal of Pediatric Psychology* (*JPP*) publishes primarily original research reports on a variety of topics. It has grown consistently since its first volume in 1976 and now publishes 10 issues per year (a newsletter that was the predecessor of *JPP* published from 1969 to 1975). In 2013, SPP launched a second journal, *Clinical Practice in Pediatric Psychology*, devoted to professional and applied topics in the field. The *Handbook of Pediatric Psychology* (Roberts & Steele, 2009), with a fifth edition in preparation, provides a regularly updated compendium of the major areas in pediatric psychology.

Within the APA, pediatric psychologists frequently also affiliate and assume leadership roles within the Association of Psychologists in Academic Health Centers (http://www.div12.org/section8), the Society of Clinical Child and Adolescent Psychology (http://www.clinicalchildpsychology.org), the Society for Child and Family Policy and Practice (http://www.apa.org/divisions/div37), and Health Psychology (http://www.health-psych.org). These organizations publish journals such as *Health Psychology* and the *Journal of Clinical Psychology in Medical Settings*, among others.

Historically, pediatric psychologists came from fields such as school psychology, family psychology, and clinical health psychology, in addition to clinical child psychology and clinical psychology. Thus, no single sequence of training prepared one to be a pediatric psychologist, and much of the training was "on the job." Licensure in all of professional psychology has been generic and not specific to a specialty. However, the title of "pediatric psychologist" is self-applied or used within a hospital setting, for example, but is not one that is recognized by state or provincial licensure. Clinical child psychology (which incorporates pediatric psychology) is a recognized specialty by the APA. Focused competencies and skills are needed for gaining hospital privileges; obtaining board certification in recognition of those competencies can be acquired through the American Board of Clinical Child and Adolescent Psychology (e.g., Finch et al., 2012). Competencies have been presented for health service psychology (Health Service Psychology Education Collaborative, 2013) responding to health care reform and positioning psychology as a profession of health service providers (Rozensky & Janicke, 2012).

Pediatric psychologists also belong to and participate as leaders in pediatric organizations. An example is the Society for Developmental and Behavioral Pediatrics (http://www.sdbp.org), a multidisciplinary, international organization founded in 1982 to improve the health of infants, children, and adolescents. The Society for Developmental and Behavioral Pediatrics focuses on research, teaching, and clinical practice. About 10% of its membership is composed of psychologists, and three psychologists have served as president. Given that medicine is organized around illnesses, the involvement of pediatric psychologists in pediatric subspecialty groups and the development of strong collaborations with pediatricians are critical in the development of the field. For example, there is a behavioral sciences committee within the Children's Oncology Group, which is the clinical trials collaborative group for pediatric cancer. Pediatric psychologists also play leadership roles (often related to research) in national organizations such as those dedicated to pain and diabetes, collaborate on programmatic development, serve as editorial board members and editors of medical journals, and integrate psychological contributions in conferences and professional activities of these organizations.

BRIEF HISTORY

Pediatric psychology as a field developed to fill identified needs that were notably not being met in medical settings. Pediatric professionals confronted numerous health and behavioral problems that would more successfully be resolved through an integrated medical–psychological approach (Roberts, 1986). The founding of pediatric psychology is typically ascribed to Logan Wright, often described as the "father of pediatric psychology," when Wright (1967) published "The Pediatric Psychologist: A Role Model" in the *American Psychologist*.

The development of pediatric psychology, however, began much earlier in the United States with Lightner Witmer in 1888, who worked with pediatricians treating children with developmental and pediatric conditions (Routh, 1990). Over time, pediatricians and psychologists worked together on individual cases, but little formal development of the field occurred as psychology in general was defining itself. Nonetheless, various calls were issued in both pediatric as well as psychological venues for greater collaboration of the disciplines to benefit children and families with psychological needs in pediatric settings. Arnold Gesell, who held both a medical degree and a psychology doctorate, saw the potential contributions of clinical psychology in children's medical treatments (Gesell, Goddard, & Wallin, 1919). J. E. Anderson (1930) foresaw psychologists assisting with child assessment and parent training in a presentation to the American Medical Association. Later, Richmond (1967), in a presentation to the American Pediatric Society, articulated that clinical psychologists could contribute in pediatric settings by working with children's behavioral problems. Kagan (1965), a psychologist, called for a "new marriage" of pediatrics and psychology in a prominent medical journal (the *American Journal of Diseases of Children*, now *JAMA* [*Journal of the American Medical Association*] *Pediatrics*). An example of this collaboration was published in a pediatric journal 2 years later (Smith, Rome, & Freedheim, 1967). Wright's (1967) article met with greater acceptance than previous writings, and the conceptualization became a realization, in part attributed to Wright's organizational savvy in securing buy-in from leaders in clinical psychology.

Additionally, much of the drive for psychologists' involvement in pediatrics came with the more effective prevention or control of diseases that had previously killed or impaired children. These improvements resulted from developments in sanitation and disease control through public health and immunization from devastating diseases such as polio and smallpox. Medical interventions became more effective in treating previously life-threatening illnesses such as cancer and diabetes. Survival rates posed new challenges to medical personnel through the different types of patient cases presenting in pediatric clinics and hospitals, such as managing emotional and behavioral problems, responding to negative psychological sequelae during and following treatments, treatment adherence (previously labeled medical compliance), adjustment to disease and treatments, and parenting issues for children with medical conditions. Pediatricians had limited training to respond to these challenges, and they rarely had sufficient time in their practice to address them. Many clinical or clinical child psychologists had neither the training nor the experience to manage these problems referred from pediatricians. Thus, a new psychological expertise needed to be developed drawing from a number of traditions to respond adequately to the challenges posed by these medical, developmental, psychological, behavioral, emotional, and educational problems presenting in pediatric settings. In the late 1960s, other children's hospitals and pediatric clinics were hiring psychologists, leading to interest in establishing the field more formally.

Wright (1967) called for a formal organization for pediatric psychologists that could specify training experiences and assist in the development of applied research. SPP was established in 1968 by Wright, Lee Salk, and Dorothea Ross as a special interest group within the Section on Clinical Child Psychology of the Division of Clinical Psychology of the APA. At its inception, SPP had less than 100 members (there are now more than 1,000 members), most of whom had backgrounds in clinical or clinical child psychology and whose work encompassed clinical care, research, teaching, and administration. SPP subsequently became a section in that division. In 2000, SPP became Division 54 of the APA.

From its inception, the purpose of SPP and *JPP* was serving psychologists in pediatric medical settings such as children's hospitals, child guidance clinics, and child development centers. For example, Wright (1967) defined the field as dealing "primarily with children in a medical setting which is nonpsychiatric in nature" (p. 323). A similar setting-based definition was published in the masthead of *JPP* in 1976 which indicated, "The field and the contents of this Journal are defined by the interests and concerns of psychologists who work in interdisciplinary settings such as children's hospitals, developmental clinics, and pediatric or medical group practices." By 1988, it was clear that the field's coverage had expanded, so the *JPP* stated its mission as publishing articles in the

> interdisciplinary field addressing the full range of physical and mental development, health, and illness concerns affecting

> children, adolescents, and families . . . [such as] the relationship between psychological and physical well-being of children and adolescents including: understanding assessment, and intervention with developmental disorders; evaluation and treatment of behavioral and emotional problems and concomitants of disease and illness; the role of psychology in pediatric medicine; the promotion of health and development; and the prevention of illness and injury among children and youth. (Roberts, La Greca, & Harper, 1988, p. 2)

There is considerable overlap between pediatric psychology and clinical child psychology (see Chapter 4, this volume), and the training of pediatric psychologists often involves a strong grounding in clinical child psychology. In general, clinical child and adolescent psychology focuses on psychopathology, whereas pediatric psychology addresses psychological concerns related to children's health and illness. Pediatric psychology is oriented toward normative reactions to illnesses and injuries. There are also differences in practice models and settings, as is illustrated throughout this chapter. Pediatric psychologists typically practice in "integrated" settings and work collaboratively as part of health care teams, rather than more traditional psychological practice models.

Pediatric psychology grew dynamically through individual and collective contributions to the research evidence base, expansions to clinical practice, and flexibility in addressing key topics in pediatrics. Pediatric psychology includes the assessment and diagnosis of and treatment interventions for the behavioral and emotional concomitants or sequelae of disease, developmental disorders, and injury and psychological and developmental conditions that affect the development of and recovery from pediatric medical conditions. With regard to the "marriage" of pediatrics and psychology, "this relationship retains some of the vibrancy of its development and creative concepts, with a continual growing together as the 'marital' arrangement matures" (Roberts, Aylward, & Wu, 2014, p. 4).

KNOWLEDGE BASE

Although many fields contributed to the knowledge base for pediatric psychology, three concepts are key. First, the field is built on recognition of child development and understanding children and their families in health-relevant contexts. Second, pediatric psychology is concerned broadly with how children and their families cope with and adjust to medical stressors. Third, children must be viewed within the context of not only their families but also other systems that affect health and well-being.

Child Development and Normative Competence

Children in the health care system are first and foremost children. Therefore, pediatric psychology is heavily rooted in developmental psychology, and pediatric psychologists bring a developmental framework to their work. The range of ages for patients in pediatrics is broad, ranging from newborns and infants through adolescence. As youths with significant health concerns enter young adulthood, the developmental considerations for pediatric psychology have expanded to include consideration of this older age group (see Chapter 6, this volume). Table 5.1 summarizes key developmental factors that affect the practice of pediatric psychology from infancy through adolescence.

Coping and Adapting in Child Health

Broadly speaking, pediatric psychology research and practice relates to fostering adjustment and coping in the context of medical conditions that vary considerably in their severity, course and impact, and treatment. There are many acute stressors associated with treatment, including those that are short lived and routine (e.g., venipunctures, injections); invasive procedures (e.g., bone marrow aspirates, catheters); and side effects from medication, radiation, and surgical procedures. The course for some conditions is relatively well understood and proceeds

TABLE 5.1

Developmental Tasks and Implications for Health and Illness

Child age	Key developmental tasks	Implications for health/illness
Infancy/Toddlerhood	Parent–child attachment, learning to self-soothe Fine and gross motor development, exploration of environment Oral-motor development, feeding and speech skills Object permanence, sense of self, separation and stranger anxiety Development of verbal and nonverbal communication skills Solitary/parallel play gives way to symbolic and cooperative play Struggle for independence (“I can do it myself”)	Early hospitalizations may affect parent–child bonding (feeding, holding, caretaking). Hospital stays, medical visits, and procedures may increase separation/stranger anxiety. Physical disability and neurocognitive impairment may affect exploration of environment. Illness and/or parent anxiety may reduce opportunities for self-soothing, autonomy, and socialization.
Preschool-Age	Increasingly sophisticated language and motor skills Greater independence with self-care activities (dressing, toileting) Symbolic and cooperative play Egocentrism, unable to see situation from other’s point of view Focus on only one aspect or dimension of a problem Animism, belief that inanimate objects have human feelings/intentions	Illness, physical disability, and/or hospital stays may restrict activity level and opportunities for self-care and socialization. Egocentrism and inability to focus on multiple aspects of a problem may prevent understanding of reasons for procedures, treatments, or hospitalizations. Separation from parents may result in anxiety.
School-Age	Play cooperatively, show empathy, awareness of varying perspectives Understand/describe feelings, understand consequences of actions Importance of peer relationships, identification of a “best friend” Increasing independence with self-care activities, completing chores Think logically about concrete events, difficulty with abstract concepts Ability to focus on multiple parts of a problem at once Increasing self-regulation, ability to conform to standard of behavior	Long absences from school and friends due to illness or hospital stays may be challenging. Illness, physical disability, and/or hospital stays may limit autonomy and opportunities for self-care. The child may understand parts of illness or treatment without a clear understanding. Overhearing adults talk about illness or treatment may cause anxiety.
Adolescence	Pubertal maturation Increased risk-taking behavior, “illusion of invulnerability” Development of abstract reasoning and individual values and morals Increased autonomy and responsibility, increased focus on peers Searching for identity, starting to develop and explore sexuality Intense emotions with developing emotion regulation skills Increased self-consciousness (“imaginary audience”), egocentrism	Hormonal changes may affect illness or response to treatment. The adolescent may have difficulties with adherence to treatment due to illusion of invulnerability and desire to conform. Illness and/or parent anxiety may reduce opportunities for autonomy and socialization. Increased emotionality may result in adjustment difficulties. Challenge of defining oneself as separate from illness.

toward recovery in many cases (e.g., healing from fractured limbs, recovery from an acute infection that required hospitalization), whereas others have a more variable, progressive, or uncertain course that could result in death (e.g., organ transplantation, cancer, cystic fibrosis). Still others are lifelong chronic conditions that will require adjustments over time (e.g., HIV, diabetes). In general, children with pediatric illness must learn to adjust to life changes imposed by treatment (e.g., limitations on activity or diet in diabetes, adherence to treatments for cystic fibrosis, and managing acute and chronic pain). Most families are able to cope and adjust to the demands of treatment without demonstrating psychological dysfunction, typically with the support of family, community (i.e., neighbors, schools), and health care team members.

Like adults, some children prefer to learn all about their medical conditions and treatments, whereas others tend to avoid this type of information. Coping will vary by age, both in terms of the experience and understanding of stressors and the strategies likely utilized. For example, distraction is more effective with younger children, whereas guided imagery, relaxation, and self-hypnosis tend to be effective for older children and adolescents (Cohen, 2008). For children, pain and anxiety are often intertwined, requiring interventions that can address both. The potential pain and distress associated with medical procedures may be amplified if the child is also separated from his or her parent(s). As cognitive skills develop with age, children tend to have a more sophisticated understanding of their health conditions. Pediatric psychologists work with children and their families to determine what approach is most appropriate.

Families and Other Systems

Children are generally treated in the context of their families, and an emphasis on family centered care is shared with pediatrician colleagues. A social ecological framework (Kazak, Rourke, & Navsaria, 2009) is often used to understand the multiple influences on the child, highlighting the importance of looking at subsystems of the child's social world that play prominent roles in adjustment and outcomes. Social ecology pervades the field and can be seen through this chapter in the discussion of clinical care, research, and training. Meta-analyses and systematic reviews document that parents of chronically ill children—mothers and fathers—experience considerable distress and burden related to parenting (Cousino & Hazen, 2013), often with a trajectory of improved adjustment over time (Vrijmoet-Wiersma et al., 2008). Although parent–child relationships are affected, the overall picture that emerges across this literature is one of competence and adjustment (Pinquart, 2013). A persistent myth is that the experience of having an ill child will necessarily be destructive to parents' marriages; this has been repeatedly shown to be unsubstantiated (Syse, Loge, & Lyngstad, 2010). Some studies suggest that single parents may experience more strain and distress than those with partners (R. T. Brown et al., 2008). The extent to which living in a multigenerational family household or receiving parenting assistance from extended family protects single parents from this strain and distress is not yet fully understood, but is important to understanding the experiences of parents and families from diverse backgrounds.

Families are complex systems, and there are many ways in which family functioning may be either an asset or a hindrance in the context of childhood illness and health. On the basis of a large empirical literature, factors associated with ongoing family distress include preexisting characteristics of the child (age, temperament, behavior), the illness and treatment, family structure (lone parent, teenage parent), financial concerns that can be exacerbated by illness and treatment, psychopathology of family members, a history of family dysfunction and lack of social support, and parental beliefs about the course and outcomes of treatment (Kazak, Rourke, & Navsaria, 2009). A family's cultural background influences management of and adjustment to pediatric illness, including attributions and beliefs about the illness, styles of coping, and the extent to which families disclose illness information or reach out for support (Gray et al., 2014). Siblings of children with chronic illnesses tend to be resilient despite having potential vulnerabilities (Vermaes, van Susante, & van Bakel, 2012). Understandable and potentially persistent reactions to their brother or sister's illness and treatment—including fear, worry, sadness, school difficulties, and struggles with perceived lack of attention and status in the family—are common (Alderfer et al., 2010). Underlying family processes supportive of well-being and protective in the face of illness, such as family routines and rituals, provide avenues for intervention (Fiese, 2006).

The social and peer relationships of children with health concerns are also critically important in understanding adjustment. Health-related issues that affect the ways that children interact with their peers include missing school, pain, fatigue and medical constraints that alter activities, and diseases or treatments that affect the central nervous system (CNS; La Greca, 1990). Across diseases, there are consistent findings related to the generally adaptive nature of peer relationships for children with health problems, the more significant effect when a child has CNS disease or treatment, and the different perspectives obtained on these relationships from the children, their peers, parents, and teachers (Reiter-Purtill, Waller, & Noll, 2009).

Aspects of the health care system in which the child's illness is managed are also important for child adjustment and outcomes. Geographic accessibility of the hospital or clinic may result in improved attendance at medical appointments and a higher likelihood of returning for pediatric psychology follow-up, particularly for those without reliable transportation. Culturally linked behaviors (e.g., eye contact, body language, communication style), assumptions about a family's beliefs or preferences, and availability of racially and linguistically diverse medical providers may affect child and family comfort and adherence to medical recommendations (Committee on Pediatric Workforce, 2013). Family-centered care practices, in which family members are treated as partners with medical staff in the care of the child, may result in improved health literacy and illness self-management (Kuo et al., 2012).

MAJOR ACTIVITIES

The major activities of pediatric psychologists (Roberts et al., 2014) include the following:

- psychosocial services for pediatric health conditions (e.g., fostering coping and adjustment to the diagnosis of a chronic illness, improving adherence to a medical treatment regimen, pain management, school reintegration);
- psychological services for mental health problems appearing in medical settings along with a pediatric problem;
- assessment and treatment for psychological problems presenting in a medical setting without a concomitant medical condition (e.g., through primary care referrals for attention-deficit/hyperactivity disorder);
- programs for health promotion, disease and injury prevention, and early intervention;
- assessment, intervention, and programming to improve functioning for children and adolescents with intellectual and developmental disabilities; and
- advocacy for public policy supporting children and families and promoting public health advancements.

Like other clinical psychologists, pediatric psychologists provide clinical services, in this case to children and families for health-related concerns, and train psychologists and other health care professionals to assess and intervene with pediatric populations. Pediatric psychology has a strong research base, and this work has informed basic knowledge about children and families in health care and the translation of knowledge into practice. Increasingly, pediatric psychologists have also provided relevant research findings about effective services for children (e.g., Kazak et al., 2010) and have advocated for policy changes in health care financing and service delivery (Rozensky & Janicke, 2012).

Assessment

The process of assessment may include clinical interviews with the child and family members, formal testing (cognitive, psychoeducational, neuropsychological) and child- or parent-report questionnaires, observations of the child and family, and interviews with health care providers. Pediatric psychologists often see patients on the basis of health care provider referral or, sometimes, self-referral (parent, patient). The information that psychologists collect in evaluating the referral question to formulate a treatment plan must be coordinated with other members of the treatment team, including other behavioral health specialists who may be working with the child and family (e.g., social workers, child life specialists, psychiatrists). A special issue of *JPP* (Cohen, La Greca, et al., 2008) features a set of articles that used specific criteria to identify well-established, approaching well-established, and promising assessment approaches for pediatric psychology, including pain (Cohen, Lemanek, et al., 2008), individual patient treatments (Holmbeck et al., 2008), health-related quality of life (Palermo et al., 2008), cognitive functioning (Campbell et al., 2008), stress and coping (Blount et al., 2008), injury (Karazsia & Brown Kirschman, 2013), and families (Alderfer et al., 2008). Applying cultural sensitivity to all aspects of child and family assessment is crucial to understanding the dynamic relationship between family, cultural, and pediatric health outcomes (Mitchell, Patterson, & Boyd-Franklin, 2011).

Treatment

Many evidence-based treatments are provided by pediatric psychologists. The contexts for treatment in pediatric psychology are quite different from a traditional clinical child setting. Pediatric psychologists must often work quickly (respond while the child is in an outpatient medical clinic, complete their work prior to a hospital discharge, etc.) and therefore must offer brief interventions, working flexibly around the child's medical appointments and with the family members present at that time. Pediatric psychology treatments may be episodic in that a "booster" session may be necessary 1 month (or 2 or 6 months) later, and ongoing monitoring of progress is advisable in many situations, particularly for youths with chronic illnesses.

There is ample evidence for pediatric psychology interventions. A series of review articles in *JPP* from 1999 to 2001 on pain (headaches: Holden, Deichmann, & Levy, 1999; procedure-related pain: Powers, 1999; disease-related pain: Walco et al., 1999), eating (obesity: Jelalian & Saelens, 1999; feeding: Kerwin, 1999), elimination (enuresis: Mellon & McGrath, 2000; encopresis and constipation: McGrath, Mellon, & Murphy, 2000), sleep (bedtime refusal and night wakening: Mindell, 1999), disease-related symptoms (McQuaid & Nassau, 1999), and adherence (Lemanek, Kamps, & Chung, 2001) identified well-established, probably efficacious, and promising interventions. Subsequent reviews supported and strengthened the initial findings, with growing evidence for effective treatments for pain in sickle cell disease (Chen, Cole, & Kato, 2004), procedure-related pain (Uman et al., 2008), chronic pain (Fisher et al., 2014), adherence (Graves et al., 2010), and e-health approaches for self-management (Stinson et al., 2009) and health promotion (Cushing & Steele, 2010). Research has also examined the extent to which pediatric psychology interventions are efficacious for children and families from ethnic minority and lower socioeconomic backgrounds, with encouraging results (Clay, 2009).

An updated set of systematic reviews of evidence-based interventions documents the progress that has been made (Palermo, 2014). Reviews using Cochrane methodology and using the Grading of Recommendations Assessment, Development and Evaluation system for evaluating evidence for interventions are available for chronic pain (Fisher et al., 2014), needle-related pain and distress (Birnie et al., 2014), behavioral family intervention for obesity (Janicke et al., 2014), pedestrian safety (Schwebel et al., 2014), cognitive interventions (Robinson et al., 2014), family interventions (Law et al., 2014), fecal incontinence (Freeman et al., 2014), feeding problems (Lukens & Silverman, 2014), treatment adherence (Pai & McGrady, 2014), sleep (Meltzer & Mindell, 2014), and health promotion (Cushing et al., 2014). Importantly, a companion issue of *Clinical Practice in Pediatric Psychology*, which illustrated clinical applications on the same topics and interventions (Carter, 2014), helps in facilitating the translation of research into practice.

Consultation

Consultation is a critical activity for pediatric psychologists and takes a number of forms (Drotar, 1995). The pediatric psychologist is one of potentially many consultants who may be accessed by physicians to treat "their" patients. The pediatric psychologist may be embedded in the department or division of the hospital where the patient is treated or as a collaborator from a centralized department of psychology, behavioral medicine, or psychiatry. The pediatric psychologist may also be a "hospitalist," as a member of a consultation–liaison team in the hospital (Carter, Thompson, & Thompson, 2014).

It is important for pediatric psychologists to understand the expectations for consultants in medical settings and related aspects of medical culture(s). That is, the pediatric psychologist on an inpatient unit is generally expected to see the patient within 24 hr of receiving the consultation request. The consultant's impressions and plans will be communicated back to the referring physician quickly and integrated into the electronic medical record, with conversations with the referring physician and other treatment team members, as needed. The pediatric psychologist may attend (or convene) meetings among providers to ensure implementation of appropriate treatment recommendations and must also determine how to communicate with and involve the patient and family in the treatments.

A protocol for family systems-oriented consultations can use a triadic framework that rests on the key parties in a pediatric consultation—child, family, and staff (Kazak, Simms, & Rourke, 2002). The referral question is understood interpersonally, with shared responsibility among the patient, family, and staff about the "problem." A systems-oriented approach rests on strong collaborative arrangements among the disciplines involved (Cushing, Friesen, & Schurman, 2012) and can be helpful in situations involving families that are perceived as particularly challenging to staff.

Practice in Health Care Settings

It is difficult to separate the practice of pediatric psychology from the settings in which pediatric psychologists practice. Pediatric psychologists are most frequently trained in clinical psychology programs in departments of psychology, and many pediatric psychologists are based in these departments as faculty. However, the practice of pediatric psychology and related research generally occurs in either freestanding children's hospitals or in collaboration with academic health centers with embedded pediatric units or hospitals. There are also pediatric psychologists involved in pediatric primary care, which can increase access to pediatric psychology services, particularly among families unable to travel to the hospital due to distance or limited resources. Though less developed than hospital-based settings, this may change under current health care reform efforts (Rozensky & Janicke, 2012).

There is a strong tradition of pediatric psychologists providing care to patients with life threatening or chronic illnesses in both inpatient and outpatient subspecialty health care settings specifically focused on disease groups or as members of teams that provide behavioral services across medical units. The array of pediatric subspecialty areas in which pediatric psychologists work is nearly as broad as pediatrics itself. In addition to the more traditional and established areas such as cancer, diabetes, and gastroenterology, pediatric psychologists work with teams dedicated to infectious diseases, dermatology, and emergency medicine, among others. Some pediatric psychologists with strong backgrounds in assessment or neuropsychology develop practices using those more specialized skills. This work continues to be critically important in documenting cognitive implications of a broad range of diseases and facilitating the interaction with schools.

Pediatric psychologists function in the context of a medical setting and establish the skills necessary to collaborate effectively with physicians, nurses, and the many other health care personnel contributing to clinical care. In these settings, pediatric psychologists may receive referrals from their medical and nursing colleagues around questions such as the following: Is this patient depressed? How will this child do psychologically with the rigors of organ transplantation? What can we do to engage this family more fully in care and ensure that the child takes his or her medication? Assessment, therapy, and consultation skills are all critically important in terms of refining the referral question, collecting information necessary, and devising an effective intervention plan.

This work is often completed under extreme time constraints. That is, physicians and nurses do not have much time to talk about patients in the same way as seen in a behavioral health clinic setting, and everyone on the team is under pressure to treat patients as quickly as possible and to maintain their tight schedules. Effective communication skills under time constraints and with colleagues who may not have the background for understanding psychological difficulties and treatments are needed. The length of time that a psychological intervention takes may seem unduly long to a physician familiar with procedures that take a few minutes to complete. Similarly, encounters with patients and families often take place in physical settings that are not optimal for psychological treatments (e.g., in a busy medical clinic environment; in a patient's room; consultation with parents in a hallway or quiet corner of public spaces, such as cafeterias).

Schools and Community

Pediatric psychologists have long been concerned with youths and their families when they are outside health care settings in their communities and schools. Many clinicians, including school psychologists, developed intervention programs to assist in the transition from the hospital to school (Canter & Roberts, 2012). School reentry programs attend to enhancing acceptance by peers and the child's social–emotional functioning after, for example, cancer treatments. Some hospitals and schools have developed reentry protocols for any child living with a chronic illness. Four elements for successful school reentry include (a) strengthening the family to be responsive to child needs and to cope individually; (b) preparing the family to work with the school staff; (c) preparing the school to create a partnership with the child and family and with their health care system; and (d) engaging the school, family, and health care systems to work in collaboration over an extended period (Power et al., 2003). A meta-analysis of evaluations of school reentry programs by Canter and Roberts (2012) revealed that "empirically supported school reentry programs will ensure a smoother reentry for ill children, their teachers, and their healthy peers" (p. 1073). Thus, these programs can be effective in removing the stress in explaining physical differences and the challenges of a chronic condition and concomitant medical treatments (which could be ongoing, visible, and with side effects), but more innovation and evaluation is needed to determine the most effective means by which teachers, healthy peers, and the children with the condition can be prepared for the interactions. Ongoing management of medical and behavioral treatments and any concomitant changes in social, emotional, cognitive, and interpersonal functioning in the schools may require more concerted attention from a pediatric psychologist (Alderfer & Rourke, 2014). Thus, a new development has been in the overlapping area of interest and activity in pediatric school psychology (Power & Bradley-Klug, 2013).

A second aspect of community-based pediatric psychology has been the attention given to community-based programs for prevention of injuries. Injuries are the leading cause of death for children and contribute to their disability at a higher rate than any chronic condition (Brown Kirschman, Mayes, & Perciful, 2009). Over time, pediatric psychologists have investigated how injuries occur and how psychological and behavioral interventions can be implemented in the community to reduce or prevent injuries such as resulting from home-based hazards and motor vehicle collisions (Brown Kirschman & Karazsia, 2014). These treatments take place in the community or at schools in terms of health promotion and injury prevention, and they often are overlooked when pediatric psychology appears to emphasize psychological issues associated with chronic illness. The prevention of childhood injuries and promotion of health is considered well within the domain of pediatric psychology and remains an important part of the field in the mission (a) to improve children's health and (b) for research and applications to advance understanding of the variables associated with injury to enhance injury control, minimize consequences of injury, and create conditions for optimal healthy development (Brown Kirschman et al., 2009).

Competencies and Mentoring in Pediatric Psychology

As in other areas of psychology, clinical competencies facilitate how a field can define itself and evaluate performance and training (Hatcher et al., 2013). Pediatric psychology has used the framework of the Competency Benchmarks Workgroup's six cluster areas (Science, Professionalism, Interpersonal, Applications, Education, and Systems), providing recommendations for training in pediatric psychology for each (Palermo et al., 2014), that built on earlier descriptions of major domains for training (Spirito et al., 2003; see Table 5.2). In addition, crosscutting competencies were articulated (see Table 5.3). These include key components of knowledge and skills necessary to function as a pediatric psychologist. Examples include having knowledge of multiple components relevant to child health (e.g., biological, cognitive, social) and appreciating the influence of families and sociocultural factors on child health.

Mentoring has occurred throughout the history of pediatric psychology in the interactive relationship between trainers and their protégés that transfer knowledge and skills while supporting professional identity. Recent attention has focused on mentoring as an important component of the education and training process and its values for the recipient as well as for teachers, advisors, trainers, and the future of the field (Aylward et al., 2012).

Administrative and Leadership Roles

Pediatric psychologists are often called upon to assume administrative positions of leadership within their units, whether academic or clinical organizations. These may be program directors for psychology trainees as well as for pediatric, family medicine, or developmental and behavioral pediatric residents and fellows, for example, or as leaders on interprofessional teams focusing on a specific problem such as feeding and eating disorders, obesity, sickle-cell disease, or pain management. Additional leadership positions may come from service as unit or section chiefs within a hospital department (e.g.,

TABLE 5.2

Domains of Education and Training in Pediatric Psychology

Domain	Definition
Life span developmental psychology	Effects of disease process and medical regimen on emotional, social, and behavioral development
Life span developmental psychopathology	Differentiate emotional distress within normal limits for children with acute and chronic medical conditions
Child, adolescent, and family assessment	Experience with the assessment of health-related concerns such as health promotion, health risk, health outcome, and quality of life
Intervention strategies	Exposure to and experience with empirically supported interventions specifically applicable in pediatric psychology and delivered in health care settings
Research methods and systems evaluations	Exposure to research design issues especially pertinent to pediatric psychology such as health services research and clinical trials
Professional, ethical, and legal issues	Knowledge/experience with issues such as health care delivery, practice of psychology in medical settings, rights of caregivers versus children when making decisions regarding medical care
Diversity	Experience with patients from diverse ethnic and cultural backgrounds, as well as sexual orientations, in health care settings and understanding of nonmainstream health practices influenced by a family's cultural or religious beliefs
Role of multiple disciplines in service delivery systems	Experience on multidisciplinary teams delivering health care services
Prevention, family support, and health promotion	Understanding the principles of behavior change as they relate to healthy development, health-risk behavior, and prevention of disease in adulthood
Social issues affecting children, adolescents, and families	Exposure to and experience with advocacy in pediatric health care including social issues that affect health care delivery
Consultation and liaison roles	Exposure to different consultation–liaison models and supervised experience providing consultation in health care settings
Disease process and medical management	A basic understanding of various diseases and their medical management.

Note. From "Society of Pediatric Psychology Task Force Report: Recommendations for the Training of Pediatric Psychologists," by A. Spirito, R. T. Brown, E. D'Angelo, A. Delamater, J. Rodrigue, and L. Siegel, 2003, *Journal of Pediatric Psychology*, *28*, p. 92. Copyright 2003 by Oxford University Press. Reprinted with permission.

TABLE 5.3

Competencies in Pediatric Psychology

No.	Description
1	Values and understands the scientific foundation underlying the practice of pediatric psychology
2	Has a strong foundation in child clinical psychology including an understanding of normative, adaptive, and maladaptive child emotional, cognitive, social, and behavioral development in the larger context of developmental expectations and caregiver behavior (i.e., family, schools, peers)
3	Has knowledge of biological, cognitive, social, affective, sociocultural, and life span developmental influences on children's health and illness, including mechanistic and meditational pathways
4	Understands pediatric acute and chronic illness, injury conditions, and medical managements from the medical literature, including the effects of disease process and medical regiment on child emotional, cognitive, social, and behavioral development
5	Has knowledge of the role and effect of families on children's health and also has knowledge of the role and effect of health, illness, and medical management on family functioning
6	Has knowledge of the effect of socioeconomic factors on health and illness, including issues associated with access to care, diversity, and health disparities in children
7	Understands how other systems (e.g., school, health care, state and federal policies) affect pediatric health and illness and a child's adaptation to illness
8	Understands the roles of other disciplines in health service delivery systems
9	Appreciates the function of health information technology in children's health care
10	Has knowledge of the transition of pediatric patients to adulthood and adult-oriented health care

Note. Also included in the work of this task force were competencies in clusters and domains for *Science*, including Research and Evaluation Methodology, Ethical Conduct of Research in Children, Interdisciplinary Research, and Dissemination and Knowledge Transfer; for *Professionalism*, including Professional Values and Attitudes, Individual and Cultural Diversity, Ethical and Legal Standards and Policy, and Reflective Practice/Self-Assessment/Self-Care; for *Interpersonal*, including Communication and Relational; for *Applications*, including Evidence-Based Practice, Assessment, Intervention, and Consultation; for *Education*, including Teaching and Supervision; and for *Systems*, including Interdisciplinary Systems, Professional Leadership Development, and Advocacy. From "Recommendations for Training in Pediatric Psychology: Defining Core Competencies Across Training Levels," by T. M. Palermo, D. M. Janicke, E. L. McQuaid, L. L. Mullins, P. M. Robins, and Y. P. Wu, 2014, *Journal of Pediatric Psychology, 39*, p. 969. Copyright 2014 by Oxford University Press. Reprinted with permission.

chief psychologist; director of behavioral medicine, behavioral pediatrics, or pediatric psychology; director/chair of an academic doctoral program or department of psychology; or dean of a college). Pediatric psychologists also serve as vice chairs of departments of pediatrics as well as holding positions as deans in schools of medicine and health professions (Robiner et al., 2014).

Examples of Evidence-Based Practices

Five conditions frequently treated by pediatric psychologists are presented here, along with examples of evidence-based practices.

Asthma. Asthma is a chronic inflammatory disorder of the airways that involves intermittent, recurring, and variable periods of airway obstruction and is the most common chronic illness among children in the United States (National Institutes of Health, 2007). Asthma prevalence has increased over the last several decades, with ethnic minority and low-income youths disproportionately represented among those with asthma-related morbidity and mortality. For example, African Americans and Puerto Ricans are at increased risk for asthma onset, a complicated illness course, exposure to environmental triggers, lower quality of care, and asthma-related death (McQuaid & Abramson, 2009).

The typical medical approach to managing pediatric asthma includes symptom assessment and monitoring, self-management, control of environmental triggers, and pharmacological management (National Institutes of Health, 2007). Pediatric psychologists provide family and health care provider education, identify and treat psychosocial barriers to effective asthma management, and implement interventions to promote effective family-based asthma management (McQuaid & Abramson, 2009). Cultural competence is crucial. Research suggests that protective processes that minimize asthma morbidity in the context of multiple risks function differently by ethnic group (Koinis-Mitchell et al., 2012), and policies to promote cultural competence within a practice site may be associated with better adherence to preventative asthma medications and more positive perceptions of asthma care among parents (Lieu et al., 2004). There is preliminary support for culturally tailored educational programs for specific high-risk populations, such as a web-based asthma management program for urban African American adolescents and a family-based program for Puerto Rican families (McQuaid & Abramson, 2009). Pediatric psychologists are likely to be highly involved in efforts to reduce health care disparities in pediatric asthma, including public policy and development and evaluation of prevention and intervention strategies.

Type 1 diabetes (T1D). T1D is caused by an autoimmune process that destroys the insulin-producing cells of the pancreas, resulting in impaired glucose metabolism. Maintaining near-normal hemoglobin A_{1c} (HbA_{1c}) greatly reduces long-term negative outcomes, including heart, kidney, eye, and nerve diseases (Diabetes Control and Complications Trial Research Group, 1994). However, diabetes self-management aimed at controlling HbA_{1c} involves a complex regimen, with several daily insulin injections (or infusions for those on an insulin pump), multiple daily finger pricks to monitor blood glucose levels, calculations of carbohydrate intake, corrections of high and low blood glucose levels, and daily exercise.

Adherence to this complex regimen is a major focus of pediatric psychologists working with this population. Characteristics associated with developmental stage (see Table 5.1) can affect adherence. For example, the transition to adolescence is associated with hormonal changes that directly affect glycemic control as well as increased emphases on peers and autonomy from parents, which can further affect adherence and glycemic control. Cultural factors have also been found to affect adherence; among Hispanic youths with T1D, better adherence was associated with less adolescent independent responsibility, more family support for diabetes, and fewer generations of the family living in United States (Hsin et al., 2010). Interventions designed to improve coping, stress management, and problem solving in children and adolescents with T1D have yielded promising results (Wysocki, Buckloh, & Greco, 2009). Recent efforts to identify children and families at highest risk for psychosocial and adherence difficulties (Cameron et al., 2007) can facilitate better outcomes.

Cancer. Cancer is the leading cause of death by disease in children. Nearly 16,000 children less than 19 years of age were diagnosed in 2014, nearly 2,000 of whom will die from these diseases (National Cancer Institute, 2014). The most common cancers are leukemias, brain and other CNS tumors, and lymphomas. Cancer remains one of the most widely researched areas in pediatric psychology and a subspecialty of pediatrics in which psychological care is widely incorporated and highly respected.

As survival from pediatric cancers has improved exponentially over the past several decades, psychologists have made many contributions to understanding the neurocognitive, psychological, and social and family implications of surviving these life-threatening diseases (Kazak & Noll, 2015) and the ways in which cultural factors influence management of and adjustment to pediatric cancer (Gray et al., 2014). Despite improved survival rates, cancer treatments can be arduous, with significant associated morbidities and lasting health and psychosocial implications throughout childhood and into adulthood (Oeffinger, Nathan, & Kremer, 2008).

Cancer provides a window into the array of pediatric psychology evidence-based practices, including interventions to promote adherence (Nathan et al., 2008) and psychological treatments to reduce pain and anxiety. Neuropsychological tests of children in high-intensity treatment protocols that place children at risk for long-term cognitive impairments have contributed to the evaluation of testing protocols that may be less neurotoxic. Cognitive remediation approaches, adapted from the adult rehabilitation literatures, are effective in improving school performance in children with and at risk for attentional problems (Butler et al., 2008).

Abdominal pain-related functional gastrointestinal disorders (FGIDs). Abdominal pain-related FGIDs, which include irritable bowel syndrome (IBS) and functional abdominal pain syndrome, are characterized by problems in bowel function not explained by identifiable structural or biochemical abnormalities. The ways in which the brain and gastrointestinal (GI) system communicate may be impaired ("brain–gut dysfunction") or the nerves of the GI tract may be overly reactive to eating, stress, emotional arousal, or gaseous distention (Banez & Cunningham, 2009). Additionally, abnormal motility (i.e., muscular spasms, very fast or slow movement of feces through the GI tract) appears to contribute to symptoms of IBS. International variation in symptoms of IBS has been reported, highlighting the potential importance of cultural beliefs, dietary practice, and psychosocial factors (Gerson et al., 2008). Individuals with FGIDs have high rates of psychosocial difficulties, including anxiety and depression (Campo et al., 2004). Although psychosocial factors are not typically the primary cause of an FGID, they likely exacerbate the symptoms. Parental responses to symptoms (e.g., increased attention or allowing the child to stay home from school) further contribute to the course of an FGID and degree of associated impairment.

Medical professionals working with this population provide education about FGIDs and reassurance of their nonserious nature as well as, in some cases, recommendations for dietary changes and medications for symptom relief. However, these interventions alone may not be sufficient for effective management of FGIDs (Banez & Cunningham, 2009). There is evidence for the effectiveness of cognitive–behavioral strategies (biofeedback, relaxation training, cognitive coping, parent contingency management training) in reducing pain and functional disability for children with FGIDs. Interventions have also targeted psychosocial factors that may be exacerbating FGID symptoms, including anxiety and depression. Interdisciplinary treatment teams consisting of both medical providers and pediatric psychologists are becoming increasingly common for the management of FGIDs.

Obesity. *Pediatric obesity*, defined as body mass index ≥ 95th percentile for age and sex, is a major public health problem for which racial/ethnic, socioeconomic, and geographic health disparities are well documented (Centers for Disease Control and Prevention, 2011). The pediatric obesity epidemic has spurred widespread health promotion and prevention efforts in communities, schools, and medical settings. Policies to improve school food and activity environments are being increasingly implemented. Interventions aimed at increasing health promoting behaviors (e.g., healthy food choices, physical activity) and decreasing health compromising behaviors (e.g., diet high in fat and calories, sedentary lifestyle) have been developed and evaluated in settings that minimize common barriers to behavioral health care (e.g., YMCAs and community centers, schools, churches; Jelalian & Hart, 2009). A review of school-based interventions suggests that combined diet and physical activity interventions may be effective in preventing pediatric obesity (T. Brown & Summerbell, 2009). Lifestyle interventions for children and adolescents who are overweight or obese—often including dietary restriction, physical activity prescription, behavior modification components, stimulus control strategies, and parental involvement—have also received empirical support (Jelalian & Hart, 2009). There is preliminary evidence that weight control interventions may additionally lead to improvements in psychosocial functioning, including improved self-concept, reduction in eating disorder symptomatology, and fewer behavior problems (Jelalian & Hart, 2009).

KEY ACHIEVEMENTS

There are many accomplishments of pediatric psychologists, undoubtedly too many to completely capture in this chapter. Next, we summarize 10 accomplishments, each supported by research evidence cutting across multiple patient groups.

Developed and Applied Evidence-Based Practice

One of the major contributions that psychologists bring to medical settings is their research training and related respect for and utilization of evidence-based practice in tandem with their medical and public health colleagues. The APA Task Force on Evidence-Based Practice for Children and Adolescents (Kazak et al., 2010) articulated applications to clinical child and pediatric psychology. In this era of evidence-based medicine, pediatric psychologists offer a range of evidence-based approaches that are highly congruent with the data-driven nature of medical practice. For example, SPP has prepared more than 30 fact sheets providing information on prevalence, etiology, consequences, and evidence-based assessment and treatment approaches (http://www.apadivisions.org/division-54/evidence-based/fact-sheets.aspx).

Reduced Pediatric Pain

Pain has biological, cognitive, and emotional components, highlighting the important role of psychological science in reducing pain and the anxiety often associated with it. The evidence base for psychological interventions—particularly distraction, cognitive–behavioral approaches that use multiple techniques, hypnosis, and treatments that combine psychological and pharmacological approaches—is strong. The evidence is provided by systematic reviews (Fisher et al., 2014) and description of clinical applications (Palermo et al., 2014). Other distressing symptoms associated with disease and side effects of cancer treatment, such as nausea and vomiting and difficulties swallowing pills, can also be effectively treated with these approaches (see Spirito & Kazak, 2006, for a summary).

Identified Neurodevelopmental Factors in Pediatric Illness

Pediatric psychologists have worked together with physicians and developmental specialists to better understand cognitive and neurodevelopmental sequelae of pediatric illness, including developmental delays, learning difficulties, executive function deficits, problems with attention and memory, and behavioral dysregulation. Research has identified biological, clinical, and social or environmental risk factors that place an infant at high risk for neurodevelopmental delays and impairment, including preterm birth, very low birth weight, complex congenital anomalies, need for cardiopulmonary resuscitation or certain surgical procedures, and absence of prenatal care (Vohr et al., 2004). Children and adolescents with an acute or chronic illness, such as those diagnosed with cancer (Nathan et al., 2007) or infected with HIV (Le Doaré, Bland, & Newell, 2012), have also been found to be at greater risk for neurodevelopmental impairment, in some cases due to the impact of CNS-directed therapies (e.g., cranial radiation, chemotherapy) on the developing brain. Guidelines for neurodevelopmental follow-up care have been published for many pediatric health conditions (Vohr et al., 2004) in light of increased awareness of neurocognitive late effects and the underutilization of developmental services and supports that address these concerns. Pediatric psychologists have authored or contributed to articles focused on translating guidelines into practice (Brosig et al., 2014), and multidisciplinary illness-specific and/or general neurodevelopment programs have been initiated at pediatric hospitals across the United States and abroad.

Supported Adjustment and Quality of Life

Children with chronic illness face a multitude of challenges, such as burdensome treatment regimens, absences from school due to medical appointments or hospitalizations, restricted physical activity, and perceived differences from peers. Although many children exhibit resiliency in coping with these stressors, difficulties adjusting to the diagnosis and treatment of a chronic illness can have a negative impact on psychosocial functioning. Recent meta-analyses confirm that children with chronic illness are at increased risk for internalizing, externalizing, social, and physical problems compared to healthy peers (Pinquart & Shen, 2011; Pinquart & Teubert, 2012). Interventions for psychosocial difficulties in children and adolescents with chronic illness have been developed and tested by pediatric psychologists (Spirito & Kazak, 2006). Group programs aimed at promoting psychosocial adjustment (Scholten et al., 2013), and participation in camps for children with chronic illness have also been evaluated with promising results. For example, a meta-analysis found improvements in self-perceptions after camp participation in children with some chronic health conditions (Odar, Canter, & Roberts, 2013). The use of the Internet to connect children and adolescents to others with chronic illness, to provide education about illness, and to deliver psychosocial interventions also has significant promise (also see the e-Health section). There is also a growing literature on psychosocial screening for children with chronic illness and their families (e.g., Cameron et al., 2007; Kazak et al., 2012).

Improved Adherence to Treatment

Adherence to treatment regimens, or the extent to which a person's behavior corresponds with agreed recommendations from a health care provider, is a significant public health issue (World Health Organization, 2003). Nonadherence is related to increased health care use in youths with a chronic medical condition (McGrady & Hommel, 2013) and to preventable morbidity and mortality (Robin DiMatteo et al., 2002). In general, adolescents tend to be less adherent than children (Rausch et al., 2012). Pediatric psychologists have identified child, family, and cultural factors that affect adherence using diverse samples (Hsin et al., 2010) and have evaluated the effectiveness of various interventions for pediatric adherence to medical regimens. Systematic reviews suggest that interventions that utilize behavioral strategies (e.g., monitoring and goal setting, incentives/reinforcement, problem solving) and that focus on family issues that pertain to disease management (e.g., family communication about illness-specific challenges, identifying systemic barriers to problem solving, maintaining parent involvement in disease management) are often helpful in improving pediatric adherence (Pai & McGrady, 2014).

Integrated Science and Practice

From its inception, pediatric psychology has demonstrated a strong integration of scientific investigation and clinical activities. This integration may have derived from the early founding academic medical centers wherein pioneers in the field were both researchers and practitioners and assumed a pragmatic method of using scientific approaches to treat patients (e.g., Wright et al., 1968). Pediatric psychologists have followed this tradition of integration, and it has continued as an emphasis through the years of development in the field. The bifurcation seen in other specialties between science and practice has not been seen in pediatric psychology, likely because of the historical emphases on integration.

Embraced Culture and Diversity

Racial, ethnic, and socioeconomic health disparities in prevalence, morbidity, and mortality of common pediatric illnesses are unfortunately well documented (Berry et al., 2010). Pediatric psychologists have the potential to mitigate some health disparities by working with families to address psychosocial factors that may contribute. Pediatric psychology interventions must be delivered in a culturally competent manner, defined as (a) being aware of one's own biases, assumptions, and values related to ethnic minorities and to those who differ from oneself; (b) striving to understand the worldview of all individuals in a manner that is free of negative judgments; and (c) developing and implementing culturally sensitive interventions (Sue, 1998). Cultural competence is now a standard for best practices in psychology (APA, 2003), and clinical child and pediatric psychology training programs have increasingly incorporated cultural competency into the curriculum (Palermo et al., 2014; Spirito et al., 2003).

Facilitated Health Promotion

Lifestyle behaviors, such as physical activity, diet, and use of substances, have been shown to increase or decrease risk for chronic disease. A sedentary lifestyle and diet high in fat and calories increases the risk for childhood obesity and contributes to racial/ethnic, sociodemographic, and geographic disparities in health outcomes. Interventions aimed at increasing health-promoting behaviors and decreasing health compromising behaviors have been developed and evaluated by pediatric psychologists, in collaboration with other health care providers. Those receiving research support with pediatric populations include behavior modification (e.g., self-monitoring, goal setting), techniques to increase inconsistency between attitudinal beliefs and behavior or to promote intrinsic motivation, and strategies tailored to an individual's stage of change. Health promotion interventions and programs that incorporate families, peers, and school systems or are delivered via mass media have also yielded promising results.

Treated Children in the Context of Their Families

As noted previously, families and a social ecological framework have guided much pediatric psychology research and treatment. Several approaches have utilized behavioral treatments in a family context, showing positive outcomes for adherence to a treatment diet in cystic fibrosis (Powers et al., 2005) and to diet and exercise protocols in weight management (Epstein et al., 2007). Behavioral family interventions have also been effective in families of children with diabetes with regard to reducing family conflict, improving adherence to treatment, and affecting metabolic control (e.g., B. J. Anderson, Svoren, & Laffel, 2007). Two interventions for families of children with cancer are registered in the National Cancer Institute's Research Tested Intervention Programs (http://rtips.cancer.gov/rtips/index.do). Problem-solving skills training (Sahler et al., 2013) is a well-established intervention that is efficacious and specific, particularly for mothers from disadvantaged backgrounds (i.e., low income, minority, single parents; Askins et al., 2009). The Surviving Cancer Competently Intervention Program has been used to reduce/prevent posttraumatic stress symptoms and to enhance family functioning for families of children with cancer (Kazak et al., 2004).

Prevented Problems and Promoted Health

Actions taken to avoid development of problems are characterized as prevention and promotion. Immunization to prevent the onset of diseases such as mumps and rubella and putting children in car safety seats are examples of prevention applications. Prevention was evident in early research to prepare children for hospitalization and surgery due to the aversive hospital practices and lengthy stays that were traumatic for children and that often led to behavioral problems afterward. As hospital preparation programs became more prevalent and as hospital policies shifted to more supportive care, psychologists' attention moved to other prevention efforts. Health care reform in the Patient Protection and Affordable Care Act of 2010 may provide more opportunities for health promotion and problem prevention activities to be documented and supported (Rozensky & Janicke, 2012). Important to any prevention effort is an understanding of cultural factors that are relevant to the specific problem in a particular population (e.g., understanding cultural factors relevant to Latino sexuality when developing HIV prevention programs for Latino youths; Lescano et al., 2009). Partnering with public health and pediatric specialists, psychologists have applied their expertise to a range of preventive and promotion interventions that have improved children's current health as well as their health over time.

FUTURE DIRECTIONS

Pediatric psychology has grown and expanded since its early stages of development into a robust and thriving field of research and practice. Progress has been made on numerous fronts, and the specialty has continually changed as it adapted to changing circumstances in terms of the challenges facing pediatric professionals. We conclude the chapter by articulating several future directions for pediatric psychology.

Health Care Delivery Research

Pediatric psychologists are well poised to contribute to how health care is delivered. Indeed, many of the recent advancements in pediatric health care necessitate engaged, informed, and trusting relationships among patients, families, health care providers, and health care systems. Pediatric psychologists have many evidence-based interventions that can be applied to facilitate the uptake of care by enhancing adherence to treatment, facilitating coping, and reducing potential side effects such as pain and anxiety. Pediatric psychologists have also been practicing integrated health care for many years, working side by side with pediatricians, nurses, and other health care providers, and therefore they have expertise in working within medical settings and with appreciation of the cultures of medical settings. Pediatric psychologists also bring an appreciation for systems to their work and therefore can be effective in leadership roles that demand a broader perspective on the many complex factors that contribute to health care delivery. With a research orientation and expertise in designing and conducting research, pediatric psychologists are also well poised to evaluate the delivery of health care and to partner with other disciplines to ensure good outcomes for patients and families.

e-Health

The application of interactive and communication technologies to enable health in children, adolescents, and families, commonly referred to as *e-Health*, is an exciting advancement in pediatric psychology. Electronic devices can be used to provide objective assessments of behaviors such as physical activity (e.g., pedometers) or medication adherence (e.g., electronic sensors that record how many times a bottle is opened) and have the potential to enhance illness management and health-related behaviors (Palermo & Wilson, 2009). The use of personalized, goal-specific text messages was found to improve self-reported adherence and self-efficacy in children and adolescents with diabetes (Franklin et al., 2006). Randomized controlled trials of Internet or CD-ROM interventions targeting health behaviors related to various chronic illnesses have provided strong support for these modes of treatment delivery (Palermo & Wilson, 2009). E-Health interventions do, however, come with their share of challenges, including the costs and time associated with developing new computer applications, difficulties keeping up with rapid technological advances, and nuances of insurance reimbursement (Palermo & Wilson, 2009). Despite their challenges, e-Health applications are likely to be increasingly utilized in pediatric psychology due to their potential to provide access to interventions from anywhere at any time, particularly to those who may not otherwise obtain the appropriate services, thus increasing access to intervention (Aylward, Cushing, & Nelson, 2014).

Survivors of Pediatric Illness and Transition of Care

Adolescents and young adults are a group of particular concern in health care in general. Developmentally, adolescents and young adults, relative to younger patients, are more likely to talk directly with their health care team about their illness and treatment, participate in treatment decisions, and understand the broader implications of their illness and treatment. The disruption to their lives may be particularly stressful, and side effects of treatment can have significant effects on their lives. In addition, parent–adolescent conflicts and struggles over autonomy and independence can be affected (O’Donohue & Tolle, 2009). In addition, for some conditions (such as cancer), adolescents are at risk for more adverse outcomes due to delay in seeking care and low levels of participation in clinical trials (Parsons et al., 2011).

As more children survive once life-threatening conditions, their care over their entire lifetime must be considered and is an increasing focus in pediatrics generally, and particularly with regard to chronic conditions, including cystic fibrosis, cancer, diabetes, and disabilities. The transition of care from pediatric to adult providers is typically a process, not a single event, and is influenced by psychological considerations such as self-efficacy, maturation, and family support, as outlined in the social–ecological model of adolescent and young adult readiness to transition to adult health care (Schwartz et al., 2011). This is an emerging area of research, involving examination of outcomes of the transition process and implications for health care delivery systems in identifying ways of preparing adolescents and young adults for transition and offering care in settings and with providers best suited to their health care needs (Crowley et al., 2011). Psychologists are prominent in efforts to measure the clinical process of transition as well (Schwartz et al., 2014).

Enhancing Integrated Care in Pediatrics

Pediatric psychologists have worked collaboratively with health care professionals, in medical settings, since the inception of the field. In addition to continuing assessment, intervention, and consultation activities, there are additional opportunities to contribute to care and advance integrated care. For example, many of the conditions treated by pediatric psychologists are life threatening (e.g., cancer, prematurity, congenital heart disease, injuries) and may be traumatic in their impact on patients and, even more so, on parents (Kassam-Adams et al., 2013; Kazak et al., 2006; Kazak, Schneider, & Kassam-Adams, 2009). *Pediatric medical traumatic stress* has been defined by the National Child Traumatic Stress Network (n.d.) as

> a set of psychological and physiological responses of children and their families to pain, injury, serious illness, medical procedures, and invasive or frightening treatment experiences. These responses may include symptoms of arousal, reexperiencing, and/or avoidance. They may vary in intensity, are related to the subjective experience of the event, and can become disruptive to functioning. (para. 1)

Therefore, pediatric medical traumatic stress is a useful framework for understanding normative reactions to potentially traumatic events and provides ample opportunities for advancing trauma-informed care by all members of the treatment team (https://www.healthcaretoolbox.org).

Primary Care

As noted previously, pediatric psychologists practice across a range of settings related to youths, families, and health. They have historically worked in primary care settings and have developed effective models for assessment, treatment, and consultation for behavioral concerns side by side with community pediatricians (Kanoy & Schroeder, 1985). With current changes in health care delivery, pediatric psychologists are continuing to develop and evaluate models for primary care integration, with priorities including prevention, screening and early intervention, health promotion and prevention related to chronic conditions, developmental disorders, family-centered treatments, as well as ongoing attention to behavioral concerns (Stancin & Perrin, 2014). This work is likely to continue and to expand, linking to many of the other themes discussed in this chapter.

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CHAPTER 6

ADOLESCENT CLINICAL PSYCHOLOGY

John E. Lochman, Caroline Boxmeyer, and Nicole Powell

This chapter focuses on adolescent clinical psychology, which entails the study of the unique developmental issues and mental health needs of individuals during the stage of adolescence. *Adolescence* has been defined as the developmental period of transition from childhood to adulthood (Santrock, 2011). It involves biological, cognitive, and social–emotional changes and rapid personal growth. Biological transitions during adolescence include the events of puberty that transform the bodies of children into those of sexually and physically mature adults. Cognitive changes during adolescence include the progression toward more abstract and less egocentric forms of thought and the development of personal identity and beliefs. Social–emotional changes during adolescence include increased focus on peer relations and social norms, individuation from family, heightened emotionality, and progression toward more autonomous functioning.

Although the age of adolescence can vary with cultural and historical circumstances, it is generally held to begin between 10 and 13 years of age and to end in the late teens or early 20s (Santrock, 2011). Increasingly, developmental psychologists describe adolescence in terms of early and late periods. Early adolescence spans approximately 10–14 years of age. It involves extensive physical and sexual changes, including most pubertal development. Late adolescence encompasses the later teenage years, approximately 15–19 years of age. Career interests, dating, and identity exploration are often more pronounced in late adolescence than in early adolescence.

CONDENSED HISTORY

Numerous theories have been articulated regarding the developmental tasks of adolescence (for review, see Lightfoot, Cole, & Cole, 2012; Rice & Dolgin, 2005). Called the “father of adolescence,” G. Stanley Hall (1904) described adolescence as a time of heightened “storm and stress.” He identified three key aspects of this developmental period: conflict with parents, mood disruption, and risky behavior. Hall’s portrait of adolescence as a time of emotional excess is now felt to be exaggerated (Arnett, 1999), as up to 80% of youths have few to no major problems during the “tumultuous” time of adolescence. Yet, Hall’s ideas shaped the views of later theorists and continue to live on in cultural stereotypes of modern adolescence.

Biological-maturation theories of adolescence emphasize that development is primarily the unfolding of inherited biological potentials. Arnold Gesell emphasized the biological effects of maturational changes on adolescents’ behavior (e.g., Gesell & Ilg, 1943). Sigmund Freud (1940/1964) focused on the psychological and sexual aspects of development. He described adolescence as a period of intense sexual excitement and anxiety in which the psychological struggle between the three parts of the personality—the id, the ego, and the superego—culminates.

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Erik Erikson maintained that adolescence is affected by social and contextual factors as well as biological factors and that adolescence is a universal and qualitatively distinct period of development. In his model of psychosocial development, Erikson (1963) articulated that the central task for young people entering adulthood is to incorporate their new sexual drives and the social demands placed upon them into a fully integrated and healthy personality. The result of this integration is identity formation, or the development of a pattern of beliefs about the self, including the ways in which one is like other people and the ways in which one differs from other people. Identity formation is increasingly seen as a dynamic process that continues into adulthood, with identity development during adolescence playing a pivotal role in shaping the trajectory of identity in adulthood.

Jean Piaget (1972) focused on cognitive aspects of development. In his model of stages of cognitive development, Piaget identified adolescence as the period in which thought processes advance from concrete operational thinking to formal operational thinking. Formal operations include complex cognitive skills such as being able to plan ahead and think more systematically about the world. Adolescents who have achieved such abilities are able to think complexly, abstractly, and hypothetically. They can take the perspective of others and use future-oriented thinking. More recently, information-processing theory has suggested that specific changes in processing capacity or efficiency, knowledge base, and cognitive self-regulation account for advances in thinking (Keating, 1990).

Increasing emphasis has been placed on contextual aspects of adolescent development. Bronfenbrenner's (1977) ecological systems theory posited that adolescent development is influenced by the context in which adolescents develop. Bronfenbrenner identified five ecological systems that affect one another and the individual at the center: (a) the microsystem, with which the individual interacts directly, such as parents and peers; (b) the mesosystem, which connects the microsystems, such as the relationship between family issues and an adolescent's school performance; (c) the exosystem, which includes aspects of the individual's environment, such as school, community, and media, that affect the individual but that he or she cannot actively control; (d) the macrosystem, comprising the attitudes and ideologies of the culture that the individual lives in; and (e) the chronosystem, encompassing the change in society across time. Vygotsky's (1978) social–cultural theory of learning also takes a social–constructivist approach, in which mental development occurs through social relationships and interactions.

More recently, the field of developmental psychopathology has emerged (Achenbach, 1974; Cicchetti, 1989), which holds that development arises from the dynamic interplay of physiological, genetic, social, cognitive, emotional, and cultural influences across time. This has led to increased research focus on the mechanisms, risk factors, and protective factors that influence mental health across the life span, including during adolescence (e.g., Steinhausen & Metzke, 2001). Neuroscience research has also shed light on the changing nature of the brain during adolescence (Giedd et al., 1999) and on the relationship between brain development and behavioral changes from adolescence to adulthood (Steinberg, 2008, 2009).

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Developmental Changes in Adolescence

Marked changes occur in physical, cognitive, and social–emotional development during adolescence. Key changes in each of these domains are summarized next (for review, see Santrock, 2011).

Physical development. Early adolescence is marked by the onset of puberty, which is triggered by hormonal changes. Puberty takes about 4 years and ends when an individual can reproduce. During puberty, both boys and girls undergo an adolescent growth spurt. Primary sex characteristics (the reproductive organs) enlarge and mature, and secondary sex characteristics appear. The principal signs of sexual maturity (menstruation for female adolescents, production of sperm for male adolescents) occur, on average, between 12 and 13 years of age in the United States. Puberty typically begins earlier in girls than in boys. Psychological effects of early or late maturation depend on how adolescents and others interpret the accompanying changes. In the last century, there has been a trend toward earlier attainment of adult height and sexual maturity, likely due to improvements in living standards.

Adolescents are typically quite physically healthy. The leading causes of death in adolescents are associated with risk-taking behaviors (e.g., motor vehicle accidents, use of firearms, suicide). Adolescents are less likely than younger children to get regular medical care. Rates of regular, vigorous physical activity decrease in many adolescents, whereas concerns with body image and eating habits rise. Many adolescents do not get enough sleep, in part because the school schedule is out of sync with their natural body rhythms. Alcohol and drug use often begin in adolescence, as does sexual activity.

Cognitive and brain development. Adolescence is a period of substantial brain maturation. Four structural brain changes occur during adolescence: (a) gray matter decreases in prefrontal regions of the brain, likely reflective of synaptic pruning; (b) dopaminergic activity in the prefrontal cortex increases significantly in early adolescence and is at its highest during this age, which likely contributes to adolescent sensation seeking; (c) there is an increase in white matter in prefrontal areas, which is likely important for the development of higher order cognitive functions such as executive function, planning, and response inhibition; and (d) there is increased connectivity between cortical and subcortical brain regions, which likely improves efficiency of processing (Steinberg, 2008). Functional changes in patterns of brain activity also occur over the course of adolescence, including the development and strengthening of brain systems involving self-regulation, reward processing, and coordination of emotion and cognition (Steinberg, 2009).

As brain maturation occurs during adolescence, thought processes become more complex. *Metacognition*, or the ability to reflect on one's own thoughts and behaviors, develops throughout adolescence before reaching a plateau in adulthood (Weil et al., 2013). As adolescents enter Piaget's (1972) stage of formal operations, they can engage in hypothetical-deductive reasoning, meaning they can think more in terms of possibilities, deal flexibly with problems, and test hypotheses. Not all individuals become capable of formal operational thinking, and those who are capable do not always use it. Individual differences, environmental stimulation, and culture play important roles in attainment of formal operational thinking.

Social–emotional development. Adolescence is a time of changing interpersonal relationships and heightened emotions. The level of conflict between parents and children often increases during adolescence, as the adolescent strives for greater autonomy, and the parent–child relationship requires realignment. Despite the heightened parent–child conflict during adolescence, many parents are able to maintain a positive, caring relationship with their adolescent child. Full-scale adolescent rebellion is unusual. An authoritative parenting style that includes parental monitoring and supervision promotes adolescents' exposure to positive activities and reduces their opportunities for engaging in delinquent, risky behaviors (Wargo, 2007). A warm but firm approach to parenting allows teens to be independent within developmentally appropriate parental limits and boundaries (Kopko, 2007).

The influence of peer relationships increases substantially during adolescence. Group membership and peer affiliation become particularly salient. The importance of peer relationships can have positive effects during adolescence, leading to close, supportive relationships with peers, particularly in girls and women. However, it can also have negative effects, such as when an adolescent affiliates with peers who engage in deviant or risky behavior. Deviancy training can occur, in which problem behaviors (e.g., delinquent acts, substance use, risky sexual behavior) are modeled and reinforced within the peer group. Adolescents who have difficulty developing close peer relationships may experience feelings of rejection and isolation, have difficulty forming a positive self-identity, and be at greater risk for mental disorders.

Adolescents have a natural biological proclivity toward high-intensity emotions, which emerges at puberty (Dahl, 2004). Pubertal maturation is also associated with a greater inclination to seek out experiences that lead to high intensity emotions (i.e., sensation seeking). This is likely due to the brain changes that occur during adolescence, particularly the dramatic remodeling of the brain's dopaminergic system (Steinberg, 2008). It is important to note that there is a high degree of individual variation during this stage of development. Many adolescents experience subtle variations in emotional intensity that can be well-managed, whereas others have a proclivity toward high intensity feelings that can lead to emotionally charged, impulsive, and reckless behaviors (Dahl, 2004). Given the importance of identity formation and the intensity of emotions experienced during adolescence, it is not surprising that a substantial number of adolescents experience suicidal ideation. Nock et al. (2013) observed a 12% prevalence rate for suicidal ideation in adolescents, which primarily occurred in youths who met diagnostic criteria for a least one mental health condition.

In sum, adolescence is a time of great paradox (Dahl, 2004), in which youths are in a peak period of health, strength, and resilience in nearly every measurable domain; yet, they face complex challenges as they experience heightened emotionality, peer influence, and risk-taking behavior and seek greater autonomy and self-identity.

Psychopathology During the Adolescent Years

From a mental health standpoint, adolescence is an important developmental period because most of the major mental disorders begin, or escalate sharply, during adolescence. The peak age of onset for having any mental health disorder is 14 years (Kessler et al., 2005). Nearly 20% of youths have current developmental, emotional, or behavioral problems (Burns et al., 1995). After an adolescent onset, many chronic mental disorders carry over into adulthood, leading to substantial impairment throughout the adult years. Thus, the prevention and treatment of mental disorders during adolescence is one of the major public health problems nationally and internationally.

Anxiety disorders, bipolar disorder, depression, eating disorders, psychosis (including schizophrenia), and substance abuse are among the disorders that commonly emerge during adolescence (Kessler et al., 2005). The emergence of certain forms of psychopathology is likely related to exacerbations of typical adolescent maturation processes in association with psychosocial (e.g., peer and romantic relations, academic demands) and biological (e.g., hormonal changes during puberty, effects of drug abuse; Paus, Keshavan, & Giedd, 2008) factors. In this section, we first overview several forms of psychopathology that typically become prominent in the adolescent years (schizophrenia, eating disorders, substance abuse), and then we provide more detailed description of two common forms of adolescent psychopathology (conduct disorder, depression), which is our focus in the following section when we discuss examples of treatments during this age period.

Schizophrenia. The life-time prevalence for schizophrenia is about 1%, and it has been noted to be relatively consistent around the world according to World Health Organization studies, although other studies have found more variability (Messias, Chen, & Eaton, 2007). Immigrant groups from Africa have been found to have higher rates of schizophrenia than nonimmigrants in developed countries, but the rate of schizophrenia for Africans in their home countries is more typical (Messias et al., 2007). Schizophrenia typically begins in adolescence or early adulthood. Onset at least by the adolescent years is associated with more severe impairments in later years (Kyriakopoulos & Frangou, 2007). Schizophrenia is characterized by "positive symptoms" that involve the presence of unusual beliefs and experiences such as delusions and hallucinations, "negative symptoms" that involve social withdrawal and flat affect, and cognitive impairments evident in poor executive functions (Paus et al., 2008). In general, early-onset schizophrenia patients have more severe negative symptoms and more cognitive impairments.

Adolescents with schizophrenia have difficulty with some of the areas of development for adolescents, including more advanced reasoning in social situations, suggesting that onset of schizophrenia in late adolescence coincides with changes in anticipated adolescent brain development. For example, the amount of delta sleep reduction in adolescents with schizophrenia is an exaggerated form of the decrease in delta sleep typically seen during adolescence (Feinberg, 1982). In a similar way, adolescents with schizophrenia display exaggerated changes in other biological processes typical for adolescence, such as reductions in volumes of gray matter in the frontal cortex, and prefrontal metabolism (Paus et al., 2008). A prodromal phase often exists prior to the onset of the disorder's full symptoms, and the prodromal features include reduced concentration and attention, decreased motivation and energy, mood changes, sleep difficulties, suspiciousness, irritability, and decline in role functioning (Gur et al., 2005). Early intervention during the prodromal phase can reduce the severity of the disorder (McGorry et al., 2002). Although drug treatment is most common for adolescents with schizophrenia in the United States, some of these youths do not display substantial symptom reduction with psychotropic medication, and adolescents may be especially sensitive to the adverse side effects of typical antipsychotics and clozapine, leading to psychological treatments that may affect symptoms in part because of the neural plasticity during this age period (Gur et al., 2005).

Eating disorders. Anorexia nervosa and bulimia nervosa typically begin during adolescence or young adulthood, and onset is rarely before puberty or after 40 years of age. Both disorders primarily affect female adolescents and women at a 10:1 rate; they begin around—or shortly after—puberty, and they occur at higher rates in Western countries. The 1-year prevalence rates for bulimia nervosa are two to three times higher than for anorexia nervosa (0.4%). Anorexia nervosa is diagnosed when the adolescent displays significantly low weight due to restricted food intake, intense fears of gaining weight, and misperceptions of body weight or shape. Bulimia nervosa, in contrast, is diagnosed when an adolescent has recurrent episodes of binge eating and recurrent efforts to prevent weight gain (e.g., self-induced vomiting, misuse of laxatives; American Psychiatric Association, 2013). Most adolescents who present for treatment of an eating disorder do not meet full criteria for these two disorders and thus can be diagnosed as "other specified feeding or eating disorder."

The onset of both disorders is often associated with the experience of stressful life events, and bulimia nervosa can also be preceded by dieting efforts to lose weight. Adolescents who have anxiety disorders or who display obsessive traits, who are in cultures and settings that value thinness (although with the dispersion of Western media worldwide, the rates of eating disorders have increased in non-Western countries), and who are first-degree relatives of individuals with eating disorders are at increased risk for anorexia nervosa. In behavioral genetics studies, concordance rates for anorexia nervosa are higher among monozygotic than among dizygotic twins (American Psychiatric Association, 2013). Linkage studies have explored areas of the human genome that might be linked to areas on Chromosome 1, but no single gene or set of genes have consistently been identified (Walsh et al., 2005). Among environmental risk factors, adolescents with anorexia nervosa have been found to be more likely to have insecure attachment with parents, higher rates of maternal trait anxiety, and higher rates of adverse life events including abuse and deaths of close relatives.

Substance abuse. Substance abuse disorders in adults typically begin during adolescence, a period of time when substance use rates begin to sharply accelerate. Although drug taking may be a passing or occasional occurrence for a number of adolescents, occurring in part because of peer pressure and modeling of others around them, in concert with moments of immature judgment, drug taking can become repetitive and lead to substance-related disorders. Children's aggression is a consistent predictor of later alcohol, marijuana, and other drug use in early research (Coie et al., 1992; Lochman & Wayland, 1994). Adolescent substance use has been associated with other types of psychopathology, such as depression, as well. However, when adolescents' conduct disorder and depression have both been examined as predictors of later substance use, the primary predictor of severity of use has been conduct disorder, with depression only contributing to earlier onset (Miller-Johnson et al., 1998).

Personality traits are an important risk factor for substance use. Adolescents who have high novelty seeking and have low harm avoidance use substances more, in part because these characteristics make them less dependent on their family influences. Research has found that these traits are associated with certain patterns of brain activity, such as in the medial-frontal circuitry, and that neurobiological factors affect some adolescents' decision making (Paus et al., 2008). In addition, once adolescents are exposed to substances, they can have changes to brain structures such as hippocampal volumes, which can, in turn, increase the likelihood of addictive disorders in later life.

Interpersonal risk factors for adolescent substance use include parental, sibling, and peer influences. Although parents' influence on their adolescents declines over time, parents who provide low levels of nurturing, who provide low levels of supervision and monitoring, and who use substances themselves have adolescents who increase their drug use most through the adolescent years (Schulenberg & Maggs, 2002; Windle, 1999). When parents spend little time with their adolescents and fail to communicate with them, adolescent drug use also increases. Siblings are another form of familial influence, and older siblings who drink alcohol before adulthood increase the likelihood that younger siblings will also start drinking early (Windle, 1999). This relationship is stronger if the older sibling is closer in age and is the same sex as the younger sibling. Peer influences become increasingly strong predictors of behavior through adolescence but not just through direct pressure to use (although peer pressure can cause adolescents to relapse into substance use). Instead, adolescents use substances more if they have previously had peer relationship problems and have been actively rejected by their peer groups. Once they enter early adolescence, an especially powerful predictor of subsequent substance use is whether the adolescent enters a deviant peer group, either as a leader or as a follower in the group (Fite et al., 2007).

Conduct disorder. Conduct disorder and the related disruptive behavior disorder (DBD) of oppositional defiant disorder (ODD) develop during the childhood years. ODD, involving angry mood and argumentative behavior, is a common precursor of conduct disorder. Conduct disorder is prevalent in 4% of youths and includes aggression toward others, destruction of property, covert behaviors such as lying and stealing, and serious violations of rules (running away from home, truant from school; American Psychiatric Association, 2013). One specifier for conduct disorder indicates whether the youth has limited prosocial emotions; if present, then the youth is expected to be less responsive to intervention and to be at greater risk for antisocial personality disorder in adulthood. An important issue related to this chapter is that another specifier exists for the age of onset of conduct disorder. Childhood-onset conduct disorder begins prior to 10 years of age, and adolescent-onset conduct disorder begins after 10 years of age. The latter form of conduct disorder is expected to remit by adulthood for most of these adolescents. In contrast, youths with a childhood-onset conduct disorder have a worse prognosis, with increased and persistent rates of criminal behavior and substance-related disorders throughout the adolescent and adulthood years. Youths with conduct disorder are at risk for later mood disorders, anxiety disorders, posttraumatic stress disorder, impulse control disorders, psychotic disorders, as well as substance-related disorders as adults (American Psychiatric Association, 2013).

Conduct disorder is multiply determined by a host of adolescent risk factors, including temperament, neurobiology, environment, and emotional regulation. We highlight a sampling of these risk factors later in this chapter. One individual-level risk factor is the presence of a difficult, undercontrolled temperament in the preschool years (Caspi et al., 1995). Children's temperament has been linked to their autonomic nervous system, stress reactivity, and neurocognitive functioning (Matthys & Lochman, 2010). Children with conduct problems have certain characteristic psychophysiological patterns (such as lower basal skin conductance levels, which is a marker for the sympathetic nervous system, along with parasympathetic or vagal hyporeactivity, evident in lower respiratory sinus arrhythmia and lower heart rate), indicating their lack of anticipatory fear and reduced responsivity to punishment (Beauchaine, Hong, & Marsh, 2008; Ortiz & Raine, 2004). Youths with DBDs also have difficulty regulating their response to stress, as found in research on the hypothalamic–pituitary–adrenal axis (van Goozen et al., 2007).

The deficits in orbitofrontal functioning of youths with conduct problems are also evident on behavioral tasks such as the Iowa Gambling Task, leading them to act to receive short-term rewards despite long-term punishments (Schutter et al., 2011), and in lowered levels of serotonin, a neurotransmitter that plays a role in the functioning of the orbitofrontal cortex and is associated with youths' behavioral inhibition abilities (H. F. Clarke et al., 2007). These findings about brain structure and neurotransmitters are paralleled by molecular genetics research that has found that youths with DBDs have been found to have polymorphisms (alternative forms or alleles of a gene at a particular locus) in genes involved in the serotonergic (e.g., 5HT) and dopaminergic (e.g., DRD4) systems (Holmes et al., 2002; Sakai et al., 2006). Behavioral genetics research also suggests that externalizing disorders are highly heritable, as parents pass to the next generation a general vulnerability to the spectrum of externalizing disorders (Hicks et al., 2004).

Numerous deficits and distortions in emotional regulation, social information processing, and problem-solving have been found in youths with aggressive behavior problems. For example, children with aggressive behavior have distortions as they appraise their social environment by attending to fewer cues and to more hostile cues in social situations than their peers do. They tend to misinterpret the social situation due to their egocentrism and orientation toward action, their impaired perspective-taking skills and empathy, and the misattribution of hostile intentions to others (Lochman & Dodge, 1994, 1998), and these appraisal distortions are especially related to reactive forms of aggressive behavior (Dodge et al., 1997). Moreover, heart rate acceleration after threat has been accompanied by increasing hostile attributions (Williams et al., 2003), indicating the clear linkage between cognitive and physiological processing and how arousal can further inflame youths' distorted perceptions. Partially because of their dominance and revenge oriented social goals, aggressive youths have deficient problem-solving strategies (Lochman & Wayland, 1994). Aggressive youths show deficiencies in both the quantity and the quality of their problem-solving solutions. Highly violent adolescents have been found to generate fewer responses than their nonaggressive peers (Lochman & Dodge, 1994). Deficits are also evident in the quality of the problem solutions generated by more moderately aggressive youths, as they typically overrely on action-oriented strategies rather than verbal assertion to handle their social problems (Lochman & Lampron, 1986).

A broad set of contextual risk factors are related to child and adolescent aggression and conduct problems. For example, neighborhood problems and high densities of aggressive children in classrooms predict increases in youths' aggressive behaviors (Barth et al., 2004; Fite et al., 2009). Children in deprived neighborhoods are exposed to high rates of violence; 17% of youths in urban Chicago neighborhoods have reported that their family members had been robbed or attacked, and 16% had seen someone shot or killed in the prior year (Gorman-Smith & Tolan, 1998), and this level of exposure led to an increase in adolescents' disruptive behavior over the following year. Early onset of aggression and violence has been associated with neighborhood disorganization and poverty partly because children who live in lower socioeconomic status and disorganized neighborhoods are not well supervised, engage in more risk-taking behaviors, and experience the deviant social influences that are apparent in problematic crime-ridden neighborhoods.

Peer influences to increased antisocial behavior are primarily apparent in the adolescent developmental stage (Warr, 2002), and adolescent problem behavior is often embedded in involvement in peer groups (Dishion, McCord, & Poulin, 1999). When adolescents enter a deviant peer group, they often increase their rates of school truancy and dropout, placing themselves in even more contact with each other, which leads directly to increased rates of delinquency and substance use (Coie et al., 1995; Fite et al., 2007).

Contextual family risk factors associated with children's aggression include parents or family structure and parenting practices that are evident. At the general family context level, family poverty as well as family structure involving single parenthood, marital conflict, and weak parent–child attachment are all associated with youths' conduct problems (Barry et al., 2005; Moffitt & Scott, 2008). The amount of marital aggression that a child witnesses is inversely proportional to that child's adjustment (Grych et al., 2000), and it has moderate effects on youths' behavioral disturbances according to meta-analyses (Wolfe et al., 2003). At the level of parenting, practices that are especially associated with children's aggressive behavior include harsh punishment and inconsistent discipline, lack of warmth and positive attention, and poor monitoring. The literature has consistently found that parents' low levels of warmth and positive involvement with their children and high levels of punitive discipline—such as verbally aggressive parenting behaviors and spanking—have predicted children's disruptive and oppositional behavior (e.g., Stormshak et al., 2000), even when controlling for other risk factors.

Depression. Depressive disorders in adolescents are characterized by depressed or irritable mood; loss of interest or pleasure in activities; changes in eating and sleeping habits; psychomotor symptoms; fatigue; impaired cognitive processing; and thoughts of worthlessness, guilt, and/or death (American Psychiatric Association, 2013). Depression in adolescents is associated with problems in interpersonal functioning, physical health problems, academic difficulties, and suicide risk. At any given time, an estimated 0.7%–3.4% of adolescents meet criteria for major depressive disorder, and lifetime prevalence estimates for adolescent depression range from 9.3% to as high as 24.0% (Merikangas & Knight, 2009). Although childhood depression is more common in boys, rates rise dramatically for girls with the onset of puberty, and adolescent girls are twice as likely as boys to be diagnosed with depression (Angold et al., 2002).

Individuals who experience a depressive episode in adolescence have a 45% probability of experiencing subsequent episodes in young adulthood (Lewinsohn et al., 1999). There is a high degree of comorbidity between adolescent depression and other mental health disorders. An estimated 25%–50% of depressed adolescents also meet criteria for an anxiety disorder, possibly due to features common to both disorders including negative affect, temperamental attributes, and psychophysiological abnormalities (Rohde, 2009).

As with conduct disorders, a multitude of risk factors contribute to adolescent depression. Four contributing temperamental features are a tendency to withdraw from, rather than to approach, novel stimuli (Leve, Kim, & Pears, 2005); low levels of flexibility; negative emotionality; and low effortful control (Yap et al., 2011). Negative emotionality, a temperamental tendency toward experiencing emotions such as sadness, fear, and anxiety, has been associated with adolescents' depressive symptoms in both concurrent and longitudinal investigations, and negative emotionality in adolescence has also been identified as a predictor of depression in adulthood (Kendler, Gardner, & Prescott, 2002, 2006). Effortful control (Rothbart, 2007) includes the ability to self-regulate and control behavioral responses.

A growing body of psychophysiological research has identified neuroanatomical and neuroactive chemical correlates of adolescent depression. However, these correlates appear to serve as risk factors rather than causes of the disorder, with their effects emerging in the context of adverse life events. Structural brain differences identified in adolescent depression include volume abnormalities in the hippocampal, amygdale, and prefrontal cortex regions as well as irregularities in white matter tracts (Weir, Zakama, & Rao, 2012). Three neuroactive chemical agents have been implicated in the development of adolescent depression, including serotonin, brain derived neurotrophic factor, and cortisol (Goodyer, 2009). Serotonin is important for a number of psychophysiological processes related to mood, sleep, and appetite; brain derived neurotrophic factor is involved in neural plasticity; and cortisol is a hormone secreted in response to stress through the hypothalamic–pituitary–adrenal axis system. Research examining cognitive theories of depression has revealed various cognitive styles and attitudes that enhance adolescents' vulnerability to depression. A negative inferential style, as posited by hopelessness theory (Abramson, Metalsky, & Alloy, 1989), has been associated with an increase in children's depressive symptoms following a negative event (Brozina & Abela, 2006). Similarly, Beck's (1987) cognitive theory posits that negative events trigger depressogenic schemata—cognitive representations about the self and one's experiences—which activate dysfunctional thought patterns (e.g., catastrophizing, globalizing). Providing support for this theory, adolescents who endorse dysfunctional thought patterns have been found to exhibit greater increases in anhedonic symptoms of depression following a negative life event (e.g., Hankin et al., 2008).

Most models of adolescent depression, such as those described earlier, are diathesis-stress models, requiring the presence of an environmental stressor, acting in concert with individual vulnerabilities, to produce depression. Such models of adolescent depression have proposed reciprocal relations among cognitive vulnerabilities, stressors, and depressive symptoms. For example, Calvete, Orue, and Hankin (2013) tested the transactional cognitive vulnerability model to stress model in a cross-lagged design with 1,187 adolescents. Results demonstrated that, in addition to established patterns of stress and cognitive vulnerabilities predicting depression, depressive symptoms and cognitive vulnerabilities have a role in the generation of stress, and stress and depressive symptoms can predict increasing dysfunctional cognitions over time. These results help to explain how vulnerabilities to depression can become enhanced and how, once established, depressive symptoms can become entrenched over time.

MAJOR ACTIVITIES

There have been a number of advances over the past 15 years in the development and implementation of evidence-based practices for adolescents' emotional and behavioral difficulties. In this section, we briefly discuss psychological assessment for adolescents and discuss examples of evidence-based treatment for two common areas of adolescent psychopathology: conduct disorder and depression.

Assessment

Many clinical psychologists conduct psychological, psychoeducational, neuropsychological, and vocational assessments with adolescents. The results of such assessments can help in planning education placements, career decisions, remediation strategies, and psychological treatment.

Treatment for an adolescent requires a careful and thorough assessment process. A problem-solving model for adolescent assessment involves a series of sequential stages (Finch et al., 2012). The first stage involves adopting a problem-solving collaborative orientation in which the therapist asks how the adolescent and family members have tried to previously solve the problem. At the second stage, the therapist defines the problem in a collaborative way with the family, getting each of their perspectives, and working to create a precise description of the problem. The third stage is a critical one, and it involves collecting assessment data and creating case formulation that describes, in ways that the adolescent and family can understand, how the problem has developed over time and for what reasons. The therapist identifies the situational and personal factors that contribute to the problem and then decides which tests and structured interviews may be necessary to describe the clients' cognitive, academic, emotional, and behavioral difficulties. It is most useful to collect information about the adolescents' behavioral and emotional adjustment from multiple sources (adolescent, parent, teacher).

The collection and interpretation of the assessment data lead directly into the fourth and fifth stages of the assessment process, and these involve setting treatment goals (what will be the target of the intervention?) and then deciding on the appropriate type of intervention. At this fifth stage, the therapist considers evidence-based practices that are appropriate for the problem and discusses them with the client and the family. The therapist assesses the clients' "readiness to change" and whether the adolescent and family are ready to "buy into" the collaborative treatment plan. After the interventions have been jointly selected and implemented, a final assessment stage involves evaluating the effects of the intervention, optimally using some of the same behavioral assessment procedures used earlier in the process. If the problems are not sufficiently resolved, then the problem-solving assessment process begins again, in an effort to identify more precise treatment goals and interventions.

Conduct Disorder

Psychosocial treatments. Comprehensive family and community-based treatments are often needed for adolescents with serious antisocial behavior because of the multiple risk factors that are typically present for these youths (e.g., child maltreatment, marital discord, parental psychopathology, poverty, exposure to neighborhood violence; Matthys & Lochman, 2010). The following are examples of programs that have been largely delivered and researched during preadolescence, early adolescence, and mid-to-late adolescence.

Multicomponent interventions involve the combination of psychopharmacotherapy and of psychosocial treatments. Although the focus of this chapter is not on psychopharmacotherapy, we would note that pharmacotherapy should not be considered the only method to treat children with DBDs (Matthys & Lochman, 2010). A trial with psychostimulants is appropriate in children and adolescents with DBDs comorbid with attention-deficit/hyperactivity disorder (ADHD) and in children with DBDs who also have at least four symptoms of ADHD but who do not qualify for a formal ADHD diagnosis. Atomoxetine not only is efficacious in the treatment of ADHD, even in children who are comorbid with ODD, but there is evidence that atomoxetine also leads to improvement in ODD symptoms (Newcorn et al., 2005). Risperidone is effective in reducing aggression in children with DBDs, but treatment with risperidone is compromised with adverse effects, and there are concerns about the effect of this and other atypical antipsychotics on the developing brain of children (Andersson et al., 2002). Other medications for which there is some evidence of an effect are lithium, clonidine in addition to psychostimulants, and valproate (Matthys & Lochman, 2010).

Multisystemic therapy (MST). MST is an intensive family and community-based treatment program that has been implemented with chronic and violent juvenile offenders, substance-abusing juvenile offenders, adolescent sexual offenders, and youths in psychiatric crisis (Henggeler & Lee, 2003). MST is an individualized intervention that focuses on the interaction between adolescents and the multiple environmental systems that influence their antisocial behavior, including their peers, family, school, and community (Henggeler, Melton, & Smith, 1992). Strategies for changing the adolescent's behavior are developed in close collaboration with family members by identifying the major environmental drivers that help maintain the adolescent's deviant behavior. Services are delivered in the family's natural environment and can include a variety of treatment approaches such as parent training, family therapy, school consultation, marital therapy, and individual therapy. Although the techniques used within these treatment strategies can vary, many of them are either behavioral or cognitive behavioral in nature (e.g., contingency management, behavioral contracting). Evaluations of the effectiveness of MST with chronic and violent juvenile offenders have produced promising results. Families who receive MST report lower levels of adolescent behavior problems and improvements in family functioning at posttreatment in comparison to alternative treatment conditions (Borduin et al., 1995; Henggeler et al., 1992). Results from extensive evaluation of MST found lower recidivism rates in juvenile offenders assigned to MST in comparison to youths who completed individual counseling at 4-year follow-up (Borduin et al., 1995).

Multidimensional Treatment Foster Care (MTFC) program. The Oregon MTFC program is a systemic intervention designed to treat adolescent juvenile offenders in nonrestrictive, family-style, community-based settings (Chamberlain & Smith, 2003). MTFC is an alternative to traditional group care (GC) settings for antisocial youths who are removed from the care of their parents or guardians. MTFC temporarily places antisocial youths with a community-based foster family where contingencies governing the youth's behavior are systematically modified through consultation with a comprehensive treatment team (Fisher & Chamberlain, 2000). As the youth's behavior improves, a gradual transition is made from the MTFC setting back to his or her parent's or guardian's home. Each foster family is assigned a behavioral support specialist, youth therapist, family therapist, consulting psychiatrist, parent daily report caller, and case manager/clinical team manager to assist with program implementation. Adolescents earn privileges within the foster home by following a daily program of scheduled activities and fulfilling behavioral expectations. The youth's biological parents or guardians assist in the treatment planning, engage in family therapy to learn effective parenting skills, and begin applying newly learned skills during short home visits. As the family's functioning improves, the visits are extended until complete reunification occurs. Family therapists continue to follow the case for 1–3 months following reunification to assist in the successful resolution of problems that arise.

Research on the effectiveness of MTFC has provided encouraging results. A matched control design involving younger abused boys in the juvenile justice system revealed that youths in MTFC had significantly fewer arrests, less self-report criminal activities, and fewer days incarcerated 1 year following treatment in comparison to boys placed in community-based GC (Fisher & Chamberlain, 2000). At 2-year postdischarge, MTFC boys reported using drugs less often than GC controls. A subsequent randomized clinical trial compared MTFC to placement in GC facilities with 79 adolescent boys, many of whom had been previously charged with several serious criminal offenses and had a history of running away from previous placements (Eddy & Chamberlain, 2000). In comparison to GC, boys in the MTFC condition were more likely to complete their program and spent 60% fewer days incarcerated in the year following their referral to the program. MTFC boys also had a fewer number of criminal referrals and reported lower levels of serious and violent crimes in comparison to boys in GC 1 year following program completion.

Psychosocial prevention programs. Prevention programs can be delivered during the adolescent age period itself, or during preadolescence and early adolescence, to prevent subsequent serious antisocial behavior during later adolescence. Examples of each approach are presented next.

Life Skills Training program. The Life Skills Training program is an example of a universal prevention program designed to prevent substance abuse in adolescents (Botvin & Griffin, 2004). The program was developed for middle school students. It is implemented across 15 class periods during the first year of middle school (11–14 years of age), with supplemental booster sessions during the following 2 years. Cognitive–behavioral, skills-training techniques are used to teach students personal self-management skills, social skills, and drug resistance skills. The program has been shown to be effective in reducing alcohol, tobacco, marijuana, and polydrug use in a series of randomized controlled efficacy trials and in two effectiveness studies (Botvin & Griffin, 2004). Evaluation results support the long-term effectiveness of the program as well as its generalizability to diverse geographic, socioeconomic, and racial/ethnic groups.

Coping Power program. Coping Power is a comprehensive, multicomponent intervention based on the contextual social–cognitive model of risk for youth violence (Lochman & Wells, 2002a). The program draws upon many of the cognitive and behavioral techniques of well-established parent training programs while also incorporating techniques that target malleable child-level, social–cognitive risk factors for externalizing behavior problems (Lochman, Barry, et al., 2008). In its full version, Coping Power includes a 34-session child component and a coordinated 16-session parent component, both of which are designed to be delivered over a 16- to 18-month period of time (Lochman, Wells, & Lenhart, 2008; Wells, Lochman, & Lenhart, 2008).

The content of the child component includes seven units for skill development: goal setting, organizational and study skills, emotion recognition, emotion regulation, perspective taking and attribution retraining, social problem solving training, and dealing with peer pressure and deviant peer groups. During each session, role plays, structured activities, and homework assignments are used to facilitate transfer of skills outside of the group setting. The parent component of Coping Power addresses behavioral parenting skills, including an emphasis on increasing parents' positive reinforcement and attention to children's positive behaviors, ignoring minor disruptive behaviors, providing clear instructions and rules, providing consistent and contingent discipline for negative child behaviors (including the use of time-out, work chores, removal of privileges), and increasing monitoring and supervision of children's out-of-home behavior. Sessions also address stress management for the parents and enhancement of family communication and problem-solving skills.

Evaluations of the efficacy of the Coping Power program are encouraging. Analyses of outcomes 1 year after completing the program indicated that combined treatment (child plus parent components) produced reductions in children's self-reported delinquent behavior, and in parent-reported alcohol and marijuana use by the child, in comparison to a high-risk control condition (Lochman & Wells, 2004). In contrast, boys' teacher-rated behavioral improvements in school during the follow-up year appeared to be primarily influenced by the Coping Power child component, as similar effect sizes were evident for the two intervention cells. Similar follow-up effects were found in a study of Coping Power effects with girls as well as boys (Lochman & Wells, 2002b, 2003). Several types of effectiveness and dissemination studies have been conducted with Coping Power, indicating intervention effects on children's aggressive behavior and problem-solving skills among aggressive deaf children in a residential setting (Lochman et al., 2001), and on the overt aggression of children with ODD or conduct disorder in Dutch outpatient clinics in comparison to care-as-usual children (van de Wiel et al., 2007). Long-term follow-up analyses of the latter sample, 4 years after the end of intervention, indicated that the Dutch version of Coping Power treatment (Utrecht Coping Power Program) had preventive effects by reducing adolescent marijuana and cigarette use of Coping Power children in comparison to the care-as-usual children, although long-term effects were not found on alcohol use.

Coping Power has also been found to be effective in reducing children's externalizing behavior problems (according to teacher, parent, and youth self-report ratings) at the end of intervention when the program has been disseminated with intensive training to "real-world" guidance counselors in schools (Lochman et al., 2009), and in preventing the reductions in language arts grades evident in control adolescents 2 years after the end of intervention (Lochman et al., 2012). In addition, the abbreviated version of Coping Power, one third shorter than the full program, has also been found to produce long-term reductions in teacher-rated externalizing behavior problems, relative to a control group, 3 years after the end of intervention, and it has produced reductions in adolescents' callous-unemotional traits (Lochman et al., 2014).

Depression

Psychosocial treatment. Treatment research for adolescent depression has largely focused on three interventions: cognitive behavioral therapy (CBT), interpersonal psychotherapy (IPT), and pharmacotherapy, all of which have received support as effective in reducing depressive symptoms. Most clinical trials for adolescent depression have included CBT interventions and have resulted in beneficial effects on symptom reduction (Weersing & Gonzalez, 2009). However, findings from the seminal Treatment of Adolescents With Depression Study (Treatment for Adolescents With Depression Study Team, 2004) found no benefit for CBT above placebo pill, whereas pharmacotherapy (fluoxetine) alone and combined CBT and pharmacotherapy were quite effective. The small numbers of studies on IPT in clinical trials have supported its effectiveness, but the benefits of IPT in combination with pharmacotherapy remain to be determined (Weersing & Gonzalez, 2009). Overall, research suggests that psychosocial interventions are beneficial in the treatment of adolescent depression, and examples of empirically supported CBT and IPT programs follow.

Adolescent Coping With Depression (CWDA) course. CWDA (G. N. Clarke, Lewinsohn, & Hops, 1990) is a group-based, cognitive–behavioral treatment designed for adolescents between 13 and 18 years of age who meet diagnostic criteria for major depression or dysthymia. A parenting component incorporating eight weekly sessions designed to run parallel to the adolescent groups has also been developed; however, results of outcome research suggest minimal benefits beyond those achieved by the adolescent groups alone.

CWDA comprises 16 manualized sessions delivered twice weekly over an 8-week period. The program includes five main skill modules, each focused on the remediation of a main symptom of depression. Negative cognitions—including feelings of guilt, worthlessness, and hopelessness—are addressed through cognitive restructuring. In the behavioral therapy module, adolescents learn to identify and schedule positive activities to counter anhedonia and impairments in interpersonal relationships. Problem-solving and communication skills provide additional tools for managing problems with interpersonal conflict effectively. Relaxation training assists adolescents with feelings of anxiety and tension as well as with irritability, anger, problems with self-control, and sleeplessness. Finally, adolescents are helped to set realistic, manageable goals and to deal with potential obstacles to these goals, such as fear of failure and of the unknown.

The CWDA program has been recognized as an evidence-based program, with eight randomized controlled trials providing support for its effectiveness in preventing and treating adolescent depression (Cuijpers et al., 2009). Results of a meta-analysis of studies involving treatment of youths with depression indicate a significant effect size, in the small to moderate range (0.35). Two studies have compared the CWDA program against a wait-list control condition, with significantly more CWDA students no longer meeting criteria for a depression diagnosis after treatment (G. N. Clarke et al., 1999; Lewinsohn et al., 1990). Interestingly, a CWDA plus parent group was included in both of these studies, but no benefit was found for parental involvement in either study.

IPT for depressed adolescents (IPT-A). IPT-A (Mufson et al., 2004) is a well-researched, evidence-based treatment (David-Ferdon & Kaslow, 2008) derived from an effective adult version of the program. Although not making assumptions about the cause of depression, the treatment model recognizes that depression negatively affects interpersonal relationships, thereby maintaining or exacerbating the course of the disorder. IPT-A thus seeks to alleviate symptoms through improving adolescents' interpersonal relationships with significant others.

Originally developed for clinic-based individual therapy, IPT-A has also been adapted for use in school settings and with small groups of adolescents. The program is designed to be time-limited, with sessions delivered weekly across a 12- to 16-week period. Early sessions comprise the initial phase, during which a standard set of treatment goals are addressed including diagnosing the depression, providing psychoeducation about depression, assessing for specific problem areas, and establishing a treatment contract. Assessment completed during the initial phase provides the middle phase of treatment's focus, one of four interpersonal problem areas including grief, role transition, role dispute, and interpersonal deficits. Sessions occurring in the middle phase incorporate a variety of therapeutic techniques focused on the program's main goals of symptom reduction and improved interpersonal relationships. Common areas of focus during the middle phase include affect identification and making links between mood and interpersonal events; communication skills, particularly recognizing how verbal and nonverbal communication may affect others; and interpersonal problem-solving skills. The focus of the termination phase is on fostering a sense of competence and independence in managing interpersonal relationships; treatment gains and potential challenges are identified, and plans are made for monitoring and addressing future symptoms of depression.

Research on the efficacy and effectiveness of IPT-A has provided convincing support for the program's ability to reduce depressive symptoms and to improve interpersonal functioning in adolescents (David-Ferdon & Kaslow, 2008). Two randomized controlled trials have examined the efficacy of IPT-A, with positive results. Mufson et al. (1999) assigned 48 adolescents with depression to IPT-A or a clinical monitoring condition, finding that adolescents who received IPT-A were more likely to complete treatment and recover from their depression, and to demonstrate more improvements in their problem-solving skills and interpersonal functioning. The second efficacy study compared a modified version of IPT-A to CBT and to a wait-list control condition in a sample of 71 Puerto Rican adolescents diagnosed with depression (Rosselló & Bernal, 1999). Both treatment groups demonstrated significant improvements in their depression symptoms compared to the wait-list control condition. Further comparisons with wait-list controls indicated that the IPT-A group, but not the CBT group, demonstrated improvements in self-esteem and social functioning.

Psychosocial prevention programs. Meta-analytic reviews of child and adolescent depression prevention interventions indicate that they are effective in decreasing depressive symptoms at posttreatment and at follow-up evaluation points, though effect sizes are generally small (e.g., Brunwasser, Gillham, & Kim, 2009; Stice et al., 2009). Prevention programs may be more effective for older adolescents, female adolescents, and those at high-risk for developing depression (Horowitz & Garber, 2006; Stice et al., 2009). Program features associated with more positive effects include shorter duration and use of homework assignments, though specific intervention content has not been found to differentiate among program effect sizes (Stice et al., 2009).

A prominently implemented and evaluated preventive intervention for adolescent depression is the Penn Prevention Program (PPP; Jaycox et al., 1994). PPP is a school-based preventive intervention designed to address risk factors for depression, including poor problem-solving skills, negative cognitions, and low self-esteem. The 12-session program consists of a cognitive component and a social problem-solving component. In the cognitive component, students learn to challenge negative beliefs and to replace pessimistic cognitions with more realistic appraisals. The social component focuses on skills such as goal setting, perspective taking, identifying and evaluating potential solutions, and communication skills. Skills for coping with distressing events are also taught, including relaxation, distraction, seeking social support, and de-catastrophizing.

The effectiveness of the PPP in preventing depression has been evaluated in a number of studies involving targeted and universal approaches. A meta-analytic review of 17 PPP trials found that adolescents consistently reported reduced levels of depression, compared to no-treatment controls, at postintervention and up to 1 year after completing the program (Brunwasser et al., 2009). However, when compared to other treatments, no significant advantage emerged for PPP. Although a significant effect was found for targeted samples at postintervention, several months later, and at a 1-year follow up, effects were only significant for universal samples 12 months postintervention. PPP has been adapted for international use (e.g., China, Australia) and for implementation in primary care settings, with positive results (Garber, Webb, & Horowitz, 2009). A parent component has also been developed, and the combined parent and child PPP program has been shown to reduce depressive symptoms up to 1 year postintervention (Gillham et al., 2006).

KEY ACHIEVEMENTS

The establishment of adolescent clinical psychology is in itself a key achievement. It has set the stage expanding recognition of mental health problems, establishing more precise identification of disorders and developing strategies to prevent and treat psychological problems in adolescents. To us, these are the key achievements of adolescent clinical psychology.

Another achievement is that the field has established the unfortunate reality that young people can and do experience suffering, impaired relationships, and lost potential due to mental health problems. Increasingly, recognition of psychopathology in adolescents has expanded beyond clinicians and psychological researchers to include primary care medical practices, schools, and the community at large. Wider acceptance has led to a decrease in any stigma associated with psychological distress and to corresponding access to treatment.

Identification of psychological disorders continues to be refined with the development of empirically informed assessment instruments and diagnostic strategies. As knowledge of risk factors and subclinical symptoms has increased, the importance of prevention has been increasingly appreciated, with important advancements in developing strategies designed to reroute problematic pathways toward more promising futures for youths.

Finally, the completion of randomized clinical trials and the establishment of empirically supported treatments has improved the quality of services for affected youths toward greater symptom reduction and enhanced health, development, and well-being.

FUTURE DIRECTIONS

As a result of these achievements, the future for adolescent clinical psychology holds promise. First, in the future, there is likely to be more widespread application of evidence-based treatment and prevention strategies. We need to better understand the institutional and clinician barriers that interfere with widespread dissemination of effective programs. Another key issue concerns the degree to which such treatment and prevention strategies can be adapted to specific populations and still retain their proven effectiveness. For example, can a treatment developed for one range of the adolescent years also be used with younger and older adolescents, and can the intervention be used with adolescents from different cultures?

Second, more attention is likely to be paid to training and implementation factors that promote the use of empirically supported treatments in real-world settings. We have begun to find that the intensity of training makes a difference in the effective uptake of the procedure by real-world clinicians. What level of training intensity is required for therapists with widely varying backgrounds? Will web-based training procedures be as effective in conveying the details about new treatments as the typically costly and effortful in-person workshops?

Third, we expect that technology will increasingly augment and extend evidence-based treatments. Internet applications may, or may not, provide effective methods for treating adolescents. Hybrid forms of treatment may be necessary for ingrained serious behavior problems, combining some face-to-face treatment sessions with interesting Internet-based content.

Fourth, we anticipate greater use of group formats for treatment and prevention in select instances. Group treatment with conduct disorder adolescents has become a controversial topic because of the peer deviancy training effects that have been observed during this developmental stage when youths are so attuned to peer feedback. What are optimal ways that group therapists can defuse this deviancy training process in group sessions?

Fifth, advancements in understanding the role of psychophysiological processes in adolescents' mental health problems promise to enhance extant preventions and treatments. For example, can integration of mindfulness approaches into treatment assist adolescents in better managing their intense physiological reactions in threatening and fear-inducing situations? Are youths with certain neuropsychological profiles more likely to profit from a given evidence-based practice than other adolescents, and can this information permit us to adapt the program for those adolescents who respond less well?

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CHAPTER 7

EMERGING ADULT CLINICAL PSYCHOLOGY

Jennifer L. Tanner and Jeffrey J. Arnett

Currently, *emerging adult clinical psychology* is not an officially recognized specialty in psychology, yet there is a growing awareness of the need for tailored services designed to meet the mental health needs of this age group, roughly spanning 18–29 years of age. Need for a specialty practice in emerging adult clinical psychology reflects widespread interest in understanding the behaviors and decisions young people are making in their late teens and 20s as they make their way from adolescence to adulthood.

Clinical psychologists are interested in understanding what has changed between past generations and more recent generations. Furthermore, there has been no shortage of popular media questioning and offering interpretations to explain the way young people make transitions to adulthood in the 21st century. For example, in 2010, the *New York Times Sunday Magazine* published an article with the title, “What Is It About 20-Somethings? Why Are So Many People in Their 20s Taking So Long to Grow Up?” (Henig, 2010). The widespread popularity of the article reflects a generalized public concern that cuts across age groups and social classes: Emerging adults and those who love and work with them want to know whether delayed and untraditionally sequenced transitions into adult roles (e.g., parenthood before marriage) reflect new, healthy pathways to adulthood, or whether later, less predictable transitions to adulthood indicate that, *en masse*, young people are failing to make successful transitions to adulthood. At the crux of this concern is the desire to know how to distinguish healthy from unhealthy functioning during a period of the life course now characterized by significant variability. Not surprisingly, the expertise of mental health professionals is sought when questions concerning mental health and mental disorder are a cause for concern regardless of age. However, clinical psychologists face specific challenges when working with emerging adults. Not only are clinical psychologists charged with the task of assessing moving targets but they also face the challenge of evaluating functioning when currently there is a lack of a shared consensus on the markers of healthy, successful emerging adult functioning.

It has become clear that mental disorder plays a significant role in the lives of a significant proportion of emerging adults’ lives. Findings from epidemiological studies reveal that 40%–50% of emerging adults (18–29 years of age) meet criteria for at least one mental disorder in a given year in the United States (Kessler et al., 2004). This high rate of mental disorder in this age group is not unique to the United States. The rate is consistent in the United Kingdom and New Zealand and other countries, with both high-income and low-income populations (Patel et al., 2007). Despite the fact that prevalence of mental disorder is higher in emerging adulthood compared to later stages of adulthood, emerging adults are less likely to access mental health services compared to older adults (Adams, Knopf, & Park, 2014; Wang et al., 2005). Emerging adults dealing with mental disorders are less likely than their peers to successfully transition into adult roles and to become productive members of society (Center for Behavioral Health Statistics and Quality, 2014; Government Accountability Office, 2008).

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Clinical psychologists represent the frontline resource for emerging adults who do seek mental health treatment. To date, however, practitioners lack conceptual models specifically designed for use with this age group. Furthermore, with exception, few assessment tools and best treatment practices have been explicitly designed and validated for use with emerging adults. A specialization in emerging adult clinical psychology has the potential to address the growing need for education, training, and resources to help psychologists provide effective mental health services to emerging adults.

In this chapter, we summarize the frontier of specialization in emerging adult clinical psychology. We begin by offering a definition of emerging adult clinical psychology and summarizing its history. Following, we provide a review of our current knowledge base, major activities, and key achievements in the field; we then conclude with future directions.

DEFINITION

The American Psychological Association (APA) has established practice specializations where the population served is defined by age and stage. Two such specialties are currently recognized: clinical child psychology and professional geropsychology. Drawing on the definitions of these developmentally informed specialties, *a specialization in emerging adult clinical psychology* may be defined as a specialty practice in professional psychology that develops and applies scientific knowledge and methods to the delivery of psychological services to emerging adults and others in their social environments to maintain well-being, overcome problems, and achieve maximum potential during the late teens and 20s. Emerging adult clinical psychology appreciates the wide diversity among emerging adults, the complex legal and ethical issues that can arise in practice with this population, and the importance of interdisciplinary models of care.

APA Division 53 (Society of Clinical Child and Adolescent Psychology) has established an Emerging Adulthood Special Interest Group. The Emerging Adulthood Special Interest Group is dedicated to the promotion of policy, practice, research, and training directly relevant to the psychological assessment and treatment of individuals 18–25 years of age. Its primary goal is to provide a professional forum that supports the development of psychological science and practice designed to promote the well-being of individuals experiencing social and psychological difficulty during the developmental transition from adolescence to early adulthood. To this end, the Emerging Adulthood Special Interest Group is interested in (a) educating others about emerging adult development, (b) promoting awareness of the service needs of this age group, (c) supporting research relevant to the psychological assessment and treatment of emerging adults, (d) developing models of service delivery for this age group, (e) defining best practices for use with this age group, and (f) disseminating information about the psychological assessment and treatment of this age group. It also seeks to establish a national platform for the exploration and development of psychological science and practice devoted to emerging adulthood mental health (see the following website: https://www.clinicalchildpsychology.org).

CONDENSED HISTORY

Formal specialization in clinical psychology is relatively recent. Only in the past 20 years has APA recognized any age- or stage-based specialties. In 1998, clinical child psychology was organized and accepted as a practice specialty to promote the design and delivery of developmentally tailored mental health services to youths (i.e., infants, toddlers, children, and adolescents within their social context; see Chapters 5 and 6, this volume). A clinical psychology of emerging adulthood rests on the same working assumption: The transition to adulthood is developmentally distinct in ways that give rise to unique mental health problems and necessitate developmentally tailored mental health services to meet the needs of young people in their late teens and 20s.

The Transition to Adulthood

The first theories of human development assumed that development commenced at birth and was complete in adolescence (Freud, 1905/1949; Piaget, 1929). Hall's (1904) in-depth study of growth and development of the adolescent suggested that adolescence commenced with the onset of puberty and concluded with the assumption of adult roles (i.e., a career and a family of one's own). According to Hall, the vast majority of individuals achieved full maturity, or adulthood, by 24 years of age.

By the mid-20th century, the notion that full maturity was achieved by the end of adolescence was challenged by the introduction of Erik H. Erikson's psychosocial stage theory of human development. Erikson (1950) postulated that development began at birth and ended at death. Moreover, Erikson asserted that adolescence, roughly spanning 12–18 years of age, and young adulthood, approximately 19–40 years of age, were distinct stages of development requiring the individual to resolve unique developmental challenges. Last, Erikson's model challenged the assumption that full maturity, or adulthood, can be measured by an individual making commitment to adult roles.

Erikson (1950) introduced a framework for measuring maturity as a function of psychosocial maturity. Each stage of development presents an opportunity for an individual to resolve a specific developmental task, one that involves an individual achieving a personal strength useful for navigating fit with society. According to Erikson, individuals who successfully resolve developmental tasks make maturational gains faster than those who do not; in addition, maturity is associated with mental health. With respect to the transition to adulthood, the individual is challenged to achieve identity, or a personal sense of self in adolescence, and is challenged to establish intimacy with others in young adulthood. With respect to mental health, young people who develop a healthy sense of self and have the ability to establish close, personal relationships with others are protected from experiencing a sense of confusion about one's role in society or a sense of isolation.

Postadolescence

By the 1960s, other theorists had introduced an alternative view of the transition to adulthood, asserting that the late teens and 20s represented a distinct stage of development involving a specific set of developmental challenges unique to this age period and different from both the tasks of adolescence and the tasks of young adulthood. Blos (1962) chose the term *postadolescence* to distinguish the late teens and 20s from adolescence. According to Blos, postadolescence involves consolidation of one's personality following the elaboration and exploration of identity that takes place in adolescence proper.

Wittenberg (1968) further articulated the developmental distinctiveness of postadolescence in two ways. First, he asserted that postadolescence is unique with respect to the transitional nature of this life stage, which, in turn, affords significant opportunity for personal growth and maturation. Second, he viewed postadolescence as a period of social suspension between adolescence and adulthood. Third, Wittenberg recognized postadolescence as a unique stage of the life span because development not only involves personality challenges but also, and for the first time, expectations that a postadolescent successfully navigate tasks associated with getting along in the adult social world in contrast to the social world of childhood and adolescence.

In total, Wittenberg (1968) identified eight developmental challenges that distinguish postadolescence as a developmental stage. He outlined five intrapsychic tasks: resolve a self-image crisis, work past identity diffusion, give up role-playing, cope fully with time continuity, and choose a partner (or actively choose not to partner). During this period of deferment, he also proposed that postadolescents faced three sociodemographic tasks: (a) manage the *socioeconomic bind*—the simultaneous expectation that a young person live self-sufficiently while also continuing his or her training or education, which requires semidependence (i.e., on parents; financial aid); (b) rely on peers as a primary source of social support and protective factor against social isolation; and (c) search for a *weltanschauung*—one's own view of life.

In sum, by the late 1960s, psychologists had begun to view the late teens and 20s as a distinct stage. Clinical psychologists were gaining awareness that young people or postadolescents in their late teens and 20s were challenged with specific developmental tasks that required them not only to reorganize their sense of self but also to progress in financial self-sufficiency. Yet, despite gains in the way mental health professionals understood postadolescence, the age period attracted little scholarly attention during the last decades of the 20th century. One reason for this is that by the 1970s, dramatic changes in the way young people made transitions to adulthood were underway (Scanlon, 1979).

KNOWLEDGE BASE

Contemporary scholars agree that 21st century transitions to adulthood are significantly different from those of the 1950s and 1960s. Throughout the second half of the 20th century, social, economic, and demographic forces reshaped the timing and sequencing of adult role commitments. For example, from 1960 to 2009, the average age of marriage in the United States shifted from 20 to 26 years for women and from 22 to 28 years for men (Kreider & Ellis, 2011). Not only did young people delay marriage and parenthood but they also established new trends all together. Cohabitation became increasingly common (Copen et al., 2012), and premarital sex became the norm (Finer, 2007). More than 41% of first-time mothers had their first child outside of marriage in 2009 (Martin et al., 2013). The traditional definition of what it means to be an adult became less useful and hastened need for new theoretical models outlining normal development from the teens through the 20s.

By the 1990s, significant shifts in the way young people were spending their 20s prompted Arnett (1997, 1998) to conduct a series of surveys investigating the following question: What are the key criteria of "adulthood"? Respondents of a wide range of ages, from a variety of backgrounds, were asked to endorse and rank 40 criteria (e.g., age 18; age 21; getting married; purchasing a home). Across samples, regardless of age or sociodemographics, only a small percentage of respondents endorsed role exits and entries as markers of being an "adult"; age was infrequently endorsed as a marker of adulthood. Together, findings from these studies point to character qualities as the distinguishing features of being an adult, specifically three: accepting responsibility for oneself, making independent decisions, and becoming financially responsible (Arnett, 2003).

The term *emerging adulthood* is not interchangeable with other terms because a distinct age period requires a unique label (Arnett, 2000). Emerging adulthood is distinct, according to Arnett (2000), on three dimensions: demographically, subjectively, and psychologically. The age period is demographically distinct due to the concentration of frequent role changes in the late teens and 20s. Emerging adulthood is subjectively distinct because individuals are unlikely to view themselves as adolescents and likely to view themselves as "in between" adolescence and adulthood (Arnett, 2001). When asked "Are you an adult?", the majority (50%) of emerging adults (20–29 years of age) responded "sometimes yes, sometimes no," and 45% reported that they have reached adulthood. Only 5% of 20- to 29-year-olds reported that they have not yet reached adulthood. Last, emerging adulthood is psychologically distinct due to the fact that personal identity is called upon to optimize the likelihood that an individual will successfully find fit between self and society.

To further explore emerging adults' experiences of these in between years, Arnett (2004) conducted interviews with more than 300 emerging adults from different areas of the United States, representing different socioeconomic backgrounds. From these interviews, five themes were extracted that characterize emerging adulthood as the era of in-between, identity, possibilities, self-focus, and instability. Exhibit 7.1 summarizes these five themes (Arnett, 2004).

Such work has encouraged scholars to examine the validity of emerging adulthood with respect to its potential distinct features. One measure, the Inventory of Emerging Adulthood (Reifman, Arnett, & Colwell, 2007), was designed to assess the proposed features of emerging adulthood. Over the past decade, studies of emerging adulthood around the globe have contributed findings that both support and challenge the universality of the five features of emerging adulthood (see Exhibit 7.1). The theory of emerging adulthood has stimulated a significant amount of scholarly debate (Arnett et al., 2011; Côté, 2014).

EXHIBIT 7.1
Characteristics of Emerging Adulthood

The age of . . .	
instability	Emerging adults often find that their grand life plan encounters complications along the way, and they are forced to revise it, often changing majors, partners, jobs, and especially residences (Arnett, 2004, pp. 10–11).
identity exploration	Emerging adults are continually trying out different options in an attempt to figure out who they are and who they would like to become, particularly in the areas of romantic relationships and careers, where they are focused on finding a person whose qualities would make for a suitable life partner and finding a job that will provide them with a sense of personal fulfillment (Arnett, 2004, pp. 8–9).
self-focus	Emerging adults tend to delay significant adult responsibilities, such as marriage and parenthood, in an effort to enjoy the opportunity to exercise the freedom they now have without their parents governing their every move. During this stage, they tend to focus on themselves and their own personal needs (Arnett, 2004, pp. 12–13).
feeling “in between”	Emerging adults often answer “yes and no” when asked “Are you an adult?” They still feel that they need to meet all the criteria of adulthood (listed above) before they can be considered fully adult, but they do feel a great deal more independent and mature compared to when they were adolescents (Arnett, 2004, pp. 14–15).
possibilities	Emerging adults often hold a very optimistic view of the future and truly believe that they will accomplish their dreams and overcome past circumstances, such as an unhappy home life, in an effort to become the person they would like to be (Arnett, 2004, pp. 16–17).

Recentering

There is significant need for conceptual models that can define the development and adjustment through the late teens and 20s to identify the special problems and mental health needs associated with this developmental period. One such model proposes that the distinguishing task of emerging adulthood is *recentering* (Tanner, 2006). Complementing the cross-sectional approach of emerging adulthood, recentering takes a longitudinal approach, describing normative individual development and variation in adaptation through the emerging adult years. Recentering, simply described, requires the emerging adult to shed the dependencies of childhood and adolescence, take on the responsibility of meeting one’s own needs, and become the navigator of one’s own life.

The core assumption of recentering is that emerging adulthood represents a critical juncture in life span development characterized by the unique and dramatic shift that occurs between the individual and society. Recentering emphasizes what is often implicit at the transition to adulthood—accepting the rights and responsibilities of the social contract. The rules of the social contract vary by culture, subculture, and historical period but universally assume that the adult act as a law-abiding, productive member of adult society in exchange for the basic rights, freedoms, and protections afforded adults (Flanagan & Syvertsen, 2006).

Recentering is conceptualized as a three-stage process. Stage 1 begins at the legal emancipation of the young person—the 18th birthday for the majority of the population. Whether fully recognized by the individual or not, recentering begins when society determines an individual is legally an adult. As individuals gain social status as a legal “adult,” they lose the status and view of self as not fully responsible for self—thus initiating a new phase of self-development. Healthy recentering involves renegotiating the relationship with one’s family origin away from hierarchy (i.e., parents have authority over and are responsible for the care of the dependent child) toward mutuality and relational autonomy (Harter, 1999, 2012).

Stage 2 of recentering, *emerging adulthood proper*, is defined by the expectation that the emerging adult make progress toward taking responsibility for meting one’s own needs. This is a shared expectation, thus motivation for such progress comes both from within and from external sources (e.g., parents, community, peers). Emerging adulthood provides a social reprieve from full adult responsibilities for a young person to gather resources (e.g., education, occupational experiences, interpersonal experiences) that will be used later to fulfill one's obligations to the social contract.

Stage 3 of recentering is marked by the transition out of emerging adulthood into young adulthood. The person commits him- or herself and resources to roles, relationships, and responsibilities. The new connections between the individual and work, family, and community, in turn, shape adult development and adjustment. Thus, in young adulthood, the individual is shaped by self-selected responsibilities to others and the demands of these commitments. In contrast to the transitional nature of emerging adulthood, and normative expectation of change, in young adulthood, the goal is to reduce instability and to embrace stability.

Mental Disorder

The late teens and 20s are opportunities for continued growth and development. Most notably due to recent advances in neuroscience, brain maturation continues, specifically in the frontal lobe, which is primarily responsible for the executive functioning skills essential for planning, initiating, and executing plans during the transition to adulthood. At the same time physical health climaxes; therefore, it is common for mental disorders to present in emerging adults' lives threatening not only their current health and well-being but also representing threat to future mental and physical health (Tanner & Arnett, 2013).

In contrast to the physical robustness of emerging adulthood, these years represent a period of peak risk for mental disorders. Findings from the National Comorbidity Survey Replication (Kessler & Merikangas, 2004) estimate that 44% of emerging adults meet criteria for at least one mental disorder in a given year (among 18- to 29-year-old, noninstitutionalized adults representing a sociodemographic cross-section of the U.S. population). Twelve-month prevalence is higher in emerging adulthood compared to adolescence (Newman et al., 1996) and later stages of adulthood (Kessler et al., 2005).

The most common mental disorders in emerging adulthood are anxiety, substance use, and mood disorders (Kessler et al., 2005). Approximately 22% of emerging adults meet criteria for an anxiety disorder, and 22% meet criteria for a substance use disorder. Nicotine dependence (16.7%) is the most prevalent of the substance disorders, followed by alcohol abuse with/without dependence (7.1%) and drug abuse with/without dependence (3.9%). Mood and impulse control disorders are less common, but each, respectively, affects more than 10% of the emerging adult population (i.e., 12.9%, mood disorders; 11.9%, impulse control disorders; Kessler et al., 2005). During the late teens and 20s (18–29 years of age), major depressive disorders are the most common mood disorders (8.3%), followed by bipolar disorders (I and II; 4.7%) and dysthymia (1.1%). With respect to impulse control disorders, intermittent explosive disorder is the most common (8.3%), followed by attention-deficit/hyperactivity disorder (3.9%), oppositional defiant disorder (1.2%), and conduct disorder (1.4%). Less common, yet severe and debilitating, disorders are likely to appear in or around emerging adulthood: schizophrenia, bipolar disorder, and eating disorders (American Psychiatric Association, 2013).

MAJOR ACTIVITIES

In the past decade, psychology and society have witnessed a growing interest in the age period spanning the late teens and 20s. Both practitioners and scholars have responded to the interest.

Clinical Practice

The practice of psychology with emerging adults is similar to that conducted with other client cohorts defined by age and life transition, such as children and older adults. Clinical psychologists frequently perform psychotherapy, assessment, diagnosis, consultation, and other direct services with emerging adults (Norcross & Karpiak, 2012). The dearth of conceptual models and professional organizations, as previously noted, have resulted in relatively few psychologists recognizing themselves or advertising their specialties as explicitly in emerging adulthood.

Scholarship

APA was one of the first large professional societies to focus and support scholarship related to emerging adulthood. It funded the first conference on emerging adulthood (Fall 2003) and contracted for the first volume on the topic: *Emerging Adults in America: Coming of Age in the 21st Century* (Arnett & Tanner, 2006). That edited volume brought together the expertise of interdisciplinary scholars, primarily developmental psychologists, resulting in a comprehensive handbook about growth and maturation from the late teens through the 20s across a variety of developmental domains (e.g., cognitive development, family relationships, school and work, ethnic identity, sex and sexuality).

A decade after that conference on Emerging Adulthood, the Division 53 Special Interest Group on Emerging Adulthood was developed. As mentioned previously, establishing a presence of this kind has helped to mobilize clinical efforts to support emerging adults as they transition from adolescence to adulthood (https://www.clinicalchildpsychology.org).

Since its introduction, the theory of emerging adulthood attracted widespread attention. In its year of publication, 80 articles referenced “emerging adulthood”; now there are more than 10,000.

The Society for the Study of Emerging Adulthood (SSEA) is an international organization of scholars who focus on theory and research related to the age period spanning 18–29 years. The mission of SSEA is to advance the understanding of development in emerging adulthood through scholarship, education, training, policy and practice. This goal is promoted through biennial meetings, the journal *Emerging Adulthood*, and a website (http://www.ssea.org).

The SSEA is primarily composed of developmental psychologists; however, one of the primary foci of SSEA has been on mental health in emerging adulthood. In 2011, 2013, and 2015, SSEA hosted workshops on “mental health in emerging adulthood” with the mission of educating and training scholars from a wide variety of disciplines including clinical psychology, psychiatric epidemiology, nursing, social work, community mental health, college student mental health, and military psychiatry.

MAJOR ACHIEVEMENTS

Given that the APA and the American Board of Professional Psychology do not currently recognize a specialization in emerging adult clinical psychology, acknowledgment that there is growing interest in and need for such a formal specialization is a major achievement. Moreover, raising professional awareness of the developmental distinctiveness of emerging adulthood, the significant risk for mental disorder associated with this age period, the high unmet need for services associated with the transition stage, and the paucity of developmentally tailored assessments and treatments designed for this age group constitute major achievements.

In the past few years, several public health publications have focused on this age period and mental health issues that appear during these years (Institute of Medicine & National Research Council, 2014; Neinstein, 2013). These publications represent major achievements because they are among the first to both recognize the distinctiveness of the age period and take the position that young people in their late teens and 20s are different with respect to their health and mental health needs.

FUTURE DIRECTIONS

In the future, a specialization in emerging adult clinical psychology will be informed by a specialized knowledge of development and adjustment as well as information about the social contexts that influence and are influenced by emerging adult development and adjustment. Here, we offer future directions for psychological practice, training, and research.

Practice

Specialty practice will address specific problems experienced during this developmental stage. These entail, among others, biological vulnerabilities, emotional and developmental problems, major mental disorders, cognitive deficits, trauma and loss, health-related problems, coping related to developmental change, and problems in their social worlds. Furthermore, specialists will utilize skills and procedures specifically designed to promote mental health in emerging adulthood.

In practice, the majority of the emerging adults who seek help will be suffering from a recurrent episode or a persistent mental disorder rather than a first episode (Kessler & Wang, 2008). Epidemiological studies note high 12-month prevalence of mental illness in emerging adulthood, ages 18–29 years (Kessler et al., 2005); however, when prevalence estimates are considered from a developmental perspective, only 10% of cases of mental disorders in a community sample followed into emerging adulthood (21 years of age) have an onset in adulthood (Newman et al., 1996). In other words, approximately 75% of emerging adults who meet criteria for a mental disorder had at least one prior episode by 18 years of age (Kim-Cohen et al., 2003; Newman et al., 1996).

Clinical psychologists can expect that emerging adult patients will be complex cases. One reason for this is comorbidity. Findings from the National Comorbidity Survey Replication estimate that among those who met criteria for any disorder, 34% of 18- to 29-year-olds met criteria for two or more disorders, and 22% met criteria for three or more disorders (Kessler & Wang, 2008). Common comorbidities include, but are not limited to, generalized anxiety disorder and panic disorder, generalized anxiety disorder and major depressive disorder, and major depressive disorder and substance disorder.

Emerging adult cases are likely to be complex not only due to the high likelihood of comorbidity but also due to the probability that early onset episodes of mental disorders—during childhood and adolescence—were undiagnosed, untreated, or undertreated. Less than half of childhood mental disorders (45.3%) received services in the previous 12 months. In a given year, 80% of 6- to 17-year-olds identified as needing mental health services go untreated (Kataoka, Zhang, & Wells, 2002). Undiagnosed childhood-onset disorders exacerbate current problems and make treatment more challenging (Huntley et al., 2012). Moreover, emerging adults who express a desire for, but who do not receive, mental health services are more likely to engage in health risk behaviors (e.g., cigarette smoking, marijuana use, binge drinking; Mason et al., 2013).

At the same time, emerging adulthood is a development stage during which mental health increases on average. Clinical psychologists working with emerging adults should expect an increase in mental health from the late teens through the 20s. Young people followed after high school graduation report increases in perceived social support, satisfaction with life, self-efficacy, and self-esteem from 18 to 22 years of age. Findings also show significant decreases in loneliness, fatalism, self-derogation, anger, depressive symptoms, and substance use (Galambos, Barker, & Krahn, 2006; Schulenberg & Zarrett, 2006) as well as increases in self-esteem and decreases in anger and depressive symptoms (Galambos et al., 2006). Through the later emerging adult years (21–30 years of age), reports of depressive symptoms decrease as perceptions of social support from family and friends increase (Pettit et al., 2011).

Given the salience of the development of the self in the late teens and 20s, psychologists specializing in emerging adult clinical psychology will recognize that their patients face challenges with respect not only to mental health and mental disorders but also with respect to self-development. Self-development is a life span process that takes on special significance in emerging adulthood when the individual undergoes the fundamental challenge of creating his or her self-identity (Harter, 2012). Not unique to emerging adulthood, the self strives for coherence. Unique to emerging adulthood, the self is challenged not only to integrate past and present self but also the numerous and significant life-shaping experiences of emerging adulthood. Pressure from within to organize self is motivated by the drive to maintain homeostasis and from external sources seeking confirmation that the young person is developmentally on target, guided by a coherent sense of self and a plan for the future.

Healthy emerging adults activate self-development processes by formulating a life plan (Pulkkinen, Nurmi, & Kokko, 2002). Life plans involve constructing a set of goals, activating the goals, evaluating the achievements, and reflecting on one's progress; in turn, self-development is associated with mental health and well-being (Nurmi, 1997). In emerging adult college students, openness to new experiences has been associated with active exploration, an indicator of healthy self-development (Schwartz et al., 2012).

Research

Mental health is an index of positive development—a separate dimension of health that is more than the absence of mental disorder. At any age, *mental health* can be defined as a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community. In a U.S. sample of college students, approximately 50% of emerging adults were classified as flourishing—living within an optimal range of human functioning (Keyes, 2002). Flourishing students report lower rates of suicidal behavior and better academic performance compared to their peers (Keyes et al., 2012). In the future, we expect more research on the enhancement of flourishing and on mental health services as a protective factor.

As well, we expect increased research on *vulnerability* among emerging adults. Emerging adulthood has been labeled a high-risk stage of the life span. For example, in a comprehensive analysis of health risks in the late teens and 20s, Neinstein (2013) stated that the high rates of unintentional injury, suicide, and homicide by describing the late teens and 20s as the "perfect storm of risk." This view of emerging adulthood suggests that the decrease in social control and increase in social freedom afforded to emerging adults are the essential ingredients of the perfect storm. An assumption of this model is that emerging adults are underprepared for adulthood. That is, risk stems from undermaturation; specifically, individuals in their late teens and 20s lack the behavioral capacity to self-regulate and the cognitive capacity to make decisions in the best interest of their own health and well-being.

From the developmental perspective, an alternative interpretation of these health risks is that emerging adulthood is a period of vulnerability. Unintentional injury is the leading cause of death in emerging adulthood. Furthermore, although unintentional injury is also the leading cause of death in adolescence (12–17 years of age, 11.9%) and young adulthood (25–34 years of age, 27.1%), the rate is highest in emerging adulthood (18–25 years of age, 39.1%; Centers for Disease Control and Prevention, 2015). Motor vehicle accidents contribute the majority of risk, followed by poisoning (i.e., drug overdose; Centers for Disease Control and Prevention, 2015). Homicide and suicide are the second and third leading causes of death from adolescence through the 30s, respectively. Suicide rates in emerging adulthood are 3 times the rate in adolescence and are equivalent to the rate in young adulthood (Centers for Disease Control and Prevention, 2015). Future researchers will examine these various models (unprepared vs. vulnerability) and methods to reduce vulnerability among emerging adults.

Training

Future clinical training will be grounded in scientific knowledge of emerging adulthood. Such knowledge will prove essential for designing and validating developmentally informed, developmentally tailored assessment and diagnostic tools, therapeutic interventions, and evaluation models specifically for use with emerging adults. The same groundwork was laid for other stage-based specializations in psychology (clinical child psychology, clinical geropsychology), psychiatry (child and adolescent psychiatry), and general medicine (pediatrics, adolescent medicine). In this way, emerging adult clinical psychology will finally and formally be recognized as formal specialization with the expected benefits to practice, research, and train.

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CHAPTER 8

ADULT CLINICAL PSYCHOLOGY

Thomas G. Plante and Lori G. Plante

Adult clinical psychology addresses challenges across the postadolescent life span. Adult clinical psychologists therefore work with the age span encompassing 20-somethings and older adults; as used in this handbook, that span is between 27 and 65 years of age. This work necessarily occurs within a wide variety of settings and often focuses on subspecialties such as geropsychology, neuropsychology, forensic psychology, and behavioral health psychology (Johnson, 2003; Norcross & Karpiak, 2012; Plante, 2011). The range of human difficulties addressed is staggering, including for example schizophrenia, anxiety, social phobia, intellectual difficulties, medical illness, marital problems, adult spectrum disorders, dementia, suicidality, impulse control problems, addictions, and depression. All clinical psychologists must complete rigorous educational, training, and licensure requirements that ultimately set them apart from many other mental health practitioners (Shakow, 1978).

The doctoral degree is considered the minimal educational requirement to become a clinical psychologist. The road is long and comprehensive, encompassing college, graduate school, clinical internship, and (frequently) postdoctoral fellowship (Shakow, 1978). Most practitioners choose to additionally undertake the training and testing requirements for licensure. Graduate work in clinical psychology combines coursework as well as both clinical and research experiences and requires at least 5 years for the Doctor of Psychology (PsyD) or Doctor of Philosophy (PhD), including the dissertation and 1-year internship. Typically, several additional years are needed to complete doctoral studies for the average graduate student, most especially to complete their doctoral dissertation project. Either the PhD or PsyD is ultimately awarded.

Though incredibly broad in its scope, adult clinical psychology can be divided into four major areas: assessment, treatment, research, and teaching (Plante, 2011). After briefly describing the historical and theoretical foundations, these four major activities are more fully discussed. Finally, in this chapter, key achievements and future directions in adult clinical psychology are highlighted.

CONDENSED HISTORY OF ADULT CLINICAL PSYCHOLOGY

The birth of clinical psychology is traditionally traced to the founding of the first psychological clinic by Lightner Witmer at the University of Pennsylvania in 1896. The first documented scientific application of psychology for the express purpose of helping alleviate human problems occurred when Witmer assessed and developed a treatment plan for a child struggling with academic performance. Witmer determined that the child in question had specific deficits in spelling, reading, and memory abilities, and he recommended tutoring in these areas. Many of the methods used by Witmer in his psychological clinic are echoed in today's state-of-the art emphasis on assessment and diagnosis prior to prescribing treatment. His interventions and diagnostic tools were scientifically based, often utilized a multidisciplinary approach, and also sought

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to prevent problems before they emerged. Subsequently, in 1907 Witmer launched the first professional journal representing clinical psychology: *The Psychological Clinic*.

Psychological Testing: The Initial Activity

Another key development helped paved the identity for the emerging field of clinical psychology. Psychological testing, a central activity of adult clinical psychology, emerged from innovations in the assessment of children's intelligence. Alfred Binet and Theodore Simon, two French scientists, developed a tool to determine appropriate educational resources for children with compromised intellectual functioning. The Binet–Simon scale was developed in 1908 specifically for use within schools. In 1916, a Stanford University psychologist, Lewis Terman, adapted the scale for use in the United States and renamed it the Stanford–Binet scale. The success of psychological testing and emerging psychological clinics quickly progressed into clinical psychology's impact in the area of mental health. Although the initial impetus was with children, psychological assessment was soon applied to the intellectual and psychological functioning of adults as well.

Testing was effectively used to assist with screening large numbers of military recruits during World Wars I and II among other purposes, yet it was also used to support discrimination, bias, and the eugenics movement. Sadly, psychological testing (and most especially intelligence testing) has been used to support racial, ethnic, gender, and national origin prejudice over the years (e.g., Herrnstein & Murray, 1994). This was an unintended negative consequence of the development and proliferation of intelligence testing that over time has been used to both help and harm vulnerable persons.

Although not a psychologist, Sigmund Freud stands out as a seminal thinker exerting tremendous influence on 20th-century concepts of healthy and abnormal psychological development. Freud's theories proposing that unconscious conflicts and emotional factors were directly connected to manifestations of many forms of mental and physical illness were outlined in his landmark publication, *The Interpretation of Dreams*, in 1890. Freud's psychoanalytic perspective first entered the domain of clinical psychology as a result of his landmark visit to Clark University in 1909. In attendance at the Clark University conference were other influential psychologists and psychiatrists: Carl Jung, James Cattell, Otto Rank, William James, and Sandor Forenczi to name a few. Freud's theories were enthusiastically embraced and rapidly integrated into the treatment practices for mental illness. In fact, this zeitgeist for psychologically based treatment greatly expanded the field of adult clinical psychology from largely academic settings into applied settings focused on assessment and treatment.

World Wars I and II: Consolidating Testing, Psychotherapy, and Training

The urgent needs of World War I required psychologists to assess the psychological and intellectual qualities of new recruits. The Army Alpha and Army Beta Intelligence Tests, as well as the Psychoneurotic Inventory developed by Robert Woodworth in 1917, were used to evaluate more than two million recruits. The demands of World War II further expanded testing into many of the prevalent measures we use today, such as the Minnesota Multiphasic Personality Inventory (Hathaway, 1943) and the Wechsler Intelligence Scales (Wechsler, 1949). The active engagement of adult clinical psychology in the military greatly enhanced its reach, status, and scope, expanding into an explosion of new psychological tests emerging between World Wars I and II.

The expansion of clinical psychologists into consultation and treatment roles followed naturally from the assessment process. By the 1930s, 50 adult psychological clinics were operating in the United States (Plante, 2011).

As opposed to the psychoanalytic treatment favored by psychiatrists at the time, psychological interventions were more behavioral in nature and were informed by research findings. In fact, it was not until the 1980s that psychologists won the right to enter American psychoanalytic institutes through a major lawsuit with psychiatry, further expanding their ability to provide more comprehensive psychotherapy.

Training Guidelines for Clinical Psychologists

As the role of adult clinical psychologists expanded into treatment, clinical psychology was no longer the domain of academics and researchers. In 1935, the American Psychological Association (APA) Committee on Standards of Training added 1 year of supervised clinical experience to the requirements for a doctoral degree. Unfortunately, this requirement was not enforced, and a schism between the research and practice divisions of the APA remained.

In 1947, the APA Committee on Training in Clinical Psychology developed what has become the gold standard for the doctoral degree. These guidelines centered around the central expectation that training occur in a rigorous 4-year doctoral program including an additional 1-year clinical internship. Further required was training in several domains, including biological, cognitive, diversity, and social aspects of behavior (Shakow, 1976, 1978). Clinical psychologists were to be trained as both clinicians and scientists, invoking the scientist–practitioner model developed during the pivotal Boulder Conference of 1949. The Boulder model has remained the prevailing training model for clinical psychologists (Norcross, 2009).

APA membership subsequently doubled during the 1950s while federal research grants for training and research tripled. After the conclusion of World War II many people took advantage of the GI bill and other opportunities to continue their education, with a sizeable number choosing psychology as a career option. Generous federal training grants by the National Institute of Mental Health as well as other agencies, a keen interest in human behavior following the atrocities of World War II, and a more well-organized and structured approach to clinical psychology training all contributed to the growth of the profession and to higher education in general during the 1950s. Adult clinical psychology has further expanded into a variety of approaches and specialties, as described in the following sections.

KNOWLEDGE BASE OF ADULT CLINICAL PSYCHOLOGY

Much of the knowledge base in adult clinical psychology has traditionally been organized by theoretical approaches or orientations. The term *theoretical orientation* is often used by adult clinical psychologists to characterize the clinician's conceptual framework in treating adults with psychological problems. Four major models have consistently dominated adult clinical psychology: psychodynamic, cognitive–behavioral, humanistic, and family systems (Norcross & Karpiak, 2012). Contemporary psychologists increasingly utilize integrative models such as the "biopsychosocial" approach. In addition, contemporary adult clinical psychology has further integrated research knowledge into treatment, taking the form of structured "evidence-based" approaches.

The Psychodynamic Perspective

Sigmund Freud is considered one of the most influential thinkers in recent centuries. Elements of his psychoanalytic perspective pervade our everyday language. References to the unconscious, the meaning of dreams, the Oedipal Complex, projection, and "Freudian slip" are bandied about as common place concepts. The psychodynamic perspective refers to a variety of psychoanalytic theories that have built upon Freud's original work. Thus, the *psychodynamic perspective* is a more general term that refers to the more specific psychoanalytic approach of Freud as well as his close followers and the additional numerous Neo-Freudian approaches offered by theorists and clinicians up until current times. These authors and clinicians greatly expanded and altered Freud's early contributions. These theories share the perspective that human behavior is influenced by intrapsychic drives, motives, conflicts, and impulses that are primarily unconscious. Furthermore, a variety of maladaptive defense mechanisms are used to deal with unresolved or unacceptable wishes, needs, and impulses. Psychodynamic perspectives also focus on the enduring role of childhood relationships in determining subsequent psychological adaptation. Finally, successful treatment is incumbent on the analysis of the "transference relationship" whereby the patient projects his or her preexisting perceptions of significant life figures onto the therapist.

Many well-known theorists put forth modified versions of Freud's fundamental principles. The

Neo-Freudian perspectives encompass psychodynamic approaches attributable to Carl Jung, Alfred Adler, and other contemporaries of Freud. The object-relations perspective later diverged from this group in emphasizing the role of attachment in interpersonal relationships rather than the control of impulses and drives. Melanie Klein, Margaret Mahler, and Heinz Kohut are some of the key contributors to object-relations theory.

Today, psychodynamic theories integrate early childhood experiences and relationships, personality structure, and the impact of unconscious forces on psychological functioning in adults. Toward the end of the 20th century, the psychodynamic treatments began to explore short-term interventions, which were not only more efficient but were better suited to more rigorous research methods. For example, Hans Strupp (e.g., Strupp & Binder, 1984) developed a brief psychodynamic treatment approach that utilizes psychodynamic principles during a short-term course of several weeks or months. These briefer treatments are more practical in light of modern health care insurance restrictions and emphasis on more efficient evidence-based treatments.

The Cognitive–Behavioral Perspective

Many therapeutic approaches utilize features of this broad perspective. On the basis of learning theory, operant conditioning, classical conditioning, and social learning theory, the cognitive–behavioral perspective seeks to identify and alter how maladaptive behavior is reinforced. Focusing on overt (or observable) behavior and covert (or nonobservable) behavior in the form of thoughts, cognitive–behavioral theory emphasizes the influential role of the environment in shaping healthy and unhealthy behaviors. Empirical research methods are emphasized in developing assessment and treatment strategies.

Behavior and cognitive–behavioral psychologists utilize a variety of specific treatment techniques. For example, an adult might learn to overcome a fear of spiders through exposure therapy (i.e., gradually extinguishing the fear response), counterconditioning (i.e., reinforcing increasing levels of proximity to spiders), or systematic desensitization (an approach developed by Wolpe, 1958, that pairs relaxation with imagined levels of exposure to spiders). To improve parenting behavior, a variety of other techniques might be used, such as operant conditioning to provide positive reinforcement to the on-task child, behavioral rehearsal (practicing nonviolent parenting when feeling angry), or social modeling (observing another parent behave appropriately when provoked).

Cognitive therapies can also be used to intervene with a host of problematic behavior. For example, individuals with social phobia might benefit from rational-emotive therapy (Ellis, 1962), which challenges assumptions and beliefs leading to avoidance of social situations. For example, a person with social phobia might assume that he or she is neither intelligent nor likable enough to successfully engage with new people. Therapists using rational-emotive therapy challenge these irrational beliefs, thus allowing new behavior to enable more rewarding social interactions. Another form of cognitive therapy involves cognitive restructuring, which uses a variety of techniques to change the way one thinks about his or her problems and behaviors. For example, a popular technique includes “thought stopping,” which seeks to teach a person to cut off maladaptive thoughts, such as “I am ugly.” Rather, an individual might be helped in developing positive self-statements, such as “My last girlfriend thought I was handsome,” or “People are primarily interested in what I say not how I look.”

There is a great array of cognitive–behavioral therapies, ranging from Beck’s (1991) cognitive therapy to Meichenbaum’s (1977) stress inoculation training to Linehan’s (1993) dialectical behavior therapy, and beyond. In general, all of these treatment strategies aim to alter thoughts and behaviors utilizing principles rooted in learning and conditioning research. Many of today’s evidence-based therapies rely on cognitive–behavioral techniques.

The Humanistic Perspective

During the early 1930s, psychoanalysis dominated the theoretical and treatment realms of adult clinical psychology. An unlikely pioneer of a vastly different perspective on mental health came from Carl Rogers, then an unknown clinical psychologist. Diverging from the more authoritarian, deterministic views of psychoanalysis, Rogers’s approach emphasized the therapeutic relationship over intellectual interpretation. Rogers's (1951) client-centered therapy focused on acceptance, permissiveness, the present, and an avoidance of advice giving. Active listening, empathy, and positive regard were the cornerstones of Rogers's approach.

Rogers's humanistic perspective was rooted in phenomenology, which emphasizes each individual's unique perception and experience in the here and now. Humanistic therapies credit people as inherently thoughtful, active, and growth oriented. The individual's own understanding of his or her needs, feelings, conflicts, and behaviors is essential. Humanistic therapists view people as instinctively striving toward greater growth, creativity, connection, and self-actualization—the ultimate pursuit of greater contentment, self-acceptance, and peaceful relationships (Maslow, 1971). Thus, the quintessentially human qualities of the person are best understood, encouraged, and accepted in the service of increasing life satisfaction and mental health. Positive striving, free will, and genuineness are emphasized in lieu of sickness or diagnostic labels.

Another pioneer of the humanistic perspective, Fritz Perls (1947, 1969) developed gestalt therapy in adult clinical psychology. The gestalt approach focuses on keen awareness of one's present experience as well as knowledge of immediate thoughts, feelings, and behaviors. Assuming full responsibility for these experiences is central to gestalt therapy, again diverging from psychoanalysis and behaviorism in their emphasis on past events and experiences in determining the human experience.

Numerous psychologists and other mental health professionals contributed to the humanistic movement in adult clinical psychology. In addition to Carl Rogers, Abraham Maslow, and Fritz Perls (mentioned earlier), Victor Frankl, Rollo May, Irv Yalom, and others greatly contributed to the humanistic approach. Its prevailing faith in human nature, egalitarianism, and affirmation of people's right to determine and embrace their individual humanity offered an appealing alternative to previous perspectives.

The Family Systems Perspective

Up until the 1950s, psychological treatments focused on and within individuals, viewing maladaptive functioning as the sole domain of the patient. However, the 1950s launched the start of a new influential model of human dysfunction and treatment that viewed individuals within the fluid context of their family system. This perspective viewed dysfunction as residing within the family system, not the individual (or "identified patient"), as family members inevitably affect each other.

Family systems therapy grew out of the work of the Bateson Project during the 1950s. Gregory Bateson was interested in studying communication styles such as *double-binds* (conflicting statements and messages) and *metamessages* (the real meaning underlying what a person actually says) in inpatient psychiatric patients (Bateson et al., 1956). Although no compelling empirical evidence linking these forms of communication with the development of schizophrenia has emerged, this hypothesis sparked a fertile field of study and practice in family systems therapies.

Many of the great names in family psychotherapy are linked to the Bateson project and subsequent outgrowths: Jay Haley, Virginia Satir, Salvador Minuchin, Maria Selvini-Palazoli, and Chloe Madanes, to name a few. Although their approaches differed, their central commonality focused on the role of the entire family system in producing and perpetuating problematic behavior, thus deemphasizing the problems of any one member in favor of understanding the family system as a whole. Intervention at the family rather than the individual level comprised a radical shift in adult clinical psychology.

The focus on family systems underscores the influences of important significant others and social context in psychological and behavioral function and dysfunction. In more recent years, much more attention has been provided to the role of others and context due to attention to our increasingly diverse multicultural community. As the United States and the much of the world has become more attentive to the critical role that multiculturalism and diversity play in our understanding of human behavior, adult clinical psychology has become much more aware of the fundamental influence that diversity and multiculturalism play in the development, perspectives, and lives of everyone.

Multiculturalism, sometimes referred to as the fourth force in psychology, has become extremely important in the training of psychologists, with important guidelines for training, research, and practice now available (e.g., APA, 2003a). APA's (2003a) guidelines insist that psychologists "apply culturally appropriate skills in clinical and other applied psychological practices" (p. 390). Diversity and multiculturalism include not only race, ethnicity, gender, sexual orientation, and identity but religion and many other aspects of diversity as well (APA, 2003b; Plante, 2009). Clinical psychology has thus embraced the goal of becoming more culturally competent, with much more attention being paid to the important role that multiculturalism plays in human behavior. Mandatory training is now required for professionals on this topic to enhance cultural competence at not only the graduate level but also at the postgraduate and postlicensing levels in most states.

Integrative and Biopsychosocial Approaches

Although the four perspectives just discussed emerged during the 20th century as the central theoretical schools in adult clinical psychology, contemporary practice has increasingly limited the dogmatic adherence to any single perspective in treating the complexities of humans. Single-theory treatments have been found lacking for treating the full spectrum of behavioral problems, and research has largely failed to support that any one treatment is consistently superior to another for all patients (Luborsky et al., 2002; Messer & Wampold, 2002; Norcross & Goldfried, 2005). In fact, research has instead demonstrated that a combination of perspectives and techniques may have greater efficacy (Lazarus, 1989; Messer & Wampold, 2002).

Thus, a unidimensional or rigid perspective may have limited efficacy. As expressed by Garfield and Bergin (1986), "the new view is that the long-term dominance of the major theories is over and that an eclectic position has taken precedence" (p. 7). Accordingly, recent studies have found that the modal theoretical orientation of clinical psychologists is integrative (Norcross & Karpiak, 2012; Norcross, Karpiak, & Santoro, 2005). Adult clinical psychology has benefited enormously from this increasingly research-based and nondogmatic willingness to utilize a variety of methods tailored to the needs of each individual patient.

Commonalities rather than differences among approaches have further been emphasized in adult clinical psychology. For example, the work of James O. Prochaska (1995, 2000) endeavored to identify commonalities in theoretical orientations by studying the underlying process of change across problems and interventions. He identified universal stages, levels, and processes of change in his broad model. The five stages of change are precontemplation, contemplation, preparation, action, and maintenance, whereas five levels of change occur in symptoms, maladaptive cognition, current interpersonal conflicts, family/systems conflicts, and past interpersonal conflicts. His integrative theory illustrates elements from the major theoretical orientations as contributing together to the process of therapeutic change.

Paul L. Wachtel (1977, 2002) was also a pioneer of this evolving integration through his work combining aspects of both psychodynamic and cognitive–behavioral therapies. This willingness to combine approaches has also contributed to briefer treatment models, such as the use of problem-solving strategies in conjunction with psychodynamic therapy. Approaches have since evolved to reflect various combined contributions from psychodynamic, cognitive–behavioral, humanistic, and family-systems perspectives.

The willingness and ability to apply more complex models and interventions have been liberating for adult clinical psychology. "Effective psychotherapy is defined not by its brand name, but by how well it meets the needs of the patient" (Weiner, 1975, p. 44). Such eclecticism is seen in the multimodal approach of Arnold A. Lazarus (1996, 2005), who defined treatment needs on seven dimensions: behavior, affect, sensation, imagery, cognition, interpersonal relationships, and drugs. Multimodal treatment might include biological interventions such as medication, humanistic methods such as empty chair exercises, and cognitive–behavioral strategies such as shaping behavior.

Integrative approaches have most recently been reflected in the biopsychosocial model, which incorporates knowledge and tools beyond psychology, such as the biological and sociological contexts essential to human functioning. A biopsychosocial model views these various factors as influencing each other and important to the development or maintenance of a disorder. For example, anorexia nervosa can be viewed as having numerous underlying biological, interactional, and psychological determinants, and each is critical to address in any effective treatment strategy. Migraine headaches may well have a biological basis, yet emotional and social/environmental factors can also trigger or maintain episodes or be altered to relieve them.

This more sophisticated and pragmatic biopsychosocial approach was first applied to the understanding and treatment of illness in George Engel's (1977) article published in *Science*. This approach to integration has been highly influential in both medicine and psychology, providing the foundation for the emergence of the field of health psychology in the early 1980s (Schwartz, 1982). The biopsychosocial approach is closely related to ecological systems theory (Bronfenbrenner, 1979), which highlights the interaction between individuals and their environments by an analysis of microsystems, mesosystems, exosystems, and macrosystms. These include the influences of family, peers, school, church, health services, media, industry, and the broader cultural context as well with each system influencing the others. These approaches have led to further key contributions in adult clinical psychology—for example, the delineation of evidence-based treatments, the importance of which is further discussed later.

Case Example: Biopsychosocial Integration in Practice

Jan was a 32-year-old elementary school teacher who presented with a complex history of anxiety, panic disorder, and depression, all of which had ebbed and flowed throughout her life. Married for 1 year, her partner encouraged her to again seek treatment despite her previous dissatisfaction with long-term therapy. Jan was highly motivated to seek help after experiencing a frightening "full-blown" panic attack during a parent–teacher conference. She described a sudden surge of anxiety accompanied by sweating, trouble breathing, and an inability to articulate effectively. Although intense anxiety had often troubled her, this was the first time she felt debilitated and unable to function.

Additionally, Jan was having difficulties adjusting to married life and her parenting role with her partner's young children from a previous marriage. Jan felt overwhelmed by the complex family dynamics and had let her own health slip. A self-proclaimed "coffee addict," she had little appetite and relied on caffeine to get her through the day, feeling constantly tired yet unable to sleep more than 4–5 hr each night. Feeling stressed and fragile, Jan had lost her social confidence, and she no longer made time for friends or recreation.

Jan's clinical psychologist assessed her symptoms through a detailed history and a battery of empirically based tests. He recommended a complete medical examination to assess her overall health. Treatment focused on core aspects related to her biological, psychological, and social functioning. First, biologically, Jan was encouraged to wean herself from all caffeine products, given their known association with anxiety and insomnia. She was also encouraged to begin a consistent exercise regimen and to consult with a nutritionist to improve her diet and to stem her weight loss. Sleep hygiene strategies were also used. Finally, a medication referral to a psychiatrist yielded a prescription for Lexapro (a selective serotonin re-uptake inhibitor) to decrease both her anxiety and depression.

Psychologically, Jan and her partner were encouraged to seek coparenting consultation to better integrate their blended family. Jan's lack of confidence as a parent and sudden lack of independence in her marriage were explored. Her many negative self-statements and expectations surrounding her anxiety were challenged, and cognitive–behavioral techniques including diaphragmatic breathing, relaxation imagery, positive self-statements, and daily meditation were incorporated into her coping skills.

Socially, Jan was encouraged to reach out to her friends and family for both support and greater enjoyment. Opening up with select others about the process of parenting was encouraged. She and her partner were advised to carve out couple's time together and work toward nurturing a greater sense of community. Jan's withdrawal from social activities was addressed in the context of her diminishing confidence and heightened anxiety, and safe social steps were encouraged.

Over the course of 6 months, Jan improved significantly. The integration of medication, health self-care, parenting strategies, couple work, cognitive–behavioral methods, and deeper insight into her demanding life had reaped clear benefits.

MAJOR ACTIVITIES OF THE ADULT CLINICAL PSYCHOLOGIST

Adult clinical psychologists participate in an incredibly diverse range of professional activities. These psychologists may conduct research, teach in universities, conduct diagnostic assessment, provide consultation, and offer direct clinical treatment. These research, teaching, consultation, assessment, treatment, and administrative activities may be carried out in a variety of settings such as hospitals, schools, clinics, businesses, clinics, government agencies, schools, military institutions, and private practices. Often psychologists conduct a variety of activities, either within the same setting or diverse environments. In general, however, the activities of adult clinical psychologists can be placed in six categories: research, assessment, treatment, teaching, consultation, and administration. Recent research has found that about 47% of clinical psychologists report that they are engaged in research/writing, 58% are engaged with assessment, 76% are involved with treatment, 49% are involved with teaching, 38% are engaged with consultation, and 46% are engaged in administrative duties, demonstrating the diversity of activities among clinical psychologists (Norcross & Karpiak, 2012). When you examine where clinical psychologists spend most of their time, the most common professional activity is psychotherapy, taking 35% of their time, with research/writing being a distant second at 15% of time spent (Norcross & Karpiak, 2012).

Research

Adult clinical psychology is founded on research. Empirical evidence has been the gold standard in determining optimal assessment, treatment, and teaching practices. In fact, adult clinical psychology grew directly out of the research tradition first begun in the laboratory of Wilhelm Wundt in 1874. Training requirements for professionals today necessarily include competence in interpreting and applying research. There remains an ongoing imperative for research to improve our understanding and practice. Research activities drive many careers in clinical psychology, as with faculty positions in colleges, universities, or medical schools. Research is also conducted by psychologists in industry (e.g., managed care, pharmaceuticals), government agencies (e.g., National Institute of Mental Health, military branches), school settings, and even private practices.

Research activities encompass biological, psychological, social, and spiritual issues, ranging from the study of pain reduction techniques in cancer patients, to treatments for anxiety, and to optimal classroom teaching styles with disabled children. Clinical psychologists integrate the research and literature relevant to their own work to remain current and to practice state-of-the art techniques and practices. The results of ongoing research are readily accessible through professional journals, books, online sites, and conferences.

Assessment

Expertise in psychological assessment is an important activity that in many ways differentiates clinical psychologists from other mental health professionals. Many psychologists across professional settings utilize psychological tests and measures to improve their understanding and ability to intervene with patients. Many nonpsychological matters are within the domain of many clinical psychologists—for example, the intellectual testing of job candidates, the determination of career aptitudes, and factors that are associated with successful marriages.

Psychological assessment is applied across cognitive, personality, behavioral, educational, neuropsychological, and observational realms. Numerous tests and measures are available to psychologists. These encompass objective (i.e., standardized and empirically based) and projective (i.e., more subjectively interpreted) tests as well as the utilization of medical findings (e.g., neuroimaging, electroencephalograms). Most assessment batteries utilize an array of measures to comprehensively assess psychological, behavioral, social, and biological factors that may contribute to difficulties. For example, in assessing a 40-year-old with depression who has sustained several concussions in athletics, a psychologist may need to use multiple measures including depression scales, observational measures, neuroimaging results, and personality tests.

Treatment

Adult clinical psychologists are frequently involved in the treatment of individuals with a tremendous range of problems. In fact, in 2010 approximately 80% of clinical psychologists were engaged in the direct treatment of patients (Norcross & Karpiak, 2012). Treatment may be targeted at decreasing the symptoms of a mood disorder, such as bipolar illness or major depression, or a personality disorder, such as an individual with narcissistic or borderline personality disorder. Truly, endless arrays of human challenges, reflecting the tremendous diversity and individuality of people, are addressed by adult clinical psychologists in individual, couple, and family therapies.

Psychotherapy increasingly involves integrative approaches that combine the most relevant and effective strategies from a variety of theories (e.g., cognitive–behavioral, psychodynamic, humanistic) and domains of functioning, such as biological, psychological, and social realms (Norcross, 2009). Increasingly, contemporary psychology has seen the development of empirically supported or evidence-based treatments that can be structured to conform to strategies utilized in successful outcome research (Addis, 2002; APA Presidential Task Force on Evidence-Based Practice, 2006; Becker et al., 2009).

Solid research is at the heart of this movement to provide state-of-the art, evidence-based treatments to a variety of clinical problems. These include virtually every disorder, such as pain control (Chou & Huffman, 2007), anxiety (Schmidt & Taylor, 2002), and depression (Cuijpers, van Straten, & Warmerdam, 2007). For example, both interpersonal therapy and cognitive–behavioral therapy have been developed as empirically supported treatment for bulimia (e.g., Agras & Apple, 1997).

The alleviation of human suffering and achievement of positive change lies at the core of adult clinical psychology's contributions. Although the majority of clinical psychologists devote their careers to treatment, many combine their clinical work with research, teaching, consultation, assessment, or administration.

Teaching

About half of clinical psychologists are engaged in teaching activities (Norcross & Karpiak, 2012). Teaching can occur in a wide variety of settings beyond the formal university classroom environment and includes offering teaching services to business and industry; professional groups such as attorneys; health care professionals including physicians, nurses, and hospital administrators; as well as self-help groups, parenting groups, and so forth. Clinical psychologists teach topics such as stress management, communications skills, coping with illness strategies, and many other psychological and behavioral science topics. Additionally, many clinical psychologists provide clinical supervision to psychology and other health care professional trainees such as social workers, nurses, family therapists, and others. These psychologist mentors train trainees and professionals in conducting psychotherapy, assessment, clinical interviewing, and consultation, among other professional activities.

Consultation

A consultant's role involves helping to guide and improve the efforts of others in their professional work. A consultant imparts expertise to other psychologists; teachers; executives; administrators; parents; athletic coaches; clergy; and those responsible for the training and employment of individuals in high-stress positions such as military, police, air traffic control, or jurors. For example, a consultant might help to advice an executive in managing extensive staff layoffs, or assist school teachers in addressing sensitive topics or crisis situations with their students. A physician might seek consultation from a clinical psychologist in managing the medical needs of patient with an eating disorder or addiction, or a pastor might seek a consultant to better manage problematic dynamics that have emerged in the congregation.

To effectively consult with a specific population or problem, a clinical psychologist may need to also utilize assessment, research, and other tools to better inform his or her recommendations. Many clinical psychologists who offer consultation services also engage in additional activities such as treatment or teaching. Almost half of clinical psychologists serve as consultants as part of their professional activities (Norcross et al., 2005).

Administration

Every treatment, research, teaching, government, and business organization requires the oversight of tone or more administrators for effective functioning. Budgets, staffing issues, policy goals, supplies, and a host of oversight activities are usually conducted by people in administrative roles. For example, colleges assign a department head to oversee and organize their activities. Medical centers, clinics, and group private practices similarly require administrators, as do businesses and governmental agencies. Psychologists often serve in these administrative roles.

Common administrative positions held by psychologists include university dean, provost, president, hospital clinic director, principal investigators on research grants, and human resources personnel in industry. Psychologists might set out to achieve administrative posts, or they may find themselves selected or otherwise assigned to such duties. The skill sets necessary to excel as an administrator are not always consistent with those necessary for successful research, teaching, or treatment careers and might require sound organizational skills, financial know how, or excellent communication and management abilities.

Subspecialties in Adult Clinical Psychology

Special populations often require special clinical skills and expertise. Several subspecialty fields have emerged in adult clinical psychology to address the specific challenges posed by specific populations and psychological difficulties. Prime examples are the subspecialties of clinical health psychology, child clinical psychology, geropsychology, clinical neuropsychology, forensic psychology, and community psychology. All of these subspecialties are covered in separate chapters in this volume of the handbook and are not discussed further here.

Case Example: The Career of Dr. Elise Tang

Dr. Tang earned her PhD in clinical psychology from an APA-accredited program at a state university in the Midwest. Subsequently, she completed a 2-year postdoctoral fellowship at the National Institute of Mental Health in adult neuropsychology. Her research there focused on magnetic resonance imaging findings in veterans with posttraumatic stress disorder and resulted in several publications. Dr. Tang accepted her first job at a university medical center, where she was involved in research, teaching, supervision, assessment, and treatment activities. She worked with a range of adults presenting with head injuries and alcohol-related cognitive impairment, and she also conducted research on AIDS-related dementia. Much of her research was conducted at a nearby Department of Veterans Affairs hospital.

Dr. Tang participated in the training and administration of psychology predoctoral interns, and she taught a seminar on neuropsychological assessment. She also managed a small private practice. Eventually, Dr. Tang's professional life encompassed a broad range of roles and settings all integrated into her adult clinical psychology career.

MAJOR ACHIEVEMENTS IN ADULT CLINICAL PSYCHOLOGY

From the pioneering days of Lightner Witmer to the current status and contributions of clinical psychology, a number of key achievements stand out in the field. In addition to the obvious contribution of improving the lives of countless individuals and families, adult clinical psychology has progressed along with advances in research, technology, and public policy. In this section, we discuss six of the key distinguishing achievements in the field.

Training and Regulation

Clinical psychology has evolved past the singular scientist–practitioner, PhD training model into a mature field characterized by several training models, clear training standards, and increasingly standardized licensure requirements. Clinical psychologists now serve on medical staffs in hospitals and on government advisory boards alongside physicians and other professionals as offering an important and unique set of skills. One striking indication of the growing relevance of clinical psychology is that starting in 2015, 30% of the content of the Medical College Admission Test for medical school admission will be devoted to foundations of behavior.

One enormous change in adult clinical psychology continues to be the rapid expansion of professional schools. About 50% of all doctorates awarded in clinical psychology are now awarded from professional schools, which typically award the PsyD degree, rather than from traditional university programs. Because admission standards at professional schools tend to be well below those of PhD university programs (Norcross, Sayette, & Mayne, 2002, 2009), concerns persist regarding the negative influence of such programs on the profession (Plante, Boccaccini, & Andersen, 1998).

As a result of the expansion of professional schools, adult clinical psychology now has two major models of training: the PhD, scientist–practitioner model, and the PsyD, practitioner model. Increasing numbers of students are being trained as practitioners without the added research and teaching training provided by traditional scientist–practitioner programs, which has both its advocates and detractors.

Finally, adult clinical psychology now has clear training standards and increasingly standardized licensure requirements throughout the United States. Each state, for example, has particular licensing, credentialing, and continuing education requirements for licensed psychologists that include required academic courses, graduate degrees from accredited programs, required supervised training at the predoctoral and postdoctoral levels, and particular continuing educational training requirements to maintain the license to practice psychology in the state.

Psychological Assessment

One of clinical psychology's defining contributions is its highly developed expertise in psychological assessment. From measures to assess intelligence, academic achievement, personality, adaptive functioning, and neuropsychological deficits, numerous testing tools have been developed, validated, and widely used. No other mental health field can boast the same proficiency with methods of assessing psychological functioning.

To effectively treat and intervene, clinicians and consultants must have data that provide a diagnostic understanding of the person and context. In determining the source or area of difficulty, treatment can more effectively and efficiently proceed to target key components of dysfunction. Similar to the requisite diagnosis made by physicians prior to prescribing a course of medication, rehabilitation, or surgery, the problem itself must be clearly identified and understood.

Adult clinical psychologists utilize a vast arsenal of assessment tools to assess cognition, behavior, and personality. Tests span a variety of forms, from objective measures (e.g., the Minnesota Multiphasic Personality Inventory, the Beck Depression Inventory, the Millon Clinical Multi-Axial Inventory, and the Wechsler Adult Intelligence Scale), to projective measures (e.g., the Rorschach Inkblot Test, the Thematic Apperception Test, and the Sentence Completion Test), to neuropsychological tests (e.g., the Continuous Performance Test, the Bender Visual Motor Gestalt Test, the Finger Oscillation Test, and the Trail Making Test). In recent years, assessment has expanded with technology into computer-based tests, biological imaging techniques, and other innovative developments in science. Positron emission tomography scans, functional magnetic resonance images, biological markers, and genetic findings are all entering the realm of adult clinical psychology's assessment resources. Psychological assessment has and will continue to be a primary realm of engagement and achievement for adult clinical psychology.

Prescription Privileges

The past several decades have embraced an explosion of psychopharmacological innovations in the treatment of a vast range of behavioral disorders. The popularity of medications is exemplified by Prozac, Zoloft, Lexapro, and other selective serotonin reuptake inhibitor antidepressants in the treatment of depression, anxiety, bulimia, and obsessive-compulsive disorder. Medication has been increasingly utilized as an integral part of the treatment of many of the problems seen by clinical psychologists, including adult attention deficit disorder, bipolar illness, substance abuse, panic disorder, and schizophrenia, to name but a few. As a result, clinical psychologists have sought to earn prescription privileges to more comprehensively and seamlessly treat their patients.

Physicians are legally allowed to prescribe psychotropic medications regardless of their specialty. An allergist, dermatologist, cardiologist, or any other medical doctor can write prescriptions, yet clinical psychologists with expertise specifically in the treatment of mental disorders have been historically barred from having similar rights. In fact, approximately 80% of all psychotropic medications prescribed for anxiety and depression are issued by physicians in family practice or internal medicine, not by psychiatrists (DeLeon & Wiggins, 1996). Furthermore, training in psychopharmacology is offered by approximately two thirds of graduate training programs in clinical psychology (Popanz, 1991), yet psychologists' hands have been tied in implementing such treatments themselves.

Currently, only a few locations in the United States allow appropriately trained clinical psychologists to prescribe medication: Guam, New Mexico, Louisiana, and the U.S. military. The Department of Defense was the first institution in the United States to allow psychologists to prescribe medications after careful and thorough training. Psychologists were needed to help ensure that military personnel could receive adequate mental health care given the limited number of psychiatrists in the military. With the success of the Department of Defense program, state psychological associations were empowered to advocate for prescription privileges for psychologists on a state-by-state basis. Although controversial, the APA has supported efforts to expand such privileges to all states. Legislative lobbying and curriculum development efforts are underway (DeLeon, Dunivin, & Newman, 2002; Fox et al., 2009).

Many advocates of these efforts believe that the continuity of clinical care would be enhanced if clinical psychologists could function autonomously and comprehensively without the control and complications of adding a psychiatric referral into the treatment process. Also, many argue that by allowing clinical psychologists to have prescribing abilities, the efficiency and cost-effectiveness of patient care would be enhanced. As integrative therapies have broadened into biopsychosocial realms, psychologists offer patients the full scope of available treatments.

Not surprisingly, the American Medical Association is opposed to allowing psychologists prescription privileges. Financial considerations and "turf battles" are implicit in the debate. The APA Task Force on Psychopharmacology (Smyer et al., 1993) and the U.S. Department of Defense under the Civilian Health and Medical Program of the Uniformed Service developed programs to train and deploy military psychologists with prescribing abilities (Sammons & Brown, 1997). Importantly, the ability to prescribe medications would allow clinical psychologists the ability to meet the needs of underserved populations, such as the poor, older adults, and those in remote or rural areas. Legislation is now pending in a number of additional states.

Medical Staff Privileges

Much like the debate around prescription privileges, the ability of clinical psychologists to admit and treat patients independently in hospitals has been ongoing. Medical staff privileges have historically allowed only physicians to admit, treat, and discharge hospitalized patients. Again, the American Medical Association (1984) has actively opposed this innovation, suggesting that it is a "dangerous trend" (Fink, 1986, p. 816) for psychologists to obtain such appointments. After undertaking years of legislative action, California became the first state to allow psychologists to have medical staff privileges. In 1990, the *CAPP v. Rank* lawsuit in California upheld this right for psychologists, leading to many other states following suit (Youngstown, 1990).

More broadly, adult clinical psychologists are recognized as independent, autonomous health care professionals in federal statutes and regulations. A major achievement is their ability to practice, and be reimbursed for services, in a host of clinical settings, including nursing homes, rehabilitation facilities, hospitals, clinics, and wherever else health care services are provided for those in need of mental health and health care services.

Integrative and Evidence-Based Practice

Another major achievement has involved the increasing use of integrative, biopsychosocial treatments. As discussed earlier in this chapter, contemporary approaches to treatment are multimodal, integrative, and research based (APA Presidential Task Force on Evidence-Based Practice, 2006). Psychotherapy has evolved to advance empirically based guidelines for treating an expanding range of disorders.

In addition, clinical practice guidelines for a wide variety of disorders have been advancing. In 2001, the Department of Health United Kingdom developed an initial set of such guidelines, and efforts are underway in the United States and elsewhere to follow suit (Institute of Medicine, 2008). Such codified clinical practice guidelines incorporate research findings into psychological treatments for a multitude of specific conditions.

The guidelines frequently allow for the judgment of clinicians and their patients' preferences to adapt protocols (Beutler, 2009; Duncan et al., 2009; Whaley & Davis, 2007). For example, in treating depression, the patient's stage of change; cultural heritage; and preference for psychotherapy, medication, or both will contribute mightily to the therapies selected (Norcross, 2011). The notion of "one size fits all" treatment has been reduced through evidence-based practice guidelines.

Case Example of Evidence-Based Practice

Maria was a 37-year-old, self-employed accountant who worked out of her home office. Maria sought treatment at her husband's urging because of increasingly prevalent and disruptive obsessive-compulsive behaviors and phobias. In particular, Maria was terrified of spiders, bugs, and "germs." Maria avoided people and settings that she deemed dangerous, increasingly restricting visitors as well as her ability to leave the home. As her lifestyle became more rigid and isolated, and her extensive cleaning rituals became more demanding on her husband, Maria also became depressed and agitated.

Once Maria was assessed and diagnosed with obsessive-compulsive disorder, phobia, and depression, several evidence-based practices were introduced into her treatment plan. First, to treat her phobia of bug, spiders, and contaminants, techniques involving shaping, as well as exposure and response prevention, were utilized. Similarly, Maria was encouraged to record the antecedents, behaviors, and consequences (the ABCs) involved in her compulsive rituals of hand washing and sanitizing surfaces. In addition to working toward exposure and response prevention, Maria's irrational beliefs were challenged, and new, healthier cognitions were developed (e.g., "I live in a safe environment"; "Nobody I have known has ever been seriously harmed by an insect").

Maria was also referred for a psychopharmacological evaluation. She was prescribed Zoloft to reduce her agitation, depression, and intensity of her obsessive-compulsive thoughts and behaviors. Maria and her husband were referred to a support group for adults with obsessive-compulsive disorder, where they received support, information, and a forum to discuss their challenges with others experiencing the similar difficulties.

In individual therapy, Maria also explored her life of fearfulness, gaining insight into the biological, psychological, and social roots of her need to seek control through rituals. Family of origin conflicts related to her own mother's overprotectiveness and fearfulness were examined in understanding her own anxieties, dependencies, and view of the world as unsafe. Current developmental challenges related to her fear of having children and lack of fulfillment in her social and professional choices were also addressed.

Treatment ultimately integrated cognitive–behavioral techniques, insight-oriented methods, medication, a support group with her husband, and a bolstering of her social support system. Overcoming her severe phobias and compulsions was a long-term process, but gradual improvement in her symptoms also alleviated her depression, agitation, and marital conflicts.

Multicultural and Diversity Issues

Ethnic and cultural diversity is growing by leaps and bounds in the United States. Currently, approximately 25% of the U.S. population is composed of ethnic minorities, and it is estimated that by 2050, 50% of all Americans will be members of ethnic minorities (U.S. Census Bureau, 2008). Similarly, diversity in many aspects of the U.S. population is increasingly being appreciated, with sexual, racial, gender, and religious differences requiring that clinical psychologists obtain training and demonstrate knowledge and sensitivity when working with diverse individuals.

The major achievement is overcoming decades of monocultural, sexist, and heterosexist perspectives. Culture and context exert powerful influences on behavior. As such, APA (2003a) has exhorted psychologists to "become familiar with indigenous beliefs and practices and respect them" (p. 378; also see Whaley & Davis, 2007). Furthermore, APA (2003a) has asked psychologists to "consider diversity of values, interactional styles, and cultural expectations in a systematic fashion" (p. 379). Cultural fluency extends to the importance of understanding the social context of sexual diversity as well as other individual differences within the larger social climate. Increasingly, psychologists have been on the forefront in adapting research and treatment approaches to respect the full range of human variation within their particular environment. APA (2003a) published guidelines for multicultural training, practice, minority representation, and research.

FUTURE DIRECTIONS

As both society and science develop, so too must the complex field of adult clinical psychology. Future opportunities and challenges abound. Although too numerous to delineate in this chapter, two primary realms of change are particularly notable. These are future changes in science/technology and economic shifts in health care.

Advances in Science and Technology

Perhaps no other aspect of our society has witnessed more dramatic change in recent decades than the explosion of technological and medical innovations. On the medical front, psychopharmacology promises to continue inroads into augmenting the treatment of wide ranging difficulties. However, although medication undoubtedly holds an important place in psychological and psychiatric treatment, the overvaluing of its usefulness threatens more comprehensive and ultimately effective biopsychosocial and integrative approaches (Borrell-Carrió, Suchman, & Epstein, 2004; Fava & Sonino, 2008). The powerful advocacy of pharmaceutical companies in broadening the use of medication to an ever increasing array of human difficulties has threatened to usurp sound science and comprehensive treatment. For example, in the treatment of attention-deficit/hyperactivity disorder, the popularity of medication falsely attributes it to purely biological factors, whereas research continues to support additional psychosocial interventions in effective treatment (Barkley, 2009; Castle et al., 2007). Similarly, biological interventions such as stomach stapling have advanced the treatment of obesity, but the complex psychosocial variables also demand intervention for long-term weight loss and maintenance.

Medical advances have improved the diagnosis and treatment of many neurological conditions involving psychological symptoms. Neuroradiagnostic imaging techniques have advanced the field of adult neuropsychology, as positron emission tomography scans, electroencephalograms, computerized axial tomography scans, and magnetic resonance images are all useful in locating the presence and placement of brain disease or damage. Newer methods further advance the understanding of current brain functioning, such as functional magnetic resonance imaging, which tracks blood flow in the brain, as does single photon emission computed tomography.

The burgeoning attention and investment in the Human Genome Project (Collins, 1999) represent another scientific realm of new discoveries that may have a tremendous impact on the understanding of behavioral difficulties. As emphasized by Francis Collins, the director of the National Human Genome Research Institute, many diseases of interest to psychologists frequently have both genetic and behavioral features, including schizophrenia, bipolar illness, Alzheimer's disease, and attention-deficit/hyperactivity disorder (Collins, 1999; Miller & Martin, 2008). Psychologists will play a critical role in assessing and assisting in how people make medical and psychosocial decisions based on such findings. Physicians and scientists as yet have little understanding of how people will react to individualized genetic health findings, and these responses will in turn have tremendous implications for prevention and compliance in treatment.

Computer-based technological advances will likely expand to affect the practice of adult clinical psychology. Computer-assisted therapy, virtual reality treatments, web-based psycho-education, and ambulatory assessment (i.e., tracking real-time behavior through electronic aids) and new innovations will in many ways revolutionize the practice of psychotherapy.

Recognizing the quickly changing culture through technological advances, APA recently published guidelines for the practice of *telepsychology*, which is defined as providing psychological services such as therapy, assessment, and consultation through the use of telecommunication technologies such as the Internet and mobile devices such as smartphones (APA, 2013). These guidelines help clinical psychologists to provide competent and ethical professional services within the rapidly changing landscape of technology by providing guidance in how to use these new technologies (e.g., smart phones, social media, mobile apps) in ways that help clients but doing so in a way that well attends to confidentiality, data security, informed consent, and other ethical and legal concerns.

Economic Shifts in Health Care

The viability and affordability of private practice in adult clinical psychology have been severely curtailed since the 1980s. The traditional fee-for-service psychotherapy, in which insurance companies dutifully covered the costs of diagnostic and treatment services rendered by the clinician, is all but a thing of the past. As health care costs rose steadily during the 1970s and 1980s, escalating expenses became unacceptable to insurers who instituted new fixed fee guidelines for treating patients with specific diagnoses. Regardless of the length or extent of services, insurers would only pay within predesignated limits.

Thus, the stage was set for the explosion of health maintenance organizations and preferred provider organizations onto the health care scene. These programs rapidly expanded during the 1990s to provide less expensive means of providing and paying for services, such as those offered by clinical psychologists. More than 75 million Americans now belong to a health maintenance organization, and 175 million Americans are served by some form of managed health care (Cantor & Fuentes, 2008). The number of Americans covered by fee-for-service plans has rapidly diminished and is almost nonexistent today (Cummings, 1995; Taylor, 2009). Overall, clinical psychologists have been displeased with this massive set of changes, as practitioners have less control over determining both the type and length of treatment their patients require and can afford through insurance. A survey of more than 200 diplomates from the American Board of Professional Psychology found that managed health care was viewed as a deleterious trend by more than 90% (Plante et al., 1998). Many psychologists believe that managed health care has denied their patients necessary mental health care in an effort to contain costs (Murphy, DeBernardo, & Shoemaker, 1998).

In the future, adult clinical psychology will be faced with adapting to the reality of managed health care. This increasing demand for clinical accountability will require psychologists to utilize evidence-based treatments (APA, 2006; Bobbitt, 2006). Some experts predict “declining provider autonomy, increasing integration of services, increasing emphasis on treatment outcomes, increasing management purview and control . . . and more consumer control via government and administrative decree” (Kiesler & Morton, 1988, p. 997). Others view the future of services as increasingly multidisciplinary, problem-focused, self-help oriented, and centered within primary care settings (Cantor & Fuentes, 2008; Clarke et al., 2006). Adaptation to an ever-changing economic landscape will continue to propel adult clinical psychology into these future challenges. With the recent adoption of the Patient Protection and Affordable Care Act of 2010 in the United States (legislation to provide comprehensive health care insurance for most citizens), clinical psychologists will likely find that they will be asked to continue to provide quality professional services to an increasingly changing health care landscape. Precisely how this landscape will change the activities of and services provided by clinical psychologists is still yet to be determined as the Patient Protection and Affordable Care Act is rolled out and integrated into the health care environment over time. Certainly with more people covered by mandatory medical insurance, additional opportunities for clinical psychologists to assist people with psychological and behavioral problems that affect health will unfold quickly.

Adult Clinical Psychology in the 21st Century

From Witmer's inaugural psychological clinic in 1896, to the current proliferation of clinical psychologists spanning a huge range of roles and settings, adult clinical psychology has consistently been at the forefront of improving people's lives. Despite tensions between research and practice within organized psychology, our knowledge and skills have ultimately grown through a complex interaction of the two, greatly improving our efficacy.

Today's growing emphasis on integrative and evidence-based approaches represents a seminal shift from past isolated schools of thought. Less frequently will patients encounter adult clinical psychologists identifying themselves as behaviorists, Freudians, Rogerians, or the like. These broader and more inclusive and empirically based perspectives promise to better serve the public by viewing individuals through more comprehensive biopsychosocial and evidence-based lenses. Rarely will a patient present with a singular problem or will a one-size-fits-all approach be viable. A dynamic duality of challenges and opportunities will guide adult clinical psychology into the future. Technological and demographic trends, the rights of clinical psychologists to prescribe medication alongside their medical colleagues, and the ever-changing climate of health care economics remain in the forefront. If the past is the best predictor of the future, adult clinical psychology will continue to adapt and make substantial contributions to human welfare.

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CHAPTER 9

CLINICAL GEROPSYCHOLOGY

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In this chapter, I outline the specialty of clinical geropsychology by first defining it and providing a brief history of the specialty. Then I summarize the knowledge base relevant to clinical geropsychology, including knowledge of the older population, adult development and aging, and clinical practice. The major activities of clinical geropsychologists—assessment, intervention, consultation, training, and research—are outlined, and the chapter concludes with a discussion of key achievements and future directions of clinical geropsychology.

DEFINITION

The terms *clinical geropsychology* or *geropsychology* have been used over the years to describe psychologists who professionally serve older adults. More recently, the term *professional geropsychology* has been used because it includes psychologists with backgrounds other than clinical psychology—chiefly, counseling and health psychologists—who also focus on this population. Professional geropsychology is the name used in specialty recognition of the field by the American Psychological Association (APA) Commission for the Recognition of Specialties and Proficiencies in Professional Psychology (CRSPPP). Because clinical geropsychology was the preferred term early in its professional history and is commonly used today, I use it throughout this chapter.

The formal definition by CRSPPP is as follows:

> Professional geropsychology is a specialty in professional psychology that applies knowledge and methods of psychology to understanding and helping older persons and their families to maintain well-being, overcome problems and achieve maximum potential during later life. Professional geropsychology appreciates the wide diversity among older adults, the complex ethical issues that can arise in geriatric practice and the importance of interdisciplinary models of care. (APA CRSPPP, n.d., para. 1)

Professional geropsychologists provide psychological services to, and/or study psychological aspects of, individuals 65 years of age and older. Most geropsychologists are service providers, and a subset is composed of academic geropsychologists, some of whom may also provide psychological services. The adjective “professional” or “clinical” indicates that the psychologist is a licensed, health care psychologist providing assessment, consultation, treatment, and/or prevention to older adults.

Four parameters define professional geropsychology as a distinctive field (Knight et al., 2009): (a) Professional geropsychology is strongly informed by research and theories of life-span developmental psychology as they pertain to adulthood and later adulthood. It is critical to understand what is normative in late life before working with older adults with mental disorders. (b) Geropsychology requires knowledge and skills about psychopathology in later life because some mental disorders have characteristics that are different than in younger versus older adults. (c) Medical problems are much

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more common in older versus younger adults. Geropsychology is strongly informed by the relative contribution and interaction of physical health and psychological disorders and their impact on functioning. (d) The context of aging—including medical, residential, and community environments; supportive services; and family—can play an important role in contributing to late-life psychological adjustment or difficulties.

In the provision of psychotherapy to older adults, the following four questions are considered essential: Within what social and environmental parameters do older people live their lives? What collective and individual life experiences inform the values and perspectives of older people? What are strengths and challenges associated with the developmental processes that evolve and are evident in later adulthood? What are common problems faced by older adults that often are different than younger adults (Knight & McCallum, 1998)?

Although clinical geropsychology primarily differs from other areas of practice on the basis of the population it studies and serves, there is overlap with other psychological specialties. Some specialties also address cognitive and physical health problems—notably, clinical neuropsychology, rehabilitation psychology, and health psychology (see Volume 5, Chapter 27, this handbook). These specialties more often serve the older adult population than other specialties. However, clinical neuropsychology, rehabilitation psychology, and health psychology address focal issues related to concerns of older adults and not the breadth of concerns evident in an older adult population. Because clinical geropsychology encompasses a broad range of late life issues, geropsychologists are much more likely to serve and study older adults in a greater continuum of environment contexts (e.g., outpatient clinics, adult day centers, long-term care facilities) than psychologists in other specialties. Clinical geropsychology also encompasses adaptation to late-life issues and facilitation of emotional and social well-being that is not reflective of physical illness or mental disorders.

Many psychologists will see a few older adults in clinical practice, and the problems with which they present have many similarities with those evident in younger adults. The knowledge and skills acquired by clinical, counseling, and other professional psychologists are relevant to the assessment and treatment of many of the common problems of older adults. However, as their problems become increasingly complicated (e.g., cognitive impairment with concurrent behavioral disturbance, mental disorders coexistent with numerous medical problems, questions of decision-making capacity), additional geropsychological competencies are needed. In such cases, access to a geropsychologist becomes highly advantageous.

CONDENSED HISTORY

The beginning of the specialty of clinical geropsychology was perhaps established on declaration that it did not exist. In *The Psychology of Adult Development and Aging* (Eisdorfer & Lawton, 1973), M. Powell Lawton introduced the book's section on "The Clinical Psychology of Old Age." Lawton (1973) wrote, "The four chapters in this section are grouped under the title 'Clinical Psychology of Old Age'—not, perhaps, an accurate title, but hopefully a direction-setting one. The fact is that there is no clinical psychology of old age" (p. 339). Despite the volume's effort to start a substantive dialogue on clinical psychology and aging, Robert Kastenbaum (1973), the life-long advocate for a deeper appreciation of older adults, concluded the book with a complaint about the volume's lack of attention to older adults' "sleeping, dreaming, imaging, fantasizing, meditating, creating, loving, grieving, and dying" (p. 699).

Kastenbaum's (1963) seminal article, "The Reluctant Therapist," spoke to the lack of interest and perhaps active avoidance of older adults as psychotherapy clients by the mental health profession. Almost all of the limited and primarily case studies on psychotherapy with older adults were reported by psychoanalytic psychiatrists. As evidence of this, among a collection of articles on psychotherapy with older adults published by the National Institute of Mental Health (1978), *Readings in Psychotherapy With Older People*, only two of the 26 authors were psychologists.

Prior to the publication of *The Psychology of Adult Development and Aging* (Eisdorfer & Lawton, 1973), both Lawton and Kastenbaum had commented on the absence of attention to psychological needs of older adults. They and others believed this paucity of clinical attention reflected negative attitudes toward older people, a lack of knowledge about clinical aging, and a dearth of professional skills to serve older adults (Kastenbaum, 1963; Lawton, 1970). Concerns about the absence of psychological services to older people also came from other members of Adult Development and Aging, Division 20 of the APA. The professional organization was first established in 1946 as the Division of Maturity and Old Age.

Lawton (1973) was correct in that clinical geropsychology did not exist. Lawton was also correct that *The Psychology of Adult Development and Aging* (Eisdorfer & Lawton, 1973) would be direction setting. What developed over the next 40 years was a substantive specialty of clinical geropsychology.

In the 10 years following publication of *The Psychology of Adult Development and Aging* (Eisdorfer & Lawton, 1973), slowly increasing interest in the mental health needs of older adults developed within and outside of psychology. Robert N. Butler's (1975) Pulitzer Prize–winning book, *Why Survive? Being Old in America*, raised public policy concerns about negative and often neglectful views of older adults that resulted in adverse medical, psychological, and social outcomes. Other work by Butler laid out a vision of mental health services for older people from the perspective of psychiatry and social work (Butler & Lewis, 1973). A 1974 Duke University conference, "Geropsychology: A Model of Training and Clinical Services," explored ways in which research studies of aging could be integrated into the clinical psychology of aging (Knight, Kelly, & Gatz, 1992). Several publications on the clinical psychology of later life appeared (e.g., Gentry, 1977; Hussian, 1981; Storandt, Siegler, & Elias, 1978; Zarit, 1980) that attested to some momentum in the field.

The 1981 APA Conference on Training Psychologists for Work on Aging (Santos & VandenBos, 1982a) took place in Boulder, Colorado, and was informally dubbed the "Older Boulder." The conference was devoted to a substantive discussion of what steps were needed to create a clinical psychology of aging. The conference focused on models of graduate, internship, and postdoctoral training in aging; associated curricula; recruitment of individuals into the field; and the expansion of the existing knowledge base. What was proposed starkly contrasted with the paucity of interest and opportunities for individuals who wanted to pursue training in applied psychological aspects of aging (Siegler, Gentry, & Edwards, 1979).

Santos and VandenBos (1982b) offered cautionary commentary on the conference's proceedings. Conference participants had not fully grappled with the reality that federal support of professional training in geropsychology likely would not be forthcoming (in that Reagan era), that few employment opportunities existed in geropsychology, and that few individuals possessed the needed expertise to supervise those with interest in acquiring skills in applied aging. According to Santos and VandenBos (1982b), "We may need to modify our strategies more in line with what is rather than with what ought to be" (p. 253). For the most part, their caution was well placed.

The 1980s saw a few developments that moved the field along. The U.S. Department of Veterans Affairs (VA) was and continues to be a leader in the field of geriatrics. The VA included roles for psychologists and training opportunities with older veterans in APA-accredited, doctoral internships. Since the 1980s, professional and clinical geropsychology training opportunities have continued to expand (Cooley, 1995). Randomized clinical trials of psychotherapy with older adults with depression began (Gallagher & Thompson, 1982; Thompson, Gallagher, & Breckenridge, 1987). The National Institute of Mental Health played an important role in funding early and subsequent studies of treatments for late life mental health problems. An informal APA-affiliated group, Psychologists in Long Term-Care, was founded in 1981 and continues today to be a nucleus for psychologists who provide psychological services to older adults in long-term care settings (Molinari, 2011). In 1982, the journal *The Clinical Gerontologist* commenced publication, and it has been a popular publication venue for practicing geropsychologists. APA launched its flagship journal on aging research, *Psychology and Aging*, in 1986.

Arguably the most important development in the 1980s was inclusion of psychologists as independent providers in the Medicare program in 1989. Medicare is the primary payer of health and mental health services to older adults. It was hard to imagine a practice specialty developing without being reimbursed by the major payer of the services it delivers. However, it was not until 2014 that full parity for mental health services was established (i.e., outpatient copays for mental health services that were comparable to those for medical visits and other changes). The regulatory machinery was not in place until the early 1990s to begin reimbursement for psychological services, but this fact changed the mental health and aging practice environment for good (Hinrichsen, 2010).

Substantive development of clinical geropsychology was evident in the 1990s. The second major clinical geropsychology training conference was held in 1992, "Clinical Training in Psychology: Improving Services for Older Adults" (Knight et al., 1995). The meeting was dubbed "Older Boulder II" and was sponsored by the National Institute of Mental Health and APA. Whereas the initial conference articulated what must be done to establish a credible field of practice with older adults, Older Boulder II focused on the advancement of training and practice issues. One product of the conference was a statement of the recommended "three Es": *exposure* to aging issues and life-span development for all students, *experience* in provision of psychological services to develop competency, and *expertise* in applied aging through postdoctoral training for psychologists for whom clinical geropsychology would be a career focus. Among its other recommendations was a proposal that continuing education opportunities be available for existing professionals to acquire needed knowledge and skills to serve an older adult population.

Clinical geropsychology was established as a section (Section II) in the Society of Clinical Psychology (Division 12 of APA) in 1993. Section II became the Society of Clinical Geropsychology, and its members continue efforts to advance the field of geropsychology. In 1994, the Division 12 (Section II) and Division 20 "Interdivisional Task Force on Qualifications for Practice in Clinical Geropsychology" was established. In an effort to move along recommendations from Older Boulder II, this task force worked intermittently for almost 10 years. CRSPPP recognized clinical geropsychology as a proficiency in 1998.

In 1997, APA President Norman Abeles created a presidential miniconvention, "Psychology and the Aging Revolution," that brought substantive attention to aging issues within the association. Perhaps most important of Abeles's many contributions during his APA presidency was establishment of the Committee on Aging, which has been a key player in advancing the field of clinical geropsychology and more broadly the field of psychology and aging.

Another notable development in the decade of the 1990s was Psychologists in Long-Term Care's publication, "Standards for Psychological Services in Long-Term Care Facilities," that outlined the organization's view of appropriate and ethical provision of psychological services in these setting (Lichtenberg et al., 1998). With Medicare reimbursement, there was considerable expansion of psychological services into long-term care by individuals and for-profit companies. Concerns were formally and informally raised about how those services were being delivered and the requisite geropsychology expertise possessed by some providers. During the 1990s, regulatory and practical implementation issues were being sorted out for psychologists being reimbursed for services provided through Medicare.

In the decade of 2000, further substantive developments in geropsychology were evident. APA's (2004) "Guidelines for Psychological Practice With Older Adults" were adopted—the fruit of almost a decade of work by the Interdivisional Task Force on Qualifications for Practice in Clinical Geropsychology as well as by others. The third geropsychology training conference was convened in 2006. The conference met in Colorado Springs, Colorado. The result was the "Pikes Peak model for geropsychology training," which outlined the attitudes, knowledge, and skills competencies recommended for those providing psychological services to older adults (Knight et al., 2009). The Council of Professional Geropsychology Training Programs was established in 2007 and is composed of institutions and individuals committed to providing high-quality training in professional geropsychology consistent with the Pikes Peak model. The APA Office on

Aging produced an impressive series of reports and recommendations with relevance to the provision of psychological services to older adults (e.g., American Bar Association & APA, 2008; APA Committee on Aging and Its Working Group on Multicultural Competency in Geropsychology, 2009; APA Presidential Task Force on Integrated Health Care for an Aging Population, 2007—all of which may be found on the APA Office on Aging website at http://www.apa.org/pi/aging).

In tandem with the Committee on Aging were active efforts by APA's Government Relations Office to advocate for inclusion of psychologists in legislation relevant to the provision of mental health services to older adults. Professional efforts were undergirded by a corpus of well-designed studies that demonstrated the efficacy of psychological treatments for late-life depression, anxiety, sleep disorders, disruptive behaviors of dementia, caregiver distress, and other problems (Scogin & Shah, 2012). Numerous journal articles and books on geropsychological practice were published as well.

In a related training development, the Graduate Psychology Education program in the U.S. Bureau of Health Professions was established in 2002. A dedicated funding stream for geropsychology training grants existed from 2003 to 2006, and a variety of aging-related projects were supported. The Graduate Psychology Education program continues to fund some training efforts in aging.

Clinical geropsychology has been developing slowly outside of the United States. Geropsychology organizations or interest groups within psychology organizations exist in Austria, Australia, Canada, China, the Netherlands, Europe, New Zealand, Sweden, and the United Kingdom (Pachana, 2015). Like the United States, elsewhere relatively few university professors and practicing psychologists identify themselves as geropsychologists (Pinquart, 2007), and only a handful of clinical geropsychology training programs exists (Pachana et al., 2010). Models of clinical geropsychology practice and theories of adult development developed in the United States have influenced international research, training, and practice. Academic scholarship on clinical geropsychology outside the United States has emerged, most notably from Europe (Pinquart, Fernandez-Ballesteros, & Torpdahl, 2007). Cross-national sharing of data among some geropsychologists is ongoing.

Conceptualizations of aging and late-life infirmity vary among cultures. Psychological assessment instruments for older people developed in the United States often require cultural adaptation (Pachana, 2014).

More generally, the aging of the world's population has prompted increasing international interest. By the year 2050, 1.5 billion persons will be 65 years of age and older (World Health Organization, 2011). In 2011, the World Health Organization published a report on the challenges of global aging. The United Nations and other international groups have published documents that call attention to global aging, the rights of older adults, and the need for services to address the social, health, and behavioral health needs of this age group (Pachana, 2015).

In this decade, the field continues to grow. The CRSPPP recognized professional geropsychology in 2010. An update and revision of the "Guidelines for Psychological Practice With Older Adults" were published (APA, 2014). In 2014, geropsychology was recognized as a specialty board by the American Board of Professional Psychology (see Volume 5, Chapter 8, this handbook).

KNOWLEDGE BASE

Knowledge relevant to clinical geropsychology falls into two broad domains: (a) knowledge of the older population, adult development, and aging as well as (b) knowledge of clinical practice with older adults. These are reflected in both the Pikes Peak model for training in professional geropsychology (Knight et al., 2009) and the "Guidelines for Psychological Practice With Older Adults" (APA, 2014).

Knowledge of the Older Population, Adult Development, and Aging

The older population. Demographic facts inform provision of psychological services to older adults as well as the societal forces that resonate in the lives of individual older adults. Unprecedented in human history, sizeable proportions of populations in many developed countries will be older adults. In the year 2030, 20% of the population will be 65 years of age and older in the United States (Schulz & Binstock, 2006). This fact reflects the aging of a large cohort of individuals born between 1946 and 1964, marked reduction of infant and adult mortality in the 20th century, somewhat longer life for those who do reach older adulthood, and other factors.

There are social, political, economic, and a myriad of public policy implications of the aging of the population both for the United States and other countries (Schulz & Binstock, 2006). Although the growth of the older population is sometimes characterized as a societal burden (e.g., "How will we afford health care, social security, and psychosocial services for this large population of needy older adults?"), many older adults will spend their later years in much better economic, health, and functional circumstances than those older adult age cohorts before them. Further, older adults make many contributions to the larger societal that are generally overlooked in public policy debates. Nonetheless, for that segment of the older adult population that has been characterized as the "oldest old" (age 85 years of age and older), health problems, cognitive deficits, functional limitations, and economic challenges become more common than in the earlier years of later life.

Considerable demographic variability exists among older people, and the impact of demographic forces will vary for subgroups of older Americans. Important issues relevant to late life diversity include race, ethnicity, foreign born status, sex, sexual orientation/gender identity, disability status, geographic location, and economic status. Age cohort specific experiences will vary for subgroups of older Americans: African Americans grew up in a racially divided society and during the civil rights struggle. Japanese Americans grew up with personal or close relatives' experience of incarceration in World War II internship camps. Lesbian, gay, bisexual, and transgender persons were raised in an era where homosexuality was criminalized and were the focus of misguided efforts by the mental health community to change sexual orientation or gender identity. Life expectancy is lower for members of many minority communities. Most minorities have higher rates of health problems and disability, often without access to good quality health care (APA Committee on Aging and Its Working Group on Multicultural Competency in Geropsychology, 2009; Federal Interagency Forum on Aging-Related Statistics, 2012). One practical impact of the demographics of late life for practicing psychologists is that increasing numbers of older adults will be seeking professional services from them. Concerns exist about the availability of knowledgeable and skilled psychologists to serve them.

Adult development and aging. An intellectual foundation stone of geropsychology is research on the processes of aging. This is often referred to as the *life-span developmental perspective*. Disentanglement of the effects of age from other forces—most notably *age cohort*—laid the groundwork for better understanding the processes of aging (Schaie, 1977). The concept of age cohort is key in the field of aging. Individuals are born into discrete historical periods and are influenced by the forces tied to their age cohort. Names to designate generations (e.g., depression era, baby-boomers, Generation X, millennials) reflect awareness that age groups differ, in part, because of the varying social and historical circumstances under which their members grew into adulthood. Therefore, each generation that moves into old age will look different from the prior generation of older adults. Clinical practice with the now exiting population of depression-era older adults will differ from the population of baby-boomers who are now entering older adulthood.

Generational experiences will also be conditioned by life circumstances that vary by subgroups (e.g., sex, race, ethnicity, sexual orientation, economic status, disability status) within the age cohort. Members of social minority groups may face particular challenges by virtue of interaction of that membership and status as an older person—sometimes referred to as *double jeopardy* or *multiple jeopardies* (APA Committee on Aging and Its Working Group on Multicultural Competency in Geropsychology, 2009). Given the longer life expectancy of women than men, women represent sizable proportions of the oldest old. Knowledge of the impact of sex on earlier life informs understanding of the influence of sex in later life. Women are more likely to be caregivers to husbands and other family members, contend with widowhood, and be in less favorable economic circumstances than men (APA, 2014).

Proponents of a life-span perspective argue that development does not stop at the end of adolescence but continues throughout the life span. Optimally, longitudinal designs capture this evolving, dynamic, and fluid process of adaptation and change. Cross-sectional studies add additional information. Cross-sequential studies combine the two (Schaie, 1977). Individuals are viewed as active responders to the forces and circumstances of different life periods, including old age. Some have offered conceptualizations of positive adaptation to later life as "successful aging" (Bundick et al., 2010), with the majority of older adults evidencing it.

Life-span developmental and other researchers have documented social and psychological factors that are often evident in later life and which inform professional practice with older people. There is evidence of both stability and change in later life (Baltes, 1997). Personality traits evidence a fair amount of stability across the life span, although recent evidence suggests some degree of change over the second half of life (Costa & McCrae, 2011). Each phase of life has its own set of potential stressors. Common late life-stressors include onset of health problems, retirement, changed financial circumstances, residential relocation, widowhood and attendant bereavement, and care for a spouse or partner with health problems. Many of these involve loss. Despite this, most older adults maintain emotional well-being. In fact, regulation of affect improves over the course of life (Charles & Carstensen, 2010), and, for some, late life stressors are a catalyst for personal growth and wisdom (Sternberg & Lubart, 2001).

Social ties and involvements undergird emotional well-being for many older adults. A large literature exists on late life friendship, family, religious involvement, volunteer activities, and other social involvements that most older people find meaningful. With increasing awareness that remaining years of life are shrinking, older adults may reduce social involvements to those that are the most meaningful to them (Carstensen, Isaacowitz, & Charles, 1999).

Usually families play a central role in the lives of older people. If an older person is in need of care for short- or long-term health problems, generally families are a reliable source of assistance. The composition of family, the definition of family, and the role of extended family vary among older adults. For example, among lesbian, gay, bisexual, and transgender older adults, family may include nonbiologically related individuals (Kimmel, Rose, & David, 2006). In the baby-boom generation for whom divorce, remarriage, and "blended families" were much more common, new familial patters of care for infirm older adults are likely to emerge.

Knowledge of Clinical Practice With Older Adults

Clinical practice includes assessment, treatment, and consultation about older adults for which there is an existing knowledge base. For some clinical geropsychologists, research and teaching are core activities as well.

Attitudes toward aging and older adults. All psychologists and other health care professionals may possess attitudes and biases toward subgroups that can adversely affect optimal delivery of psychological care. These include older adults. Negative attitudes toward older adults often reflect lack of accurate information about older adults—information that is assumed to be true and is not challenged. For example, most older people are much alike, alone and lonely, frail and dependent on others, cognitively impaired, and depressed. In fact, most older people are different from each other, maintain close contact with family, live independently, are cognitively intact, and are less likely to be depressed than younger persons (APA Working Group on the Older Adult, 1998). Such stereotypes overestimate the prevalence of mental disorders, functional impairment, subjective unhappiness, and social isolation and underestimate older adults' capacity for resilience, adaptability, and personal growth.

The term *ageism* (Butler, 1969) reflects stereotyping of and/or discriminating against individuals on the basis of the perception that they are old. Fifty years of research has documented the existence of ageism in all sectors of American society and its adverse impact on older adults (Hinrichsen, 2015; Levy, 2009). Some psychologists fail to adequately diagnose and treat health problems in older adults because they are attributed to "old age." Psychologists may be uncomfortable with their own aging; the aging of family members; or with cognitive impairment, physical frailty, or death. For some professionals, old age seems like a distant reality, yet on some level they realize they too will grow old.

The psychodynamic tradition of attending to the therapist's countertransference may prove helpful, and several thoughtful books and articles address this topic in the treatment of older adults (e.g., Newton & Jacobowitz, 1999). Paternalistic behavior toward older adults by health care professionals is relatively common. Characterization of older adults as "cute" or "childlike" exist as well as use of patronizing speech toward them including *elderspeak* (i.e., speaking in a high tone of voice with simplified language as if speaking to a child), overly familiar references (e.g., "dear," "honey," "young lady"), and addressing the older person by a first name without asking for preferences for being addressed (e.g., "Mrs. Jones"). Some older adults with advanced professional qualifications for which they are typically addressed as "doctor" or "professor" may find it unsettling to discover that they are now addressed by first names—stripped of an honorific by virtue of age.

Psychologists' coexisting attitudes related to race, ethnicity, gender, disability status, and sexual orientation may further complicate clarification of attitudes toward aging. For example, a psychologist who is uncomfortable with late-life sexuality may be especially uncomfortable talking with an older gay man about sexual intimacy concerns. A psychologist uncomfortable with disability will likely find it challenging to productively engage an older adult with progressive cognitive loss.

Other foundations of clinical practice. Knowledge of common health problems that affect older adults is highly useful. The majority of older adults experience physical health problems and a decline in sensory abilities. Relative to their early lives, most older people evidence cognitive changes. Symptoms of late life psychopathology are usually interwoven with physical health problems. The presentation of psychopathology is sometimes different in older compared with younger adults. Health, sensory, and cognitive problems often affect older people's ability to function in different life domains, and they become more dependent on their physical and social environments, which may facilitate or impede successful adaption to late life challenges (Zarit & Zarit, 2011).

Older adults are at much higher risk of chronic physical health problems than younger adults. Most older adults have one or more chronic illnesses, including arthritis, high blood pressure, heart disease, hearing loss, and cataracts (Federal Interagency Forum on Aging-Related Statistics, 2012). Physical health problems increase risk for mental health problems because of physiological changes (e.g., poststroke depression) or adjustment to physical health problems and their functional, social, and psychological consequences.

Most medications have side effects, and most older adults take multiple medications that may interact with each other in ways that are not always well understood; furthermore, psychotropic medications have their own characteristic side effects and potential for interaction with medications prescribed for physical health problems (Arnold, 2008). Falls are increasingly common in older people, and certain medications, notably benzodiazepines and other sedative-hypnotics, increase risk for falls.

A large literature on cognitive aging exists (Baltes, 1993). Some cognitive abilities are relatively preserved into later adulthood, primarily those that rely on stored information such as language, vocabulary, and reasoning. For most older people, a slowing of psychomotor, information processing, and motor control is common as well as some aspects of memory performance. The majority of older adults are capable of learning new information, albeit more slowly than younger adults. Many factors may affect cognitive abilities, including sensory decline, cardiovascular disease, past intellectual achievement, personality, emotions, and accumulated socioeconomic advantages or disadvantages (APA, 2014).

Although only a minority of older adults have dementia (about 5% among persons 71–79 years of age), the percentage increases steadily with advancing years (almost two fifths of persons age 90 years and older; Plassman et al., 2007). The most common types of dementia are Alzheimer's disease and those reflective of cerebrovascular illness (e.g., vascular dementia). Some individuals evidence what is now called *mild cognitive impairment*. Mild cognitive impairment is evident in cognitive difficulties that are more pronounced than cognitive changes typically associated with aging but not severe enough to meet diagnostic criteria for dementia (Winblad et al., 2004). Some cognitive deficits are remediable because they reflect underlying metabolic, medical, or mental disorders (e.g., thyroid dysfunction, B12 deficiency, depression).

The *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (*DSM–5*; American Psychiatric Association, 2013) has changed its nosology that characterizes neurocognitive disorders. Instead of dementia, the terms "major and mild neurocognitive disorders" are used, and subtype is noted (e.g., Alzheimer's disease, vascular disease). The cause of delirium (also known as an "acute confusional state") is often caused by an underlying medical problem that requires immediate medical care.

It bears repeating that most older adults do not have mental disorders, are satisfied with their lives, engage in meaningful activities, have solid connections with family and friends, and contribute to their families and communities. However, a significant minority of older adults do have mental disorders, and these are the individuals most commonly seen in clinical practice. Studies suggest about 20% of older adults have mental disorders, including dementia (Karel, Gatz, & Smyer, 2012). Rates of mental disorders in long-term care settings may be as high as 80% (Conn et al., 2007). Some older adults have had ongoing or intermittent mental health problems throughout their lives. For others, a mental disorder appears for the first time in later life. Some psychological problems for which older adults seek treatment are similar to those of younger adults. Other problems are much more common in later life than in earlier life (e.g., stresses of caregiving, coming to term with end of life, cognitive deficits, physical health problems).

Mental disorders that are common include depression, anxiety, adjustment disorders, and cognitive problems. Depression and anxiety may present somewhat differently in older versus younger adults. For example, older adults with depression are less likely to complain of depressed mood and more likely to report anhedonia (Fiske, Wetherell, & Gatz, 2009). For persons with dementia, management of behavioral problems (agitation, wandering, repetitive behaviors) is common as well as consultation with and support for formal and family caregivers. The rates of suicide among European American men age 65 years and older is four times greater than that of the general U.S. population (Heisel & Duberstein, 2005). Notably, the majority of older adults who have completed suicides have seen a physician within a month of the suicide (Conwell, 2001). The practical import is that clinicians need to be especially vigilant about assessment of suicide in older European American men. Substance abuse exists among older adults, including abuse of alcohol, prescription drugs, and least commonly illicit drugs such as cocaine and heroin. Other problems include complicated grief, psychotic disorders, personality disorders, and sexual dysfunction (Segal, Qualls, & Smyer, 2011).

Most older adults function reasonably well despite contending with physical health problems (Federal Interagency Forum on Aging-Related Statistics, 2012). Functioning may decrease as physical health problems accumulate or worsen, and the individual needs to rely on others for assistance. Functional abilities affect the capacity to work, participate in leisure and social activities, independently maneuver the physical environment, and engage in self-care. Increasing dependence on others can be stressful for older adults as well as for family members who provide assistance as reflected in shifts in established roles, expectations, and behaviors (Qualls & Zarit, 2009). Even for older adults with relatively good health, social functioning can be adversely affected as age peers die, become infirm, or residentially relocate. The oldest of older adults may find that they are the lone survivors among their peers and must contend with not only the emotional impacts of these losses but the practical challenges of reconstituting social connections with others. As functional abilities decline, people are increasingly reliant on their immediate environments, which may facilitate or impede functioning.

Early in the history of geropsychology, it was posited that with decreasing competence individuals rely more on their immediate environments to maintain emotional, social, and physical well-being (Lawton & Nahemow, 1973). The body of work and research known as *person–environment fit* suggests that some environments are better suited than others to facilitate optimal functioning of individuals that minimize demand on them. Environments can be redesigned to make a better fit between an individual with physical and/or cognitive losses (Wahl et al., 2009).

Assessment. Clinical geropsychologists are often asked to evaluate older adults with respect to anxiety, depression, cognitive changes, sleep problems, suicide risk, psychosis, behavioral problems, and decisional capacity. Optimally, assessment of older adults is conducted in interdisciplinary teams (APA Presidential Task Force on Integrated Health Care for an Aging Population, 2007). Often, many factors need to be taken into account in psychological assessment of older adults (e.g., medical problems, medications, family supports, environment influences), and integrated teams often do the most comprehensive job in the conduct of assessments. However, teams are more the exception than the rule, and for most older adults, assessment is conducted by an individual practitioner who hopefully coordinates assessment with other professionals. Methods of psychological assessment of older adults are similar to those of younger adults: clinical interviewing, behavioral observation, and psychological testing. With older adults, use of informant data and neuroimaging are more common than with other age groups.

One challenge in the assessment of older adults is that many standardized assessment instruments have not been normed on older people. In this case, caution must be used in administering and interpreting such instruments. Geropsychologists generally give preference to instruments that have been normed on older people (Edelstein et al., 2007; Lichtenberg, 2010).

As with younger adults, cultural factors are taken into account in the interpretation of standardized instruments (APA Committee on Aging and Its Working Group on Multicultural Competency in Geropsychology, 2009; Brickman, Cabo, & Manly, 2006). Assessment takes into consideration the older adult's strengths and abilities. Repeated assessment can be valuable in documenting variability of factors (and what biological, social, psychological, and environmental factors that may contribute to that variability) as well as response to psychological interventions. Geropsychologists make needed adaptation in the testing enterprise that takes account of sensory deficits, slowed pace of learning compared to earlier life, and other factors that can influence performance. For example, the psychologist will conduct assessments in environments that are well-lit and free from noise, use larger-print materials, and ensure that older patients use needed glasses or hearing aids. Psychologists sometimes are engaged to assess the efficacy of programs for older adults (e.g., day care, respite, long-term care).

Intervention, consultation, and the aging network. The history of clinical geropsychology reflects efforts to use and adapt existing psychotherapeutic interventions developed for younger adults for older adults. With some adaptation, most major psychotherapeutic approaches have been used successfully with older adults. Research evidence indicates that older adults respond as well as younger adults to the major psychotherapies (Pinquart & Sörensen, 2001).

Psychologists provide services to older adults in a wide continuum of settings: community-based social service, community residence (e.g., client home, age-congregated housing, so-called naturally occurring retirement communities), independent practice, outpatient mental health clinic, outpatient primary medical care, integrated medical/mental health, partial day program, inpatient psychiatric, inpatient medical, assisted living, and long-term care. Knowledge of these settings, the strengths and limitations of each setting in the delivery of services, institutional dynamics, and related matters is most helpful.

Provision of psychological services in long-term care setting is worth further mention (Rosowsky, Casciani, & Arnold, 2009). Older (and younger) adults who reside in long-term care settings are much more likely than others to have mental health problems, cognitive impairment in particular. Long-term care settings are institutionally and interpersonally complex environments that are not only an older individual's home but a place for provision of medical and supportive care. Environmental factors play an important role in the genesis or amelioration of psychological difficulties. Substantive provision of psychological services in long-term care only began in the 1990s, and psychologists working within them are highly advantaged by additional knowledge and skills to effectively function within them (*Psychological Services in Long-Term Care Resource Guide*: APA, 2013; "Standards for Psychological Services in Long-Term Care Facilities": Lichtenberg et al., 1998).

Knowledge of the agencies and organizations commonly utilized by older adults also proves most helpful. Social Security provides income for older adults and younger persons with disabilities. Medicare is the federal health insurance plan for persons 65 years of age and older and younger adults with disabilities. Among services funded by Medicare is a hospice benefit for seriously ill persons. Medicaid is the federal- and state-funded health insurance plan for individuals with low income. The Supplemental Nutrition Assistance Program (formerly "food stamps") provides a benefit for the purchase of food for both younger and older adults. Area Agencies on Aging are funded through the federal Older Americans Act (O'Shaughnessy, 2011). Area Agencies on Aging are located throughout the country and provide information, referral, and other services related to aging and disabilities. The Older Americans Act also funds nutritional assistance programs for eligible older adults, including the "meals on wheels" program. A continuum of residential options exists for older adults that range from congregate ("senior citizen") housing (some of it supported through federal funding), assisted living (independent living with supports for those with functional limitations), and long-term care ("nursing homes"). Continuing care retirement communities provide residential care options from independent living to long-term care in one geographic location with residents moving to higher levels of care as needed (Segal et al., 2011). The VA also provides a continuum of housing options for eligible veterans with functional limitations.

Provision of treatment and consultation services requires knowledge of ethical and legal issues relevant to older adults; these include most notably informed consent, confidentiality, state capacity/competency, and state elder abuse/neglect reporting requirements (Karel, 2011). Given the increasing prevalence of cognitive impairment among those of advanced old age, psychologists often need to think carefully about balancing the ethical principles of autonomy and beneficence. As part of this process, psychologists are sometimes called upon to assess one or more capacities in an older adult, such as those involving financial, medical, and contractual decision making (American Bar Association & APA, 2008). Maintaining confidentiality for the older adult may be challenging when involved family members request information or care is provided in interdisciplinary teams or within residential care settings.

Consultation is often provided to staff in long-term care settings, frequently in conjunction with provision of individual services to older residents. Consultation often focuses on behavioral difficulties associated with dementia as well as adaptation to the long-term care setting (Vongxaiburana, Molinari, & Hyer, 2014). Geropsychologists also consult on the development of integrated care teams (Zeiss, 2003) and, within primary health care settings, behavioral health issues such as improvement of sleep (McCurry et al., 2007), management of pain (Hadjistavropoulos & Fine, 2006), and behavioral aspects of urinary incontinence (Burgio et al., 1998).

MAJOR ACTIVITIES

The major professional activities of clinical geropsychologists are informed by attitudes toward older people, the knowledge base on which the specialty rests, and the possession of skills to implement those activities. The major activities include assessment, intervention, and consultation; for some, additional major activities include training, teaching, and/or research.

Assessment

Geropsychologists assess older adults with a wide range of problems in the many settings where older adults reside or seek services. As noted earlier, assessment methods may include a clinical interview, behavioral observation, administration of standardized psychological tests, use of informant information, and referral for other needed assessment (e.g., a physician for a medical examination or neuroimaging, a neuropsychologist for a comprehensive cognitive evaluation; Edelstein et al., 2006). A comprehensive geriatric assessment is optimally interdisciplinary, or, at the least, avenues exist for sharing and integration of information (APA Presidential Task Force on Integrated Health Care for an Aging Population, 2007). Assessment typically includes characterization of symptoms, their onset, and likely causes; the older adult's chief concerns; existing medical problems, sensory deficits, and use of adaptive devices (e.g., glasses, hearing aids, walker); prescribed medications; cognitive functioning; capacity to engage in activities of daily living and instrumental activities of daily living; safety concerns (e.g., potential for harm to self or others); developmental history including past effective coping/resilience; role of spiritual/religious engagement; social/familial supports; environmental barriers/facilitators; and social service needs.

Most assessments include a characterization of symptoms within the *International Classification of Diseases* (10th ed.; World Health Organization, 1992) or the *DSM–5* nosology of mental disorders. As needed, assessments are repeated over time. In view of the increasing prevalence of cognitive difficulties as people age, cognitive assessment is an integral part of the assessment process. Cognitive screening instruments may indicate the need for further evaluation. Further evaluation may include gathering additional history (including that from collaterals) about the onset of cognitive change, discerning whether health and mental health factors might contribute to the onset or exacerbation of cognitive changes, and administering psychological instruments to better characterize the nature and extent of cognitive impairment. According to the level of competence in administration of neuropsychological instruments, the geropsychologist might refer to a neuropsychologist for further evaluation and also a neurologist. Assessments require the integration of biopsychosocial factors in the explanation of current difficulties and their possible amelioration.

The following are common requests for assessment to clinical geropsychologists: depression, suicidal concerns, anxiety, sleep problems, cognitive changes, interpersonal conflict, maladaptive interpersonal behavior, behavioral disruption, social isolation, and noncompliance with medical regimens (APA, 2014). Sometimes geropsychologists are asked to make capacity assessments at the behest of others (e.g., family members, lawyers, courts). Such assessments require a solid understanding of the assessment process, relevant instruments (and their limitations), and state capacity (or competency) laws. Capacity assessment may require ongoing evaluation (American Bar Association & APA, 2008).

Intervention

As noted earlier, geropsychologists provide intervention services in a range of settings, including traditional health care settings (e.g., outpatient/inpatient mental or physical health programs) and places where older adults reside or congregate (e.g., home, long-term care residences). The major treatment modalities are individual, couples, family, and group therapies. Issues that are frequently addressed in psychotherapy with older adults include adaptation to medical illness and/or cognitive loss; care for a family member with health and/or cognitive problems; residential relocation; conflict with a spouse/partner, adult child, formal care provider, or coresident of a care facility; grief secondary to death of an important person; and longstanding or recent social isolation because of contraction of social world because of death, illness, or relocation of family and friends (Knight, 2004).

Substantive evidence exists for the efficacy of psychological interventions in the treatment of a range of problems evident in later life. These include depression, anxiety, insomnia, distress in family caregivers of older adults, and disruptive behaviors in dementia (Scogin, 2007). In the treatment of late life depression, behavioral therapy, cognitive behavioral therapy, cognitive bibliotherapy, problem-solving therapy, brief psychodynamic therapy, and reminiscence therapy have been found to be effective (Scogin et al., 2005). In the treatment of late life anxiety, relaxation training, cognitive behavioral therapy, and (to a lesser degree) cognitive therapy and supportive therapy have demonstrated efficacy (Ayers et al., 2007). Insomnia can be effectively treated in older adults, including use of sleep restriction-sleep compression and multicomponent cognitive behavioral therapy (McCurry et al., 2007). Distress in family caregivers can be reduced. Studies in this area broadly fall into three approaches that include psychoeducational programs, psychotherapy, and multicomponent interventions. Each of these approaches has been found useful (Gallagher-Thompson & Coon, 2007). Disruptive behaviors often accompany dementia, and some interventions have been found effective in reducing them, including behavioral problem solving, increasing pleasant events, and making environmental modifications (Logsdon, McCurry, & Teri, 2007).

Consultation

Frequently, older adults are referred for psychological services by others including family members, health care professionals, social services providers, and residential care staff. Family members may seek guidance on the nature of the older person's difficulties and how to respond best to them. For some, this may develop into a more formal family therapy, for which a few models of care exist, including caregiver family therapy, but for which there is limited empirical support for their efficacy (Qualls & Williams, 2013). As noted, most clinical studies of family interventions are for reducing distress in caregivers of older adults with health and cognitive impairment (Gallagher-Thompson & Coon, 2007).

For geropsychologists working with or in collaboration with primary health care personnel, education may be provided about mental disorders and behavioral approaches to enhance patient engagement in therapeutic regimens or health-promoting behaviors. Staff at long-term care residences may seek guidance on how to best manage behavioral disruptions evident among residents with cognitive disorders. Effective programs to reduce behavioral problems among older people in residential care exist and can be taught to staff (Camp, Cohen-Mansfield, & Capezuti, 2002). Notably the STAR (Staff Training in Assisted Living Residences) program (Teri et al., 2005) is being implemented nationally in long-term care within the VA community living centers.

Training and Research

Some clinical geropsychologists train others in activities relevant to professional geropsychology (Knight, 2009). The Pikes Peak model for training in professional geropsychology (Knight et al., 2009) outlines recommended competencies that inform training in geropsychology at the graduate, internship, and postdoctoral levels (Hinrichsen et al., 2010). Geropsychologists also provide training and clinical supervision to postlicensure psychologists who wish to acquire competencies in the provision of services to older adults (Knight, 2009).

Geropsychologists in academic settings typically teach courses relevant to professional geropsychology. A 2003 survey of doctoral psychology programs with a formal or informal concentration or emphasis in geropsychology noted that there were 13 such programs (Hinrichsen, 2003). Subsequently, the University of Colorado at Colorado Springs established a major emphasis in clinical geropsychology within their clinical psychology training program. Other geropsychologists teach in professional continuing educational venues. Some geropsychologists conduct research, notably those in academic positions and university-affiliated health care institutions. As reviewed earlier in this chapter, geropsychologists have substantively contributed to research on adult development and aging, the assessment and treatment of late-life mental disorders, and many other topics.

KEY ACHIEVEMENTS

There are many small and large building blocks in the establishment of a specialty area. The previous Condensed History section outlines the evolution of clinical geropsychology, and within it is contained many of its key achievements. Among these are the following:

- provision of demonstrably effective psychological treatments to older adults;

- support of research studies on psychotherapy with older adults by the National Institute of Mental Health, the National Institute on Aging, and other agencies;
- development and use of psychometrically rigorous and clinically useful assessment methods for older adults;
- creation of geropsychology-related groups within and outside of APA;
- recognition as a specialty by the APA and establishment of the geropsychology specialty board within the American Board of Professional Psychology;
- publication of "Guidelines for Psychological Practice With Older Adults" (APA, 2014);
- creation of the standing APA Committee on Aging;
- publication of numerous peer-reviewed articles and books as well as the creation of professional journals devoted to aging;
- establishment of three conferences on training in psychology and aging;
- development of formal training programs for professional geropsychologists; and
- successful advocacy for reimbursement for services provided by psychologists under the Medicare program and parity of mental health services with physical health services.

FUTURE DIRECTIONS

Clinical geropsychology has substantively developed over the last 40 years. However, important challenges remain for the near and distant future. To paraphrase George Niederehe (2010) in his address on the field of clinical geropsychology, "If you build it, will they come?"

The demographic imperative of the aging population is compelling: The first of 75 million members of the baby-boomer population are now turning 65 years of age. The public-policy implications of this development are large and especially important for those delivering health care services. The Institute of Medicine's (2008) report on the existing and projected health care workforce for older adults—*Retooling for an Aging America: Building the Health Care Workforce*—was sobering: Large shortages of health care professionals trained to serve older adults currently existed, and things would only get worse. A companion study by the Institute of Medicine (2012)—*The Mental Health and Substance Use Workforce for Older Adults: In Whose Hands?*—similarly concluded that the current and projected mental health workforce were woefully inadequate.

Despite several decades of federal government support to attract physicians to the field of geriatrics, geriatrics and clinical geropsychology have a recruitment problem. Attracting professionals to the field of aging has been a hard sell. The reasons are probably multiple: Like the general public, many students hold negative stereotypes about older people (they are viewed as an unattractive population to serve); care for older people usually requires more effort than with younger patients (including critical care coordination), for which there is inadequate reimbursement; and relatively few faculty members exist with substantive expertise in aging who can serve as role models to those with a nascent interest in aging.

How many clinical geropsychologists are there, and how many are needed? Numbers have been difficult to estimate. There are perhaps 700 psychologists for whom delivery of services to older adults is their primary professional activity; furthermore, one study found that about 69% of psychologists reported providing some services to older people (Qualls et al., 2002). Estimates of the number of psychologists that might be needed to serve older adults were projected (Gatz & Finkel, 1996) to be 7,495 by the year 2000. If that estimate is true, the shortfall is enormous.

The number of psychologists needed to serve the future mental health needs of older adults, of course, depends on demand for services. Historically, older adults have been underutilizers of mental health services reflecting, among many factors, past higher Medicare copays for outpatient mental health services, lack of available providers, and age-cohort-based attitudes against the use of mental health services (Karlin, Duffy, & Gleaves, 2008). Some argue that demand for mental health services will increase considerably by baby-boomer older adults for whom use of mental health services is not viewed as negatively as the preceding generation of older adults and who may, in fact, have a greater need for mental health services than their parents' generation (Gatz & Smyer, 1992).

It is likely that clinical geropsychologists and others with expertise in geriatric mental health will be called upon to educate generalists about core principles that guide the assessment and treatment of older people with mental health problems. It is likely that the future will see increasing demand for geropsychologists to provide postlicensure continuing education on a range of aging-related topics as practitioners reckon with the reality that, even though they had not intended to serve older adults, they are. Geropsychologists possess the expertise to deliver services to older people with the most complex mental health problems as well as consult to generalists.

Despite the development of some psychological assessment instruments and methods for older adults, most psychological assessment instruments have not been normed on older people. In view of the increasing prevalence of cognitive problems in later life, better instruments are needed for differentiating normal, age-related cognitive changes from symptoms that are now called "mild neurocognitive disorders" and that may be a harbinger of major neurocognitive disorders such as Alzheimer's disease.

Psychological treatments need to be adapted and studied for older adults with cognitive deficits. Psychologists working on long-term care settings commonly work with older residents with depression and/or anxiety who have varying degrees of cognitive impairment. Behavioral and environmental interventions for older adults with cognitive impairments in long-term care hold promise for enhancing quality of life. Clinical trials are needed with this population as well as more trials with the very old (85 years of age and older) who have not been included in most research.

There is interest and enthusiasm by the general public in programs that purport to improve memory and cognition, although the evidence is limited about their usefulness (Rebok et al., 2012). Furthermore, compelling evidence does not exist that cognitive decline can be prevented (National Institutes of Health, 2010). If effective methods could be developed to prevent or remediate cognitive deficits, the general public would likely embrace these.

Despite substantive evidence on the utility of interventions for family caregivers, few models of couples or family therapy exist for issues other than caregiving. The adaptation of existing couples and family therapy models for older adults holds promise given the centrality of social and family supports in maintaining late life well-being.

Most research on assessment and treatment of older adults has not included older adults who are ethnic, racial, or sexual minorities. We have limited knowledge about how assessment instruments and methods may need to be adapted to minority older adults or the extent to which psychological interventions may be more effective when they take into account the perspective and life experience of minority older people. Delivery of culturally competent services to older adults will be become more pressing as racial and ethnic minority older people constitute an increasing percentage of the older adult population.

The fruit of the maturation of clinical geropsychology over the last 40 years is that there is a small, well-prepared cadre of specialists. Geropsychologists are armed with a substantive knowledge base, skills, a clearly delineated professional identity, relevant organizations to support their efforts, and a commitment to improve the welfare of America's older citizens.

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C h a p t e r 10

FAMILY PSYCHOLOGY

Mark Stanton, Thomas L. Sexton, and Susan H. McDaniel

This chapter provides an overview of the specialty of family psychology. We offer a comprehensive definition of family psychology, a condensed history, a synopsis of the specialty knowledge base, a description of major activities and key achievements, and a sketch of the expected direction for the future.

DEFINITION

Family psychology is

> a broad and general specialty in professional psychology that is founded on a systemic epistemology, including explicit awareness of the importance of context, diversity, and developmental perspectives, to understand, assess, and treat the comprehensive issues of psychological health and pathology, including affective, cognitive, behavioral, and dynamic factors across individuals, couples, families, and larger social systems. The crucial element of the specialty is a thorough systemic conceptualization and the application of systemic concepts to human behavior. [Family psychology] includes a body of knowledge and *evidence-based interventions* that require specialty competence. (Stanton & Welsh, 2011, p. 8)

This summary definition was derived from a review of six definitions posited by family psychology organizations or presented in family psychology specialty documents. The review identified six common elements across the definitions: (a) founded on systems theory, (b) contextual conceptualization, (c) developmental progression, (d) broad definition of family, (e) comprehensive treatment issues, and (f) variety of professional functions. Key aspects of each element are described next.

Founded on Systems Theory

The role of systems theory is fundamental to the specialty, its sine qua non. Family psychologists adopt a systemic epistemology that recognizes the reciprocal influences among individual, interpersonal, and environmental or macrosystemic factors in human behavior (Stanton, 2009).

Contextual Conceptualization

Family psychologists recognize the importance of the context in conceptualizing individual and relational dynamics. Specialty definitions note the reciprocity between individual, couple, and family functioning and mesosystems (such as schools, neighborhoods, health care clinics, businesses) or macrosystems (such as culture, ethnicity, socioeconomic status, or religion; Family Psychology Specialty Council, 2009).

Developmental Progression

Family psychology highlights the importance of a developmental perspective in psychological functioning. Family psychologists pay attention to individual life span development in combination with family development that recognizes the complexity of multigenerational patterns (Laszloffy, 2002). Family history combines with current individual, family, and

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social development to provide insight into behavior and relational dynamics. One useful clinical tool in gathering developmental information is the multigeneration genogram (McGoldrick, 2011). Typically used in assessment and to guide treatment, the genogram provides historical and current data regarding family members and system patterns that may contribute to current presenting issues.

Broad Definition of Family

Because the specialty focuses on human behavior in relational context, the term *family* is always defined broadly to include dyadic, couple, family, group, and organizational relationships, from micro to macro contexts. The crucial element is the reciprocal influence between individuals in the context of relationship. Cultural and cohort variations in the composition of the family over time are recognized (Patterson & Sexton, 2013).

Comprehensive Treatment Issues

Family psychologists function across the comprehensive range of psychological factors that contribute to health or pathology. “Affective, cognitive, and behavioral factors across individuals, couples, families, groups, organizations, and larger social systems fall within the domain of the specialty and are noted in the official special definitions” (Stanton & Welsh, 2011, p. 7). Case conceptualization, assessment, and treatment recognize the multiple factors and influences that operate within social systems, including aspects of individual and cultural diversity. Family psychologists often treat individual disorders, such as depression. The treatment considers both the individual and the complex system of which the individual problem is a part (Whisman, Whiffen, & Whiteford, 2009). Family psychologists address these issues in a variety of practice formats (see the Practice section).

Variety of Functions

Family psychologists engage in an assortment of professional activities, including research, clinical practice, consultation, supervision, and education. Some family psychologists engage in subspecialty areas, such as family forensic psychology, family business consultation, medical family psychology, and sex therapy (Stanton & Welsh, 2011).

Changing the Title of the Specialty

The title *family psychology* has been controversial since it was introduced and adopted in the founding of Division 43 of the American Psychological Association (APA). The founders of the division considered a number of titles, as it was feared that the field would be misunderstood as dealing with a particular treatment population or with the number of people involved in treatment or as focusing solely on family therapy. Unfortunately, that has frequently been the case, and family psychology organizations have labored under this misperception despite the fact that family psychologists treat a variety of individuals, couples, families, and larger groups (Nutt & Stanton, 2008). This is why definitions and descriptions of the specialty emphasize the theoretical framework over the treatment population; “family psychology is not defined by the number of people in the consulting room, but it is a broad theoretical framework for understanding human behavior” (Nutt & Stanton, 2008, p. 521).

Recently, however, the specialty has extended *family psychology* to *couple and family psychology*. This may be understood as a concession to consensual perception and as an expedient intended to allow more psychologists to identify with the specialty because many clinical psychologists treat couples (e.g., about half of APA Division 12, Clinical Psychology, members treat couples, whereas only 33% treat families; Norcross & Karpiak, 2012). For instance, the specialty board and the academy associated with the American Board of Professional Psychology have renamed themselves to include the reference to couple psychology. The new journal launched by the Society for Family Psychology is titled *Couple and Family Psychology: Research and Practice*. At this time, the titles *family psychology* and *couple and family psychology* are being used interchangeably to refer to the specialists and specialty organizations that share a theoretical framework and professional identity.

CONDENSED HISTORY

Family psychology grew out of the epistemological “revolution” that occurred in the early and mid-20th century when scientists across many disciplines espoused a systemic, cybernetic paradigm that emphasized context and interaction to understand human behavior (Goldenberg & Goldenberg, 2009). In the behavioral sciences, this was a significant shift away from intrapsychic analysis and etiology to a focus on "what was occurring in the present as families interacted, and how each participant influenced (and in turn is influenced by) other family members" (Goldenberg & Goldenberg, 2009, p. 21).

Leaders were open to new models because traditional psychoanalysis and early insight-oriented psychotherapy showed slow treatment progress, counseling agencies were experiencing lengthy wait times for access, and clinicians increasingly recognized that patient change depended in part on family support (F. W. Kaslow, 2010). Foundational conferences, such as the Macy Foundation Conferences in the 1940s, convened scientists across disciplines to grapple with large social and military issues, resulting in the key concepts of a new systems theory that linked cybernetics to human interaction (Goldenberg & Goldenberg, 2009). Becvar (2003) has called this Era I, noting that it is when the epistemological paradigm began to shift.

Several research groups developed out of this foundation. The principals were a Palo Alto group (later to become the Mental Research Institute) led by Gregory Bateson, John Weakland, and Jay Haley (and somewhat later Paul Watzlawick, Virginia Satir, and Don Jackson); Murray Bowen's group and his theory of differentiation of self, developed at the National Institute of Mental Health and Georgetown Medical School; Lyman Wynne's group, also at the National Institute of Mental Health; and Theodore Lidz's group at Yale (F. W. Kaslow, 2010). Some of these research groups began to apply systems theory to psychotherapy, and a number of practitioners joined in that effort, including Nathan Ackerman, John Bell, Carl Whitaker, Don Jackson, Virginia Satir, and Salvador Minuchin (Goldenberg & Goldenberg, 2009). Several of the early systemic assumptions were later proven flawed—for example, the supposition that family dynamics led to schizophrenia. Now it is known that family factors play a role through biological vulnerabilities in etiology but are not causal, although the family environment plays a significant role in the development, maintenance, and treatment of schizophrenia (Hooley, Woodberry, & Ferriter, 2005).

The efforts of these early systems advocates resulted, from 1960 to 1990, in a wave of publications, new journals (e.g., *Family Process, Journal of Marital and Family Therapy*), creation of family therapy training institutes, and formation of professional organizations (including APA Division 43—Society for Family Psychology). This was Era II, when the paradigm shift occurred, systems theory matured, and second-order concepts were applied to systems thinking and systemic practice (Becvar, 2003). Early mechanistic concepts gave way to living systems approaches that were more amenable to the dynamics of social systems, such as couples and families (Lebow, 2005). Constructivism was introduced to recognize the role of perception and the social organization of ideas. As charismatic founders passed from the scene, common-factor and integrative models were adopted by clinicians (Lebow & Stroud, 2013).

Out of these roots, the specialty of family psychology developed somewhat distinct from the marriage and family therapy associated with the American Association of Marriage and Family Therapists. Systemic ideas and models evolved within a psychological framework through the activities of the Society for Family Psychology and subsequent specialty organizations. This especially affected professional identity, as psychologists interested in systemic approaches to multiperson psychotherapy migrated toward the Society for Family Psychology and board certification in couple and family psychology (Stanton & Welsh, 2011). Education and training opportunities in family psychology were developed in APA-accredited doctoral programs and internships (Stanton, Harway, & Vetere, 2009), in postdoctoral training (McDaniel & LeRoux, 2007), and in continuing education. Pathways toward professional identity as a family psychologist were established (Stanton & Nurse, 2005).

KNOWLEDGE BASE

Family psychologists accept systemic epistemology, the role of evidence-based practice (EBP), the identified competencies in their specialty, the importance of interpersonal relationships, and a strong commitment to diversity. These five tenets represent the knowledge base of family psychology, and each is considered next.

Systemic Epistemology

An *epistemology* is a compilation of rules for thinking used by a group of people to explain reality (Auerswald, 1990; Bateson, 1972). Most people are socialized to think according to the rules of the culture or geopolitical society in which they were raised, with little awareness that others may think according to a different epistemology. For example, significant differences have been identified between individuals socialized in Eastern and Western thought (Nisbett, 2007). Those educated in Western thought often think according to the Cartesian scientific method that divides problems into segments for understanding and resolution, even if this violates the natural reciprocity between the parts (Capra, 2002). Taken to an extreme, the scientific method can result in excessive individualism that misses an understanding of the whole, linear cause-and-effect thinking and the loss of complexity to reductionistic thinking (Stanton, 2009).

A systemic epistemology balances Western thought with an emphasis on complexity, circularity, the contextual surround, and the reciprocity between a whole and its parts (Stanton, 2009). For those socialized into a Cartesian epistemology, this may require an epistemological transformation in which an individual relinquishes current ways of thinking to experiment with new rules of conceptualization (Gregoire, 2003). This is often preceded by facing circumstances in which the prior epistemology is found to be wanting and inadequate, and another model of conceptualization is presented that is capable of addressing the problem (Gregoire, 2003).

Family psychology counters psychological approaches that focus extensively or exclusively on the individual. “The systemic thinker has made a paradigm shift to considering all aspects of human behavior within the multiplicity of contexts within which they occur. This provides a more expansive view than traditional psychological approaches” (Harway, 2003, p. 4). There is extensive scientific support for the reciprocal relationship between individual behavior and family dynamics as well as mounting research on environmental factors affecting individual and family life (Lebow, 2005). Family psychology posits a systemic paradigm that allows researchers and clinicians to organize the complex factors involved in human behavior (Barton & Haslett, 2007); there is a dynamic relationship among individual, interpersonal, and environmental/macrosystemic factors across time in understanding and treating human behavior (Stanton, 2009). This framework can assist family psychologists in thinking systemically in case conceptualization, treatment planning, alliance creation, and treatment method (Stanton & Welsh, 2011), and it provides the necessary conceptual framework for full inclusion of diversity and multiculturalism into treatment (Harway et al., 2012).

Systemic epistemology results in an ability to demonstrate habitual systemic thinking in perceiving, organizing, and addressing life circumstances (Benson, 2007). Sweeney (n.d.-b) identified several perceptual and cognitive structuring practices that demonstrate systemic principles and labeled them as *habits of mind*. A systemic thinker regularly exhibits these habits; family psychologists use them in all aspects of professional practice. These habits include the following: challenge mental models, see the system, comprehend complexity, recognize reciprocity, conceptualize change, observe patterns and trends, consider unintended consequences, contemplate connections, accept ambiguity, shift perspective, and factor in time (Stanton & Welsh, 2012). They extend the cognitive frame beyond the simple or reductionistic analysis of behavior to take a fresh look at human behavior with lenses that recognize the totality of human systems.

EBPs

EBPs integrate “the best available research with clinical expertise in the context of patient characteristics, culture and preferences” (APA Presidential Task Force on EBP, 2006, p. 273). EBPs represent a *clinical decision-making process* with the single goal of improving clinical effectiveness through “the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients” (Sackett et al., 1996, p. 71).

Evidence-based prevention and treatment in family psychology are mindful, intentional actions intended to improve the client's (and often the family's) functioning across domains. Treatment methods range from singular discrete actions to comprehensive programs that represent increasing levels of complexity and specificity. Techniques are discrete, single, relational, or structured activities with a narrow range of desired outcomes. In contrast, treatment programs are comprehensive with theoretical principles, clinical change processes, change mechanisms, and adherence measures (Chambless & Hollon, 1998).

Family EBPs possess consistent and strong cumulative evidence for the success of the practice across different studies, clients, and contexts. The evidence must indicate a comprehensive view of outcomes, including changes in individual functioning, couple/family functioning, reduction of clinical symptoms, global measures of client well-being, and/or cost-–benefit analyses of the community implementation of a treatment. In this respect, EBPs in family psychology tend to be more systemic in both intent and evidence.

In 2007, the Task Force for Evidence-Based Treatments in Couple and Family Psychology developed a set of evidence-based guidelines and used those guidelines to systematically review the literature to identify clinical practices that have the greatest potential to help diverse clients in diverse settings. This task force recommended using a combination of (a) a "levels-of-evidence" approach that leads to identification of an evidence-based treatment and (b) a categorical approach that organizes different types of research evidence to help make specific clinical decisions (Sexton et al., 2011). Three levels of treatments were identified in the review:

- *Evidence-informed treatments* are informed by psychological research or research on therapeutic common factors. Evidence for the treatment program is based on the explicitly identified to preexisting empirical or research-based evidence or to portions of already validated evidence-based treatments to suggest that they have an evidence base. Examples of treatments that may fall into this category are some of the first- and second-generation family therapy treatments, including structural family therapy (Minuchin & Fishman, 2004) and medical family therapy (McDaniel, Doherty, & Hepworth, 2014b).
- *Promising treatments* have preliminary results, evaluation outcomes, or only comparison-level studies of high quality. These results have not been replicated in another setting or evaluated for specific outcomes with specific populations. Illustrative treatment models might include insight-oriented marital therapy (Snyder & Wills, 1989) and attachment-based family therapy (Diamond, Siqueland, & Diamond, 2003).
- *Evidence-based treatments* are specific and comprehensive interventions that have systematic high-quality evidence demonstrating that they work with the clinical problems they are designed to affect. At a minimal level, such evidence should include multiple outcome studies (at least two) to show that the program can reliably demonstrate that the treatment program produces outcomes greater than gained from the normal improvement process typical in that treatment population. Examples in this category are multisystemic therapy for adolescent problem behaviors (Henggeler, Melton, & Smith, 1992), functional family therapy for adolescent problem behaviors (Alexander et al., 2000; Sexton, 2011), and behavioral couple therapy for alcohol and substance abuse disorders (O'Farrell & Fals-Stewart, 2006).

As health care systems around the world move to require evidence for psychotherapy treatments, the progenitors of family EBPs are conducting trials regarding the implementation of those treatments in the international arena. For example, multidimensional family therapy has been studied across five Western European sites (Rowe et al., 2013), and functional family therapy has been adapted to cultures outside the United States (Breuk et al., 2006).

Specialty Competencies

Family psychology advocates a systemic approach to the core competencies defined by professional psychology (N. J. Kaslow, Celano, & Stanton, 2005). The competencies movement in psychology achieved prominence in 2002 at the Competencies Conference where core competencies were identified and conceptualized (N. J. Kaslow et al., 2004). Family psychology quickly joined this movement, noting developmental pathways toward competence in its petition for recognition as a specialty by the Council for Recognition of Specialties and Proficiencies in Professional Psychology, and initial specification of the particular manner in which family psychology understands and develops the core competencies (N. J. Kaslow et al., 2005). Many articles and books have detailed various aspects of the couple and family psychology competencies (e.g., Harway et al., 2012; Stanton & Welsh, 2012).

Interpersonal Relations

Because family psychologists regularly provide treatment in formats that include more than one person (e.g., couple, family, or larger social system therapy), understanding interpersonal relations and developing an effective therapeutic alliance are critical family psychology competencies (Friedlander, Escudero, & Heatherington, 2006). The establishment of an effective alliance in family therapy has been demonstrated to be an evidence-based therapy relationship (Norcross & Wampold, 2011). This entails an understanding of the manner in which multiple people participate in reciprocal processes as the therapeutic relationship is created and evolves. For example, there may be different perceptions of the alliance between family members, and a clinician must attend to those differences. In addition, the clinician must not only assess an individual's alliance with the clinician but also that individual's perception of the clinician's alliance with other family members. The perception of women in couples therapy regarding their partners' relationship with the therapist is an important, separate variable that affects treatment outcomes (Knobloch-Fedders, Pinsof, & Mann, 2007). A variety of other factors may affect the therapeutic alliance, including the quality of family functioning in participants' families-of-origin and the extent of relational distress between presenting clients (Knobloch-Fedders, Pinsof, & Mann, 2004), individual and cultural dissimilarities between clients and clinician (Pedersen, Crethar, & Carlson, 2008), empathic understanding of a person within the cultural context (Chung & Bemak, 2002), the ability to adjust to cultural expectations of the clients (Flicker et al., 2008), and the type of alliance advocated by the family psychology treatment model being utilized by the clinician (Sexton, 2007).

An effective alliance requires different skills across the phases of systemic treatment. In couples therapy, it is critical to create the treatment alliance quickly because first-session client perceptions of the alliance continue for some time (Knobloch-Fedders et al., 2007). Creation of an effective alliance with all clients is necessary to facilitate positive engagement in assessment and treatment (Friedlander et al., 2006). The ability to pay attention to different interpretations of presenting problems values the input of each person and ensures that treatments are found to be meaningful to each participant (Anderson, 2009; Sprenkle & Blow, 2007). Active measures to understand client perceptions of the alliance must begin in the first session and continue throughout treatment (Thoburn et al., 2009); these may be informal or formal, including the use of treatment progress measures (Pinsof & Chambers, 2009).

Over the course of treatment, family psychologists "monitor, maintain, adjust, and improve the alliance" (Stanton & Welsh, 2012, p. 24). This requires observing all individuals and the dynamics between them while remaining alert to potential threats to the therapeutic alliance; positive communication processes with multiple clients simultaneously; holding and displaying empathy for various client perspectives concurrently; equitable interaction with all individuals; and handling the interpersonal conflict between clients in a way that promotes safety, maintains the alliance with all involved, and allows treatment to progress (Friedlander et al., 2006). Managing conflict in family psychology requires "diffusing hostile exchanges, minimizing blaming attributions among family members, and promoting a relational or systemic view of the problem behaviors" (Celano, Smith, & Kaslow, 2010, p. 37).

Commitment to Diversity

Because family psychology is defined by attention to context, it necessarily attends to issues of demographic diversity (e.g., age, gender, race/ethnicity/culture/country, socioeconomic status, sexual orientation) in patient care and research. Family psychology also commits to educating family psychologists who represent the diversity of our population in the United States. The Society for Family Psychology places emphasis on diversity and inclusion, both among its membership and in its practical application of theory (see the Society for Family Psychology's home page, http://www.apa.org/divisions/div43).

Individual, couple, and family dynamics are inevitably flavored by demographic location. A couple in their 80s presented with long-standing marital conflict. The husband had cancer, the wife had long-standing resentment. They wanted help moving through this final phase of their relationship in the best possible way. A younger couple with similar dynamics might have considered divorce; this was not on the older couple's list of possible outcomes. Their commitment to each other had already stood the test of time.

Age and family life cycle stage are relevant in all couple and family presentations (McGoldrick & Carter, 2003). For example, the same issues that brought together an age-disparate couple (his wisdom, her energy) became concerns as the wife worried about how she would fare when her husband, who was 20 years older than she, died. They came to couples therapy when, to their surprise, she developed breast cancer.

Gender issues and family roles are often included in the presenting issues in family psychology (Silverstein & Goodrich, 2003). A surgeon has her first child at 42 years of age. She resisted having children for fear of its effect on her career, knowing she could never be the "ideal, stay-at-home mother" like her own. Knowing her older physician husband badly wanted a child, she relented. Both enjoyed the pregnancy much more than expected, and like most parents, fell in love with their baby. Once back to work, the mother became depressed, not feeling she could be a good surgeon and a good mother at the same time. Over a year's time, family-oriented therapy with her individually, with her husband, and with her parents began a process of working through the complexity of issues regarding how her mother chose her priorities and how the patient chose hers, including work outside the home, parenting, marriage, and fulfillment.

Ethnicity, race, class, sexual orientation, and culture all play a major role in family treatments (Falicov, 2014; McGoldrick, Giordano, & Garcia-Preto, 2005). If the dynamics are the content of the picture, these elements provide the color. For example, an expressive Italian family speaking over each other means something different than a Swedish family speaking over each other out of anxiety. In cross-cultural families, the cultural lens provides information about communication style, for example, while lifting personal blame. Genograms, the ever-present tool of family psychology, provide an excellent way to organize these demographic influences that affect family dynamics (McGoldrick, 2011).

MAJOR ACTIVITIES OF FAMILY PSYCHOLOGISTS

The principal activities of family psychologists entail practice, consultation, education, research, international activities, and professional advocacy, such as working with professional organizations.

Practice

Family psychologists practice within a wide variety of contexts. "Family psychologists work with individuals, couples, families, and broader environmental systems, such as schools, medical clinics, and business organizations" (Family Psychology Specialty Council, 2009, p. 15). Professional settings may include hospitals, clinics, independent practice, schools, colleges and universities, businesses, government, and other organizations.

Ethical identification and competence. Many psychologists provide psychotherapy to couples and families without demonstrated education, training, and experience in the specialty of family psychology (Green, 2005). Patterson (2009) and others view this as a violation of the competence standard of the APA Ethics Code that 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, 2010, p. 4; Standard 2.01 [a]). Patterson has suggested that clinicians need to establish competence and not assume that a broad and general education in psychology adequately prepares one for a practice with couple and families. Although there is overlap in clinical skills, the extended knowledge, interpersonal skills, and attitudes of the specialty extend beyond the training provided in most graduate psychology programs (Green, 2005). In addition to knowledge of EBPs for the treatment of couple and families, it is important to be competent regarding legal and ethical issues that are unique to practice with couples and families.

Systemic practice. A family psychologist inculcates the systemic habits of thought into clinical practice. For instance, this means that a family psychologist will “see the system” that operates around and interacts with individual behavior when providing psychological services in individual, couples, family, or larger group therapy. For example, a family psychologist treating a couple that presents with one partner evidencing severe anxiety symptoms would not shift automatically to individual treatment for anxiety but would seek to understand and treat the anxiety in the context of the reciprocal dynamics of the social and ecological system of which the person is a part. This avoids assuming that one person is the patient, especially if the couple presented for relationship therapy (Harway et al., 2012). The inclusion of the full system affects all aspects of treatment, from case conceptualization to assessment to intervention.

Couples therapy. Couples therapy is an important element of the specialty of family psychology, and couples share the systemic properties at the core of the specialty. Lebow (2013) noted that “couple therapy has emerged as having two related but different uses” (p. 2): improving relationship satisfaction through the alleviation of couple distress (“the only treatment established to be effective in this way”; p. 2) and, more recently, treating nonrelationship disorders that may manifest in couples (e.g., individual disorders, life problems encountered by the couple). For example, couples therapy has been demonstrated effective in the treatment of individual depression (Whisman et al., 2009), and it may play a role in normal life challenges such as illness and grief (McDaniel, Doherty, & Hepworth, 2014a). It is important to consider individual and cultural differences in the treatment of couples (DeLoach, 2013). Couples therapy includes heterosexual; lesbian, gay, bisexual, transgender, and questioning; cultural; and socioeconomic differences in couple definition.

Family therapy. Family therapy focuses on the relationships between members, the patterns of relationship with historical generations, and the impact of multiple perspectives as a means to assess and intervene to help change the functioning of the family or the behavior of family members. Family therapists regard the family, as a whole, as the unit of treatment and emphasize such factors as relationship and communication patterns rather than traits or symptoms in individual members. Family therapy is built on the principles of systemic thinking upon which numerous first- and second-generation theoretical models have been built. More recently, several family therapies have been designated as evidence-based treatments.

Family therapy is the treatment of choice for a number of adolescent behavior problems, depression, and the treatment of adults with chronic schizophrenia (Sexton et al., 2012). Family therapy is unique in its specificity and external validity in community-based effectiveness trials. For example, recent developments are specific and comprehensive treatments for clinical problems (Sexton, Alexander, & Mease, 2004). These models are built on the formative concepts in the field, include constructs from first- and second-generation schools or theoretical approaches, and are informed by process and outcome research. For example, multisystemic therapy (Henggeler & Lee, 2003) is a family- and community-based treatment model rooted in family systems, general systems, and social ecological theories that is designed to address chronic behavior problems and serious emotional disturbances in adolescents. Multidimensional family therapy (Liddle, 2009) is more family-centered in its systemic focus. Multidimensional family therapy targets aspects of youth-presenting problems through interdependent modules that together form the adolescent's psychosocial world, each of which contributes to maintaining the problematic behavior. Functional family therapy is a clinical model designed to treat at-risk youths with a range of maladaptive behaviors, including violence, substance use, risky sexual behavior, truancy, conduct disorder, and other externalizing disorders (Sexton, 2011). Each of these models has demonstrated efficacy/effectiveness research support, systematic theory, and clinical protocols that tend to respond to the individual differences of clients (Sexton et al., 2012).

Integrated health care. Family psychology has played an important role in integrated care since its inception. Given the natural connection between a systemic and a biopsychosocial approach, family psychology has been less likely to focus only on intrapsychic dynamics than other areas of psychology. Systems thinking can provide an overarching, metaframework (Breunlin, Schwartz, & Mac Kune-Karrer, 1997) for other health areas of psychology, such as health psychology, pediatric psychology, and rehabilitation psychology. This metaframework emphasizes the role of context in the patient's health and illness, including the patient's relationships with significant others (family, friends, colleagues) and the patient's relationships with the health care team (psychologist, primary care physician, specialty physicians, and other health professionals).

Family psychology is especially well-suited to primary care medicine (McDaniel et al., 2005). Both disciplines provide care across the life span, with a commitment to diverse populations and diverse problems. Primary care in the 21st century is team-based care (McDaniel et al., 2014b). The patient is to the family as the primary care clinician is to the team. Each provides a context that, at best, is complementary and supportive of each other and the patient.

Medical family therapy is an integrated care approach founded on family psychology principles (McDaniel et al., 2014b). The goals of medical family therapy are to increase agency (self-efficacy) and communion (communication and meaning) for the patient, family, and health care team. Within medical family therapy, the family psychologist can function in numerous ways: seeing patients in the primary care clinic for brief (often 15 min) interventions in close collaboration with the rest of the team, providing crisis treatment, offering more intensive treatment for those that need it, supervising master's-level clinicians, coaching physicians and other health professionals, facilitating each professional to work at the top of his or her scope of practice, training health care teams, creating innovative programs for population health, participating in medical group visits, and evaluating programs, to name just a few of the possible roles.

An example of medical family therapy in primary care is a 60-year-old man who does not take good care of himself and who has a history of juvenile diabetes and new-onset colon cancer. The family psychologist provided the following care: individual sessions to help the patient accept his diagnosis and to increase his motivation to care for himself after cancer treatment; individual sessions for his wife, who was both frightened about her husband's prognosis and resentful about having to care for him within a month of her retirement; conjoint sessions to support the couple together; discussions with the primary care physician, who was very fond of this patient and who was worried that he "caught" the colon cancer later than he should have; consultations with the team about the care of this patient and not allowing his joking manner to prevent them for being supportive to him during this time; and written communications through the electronic health record with the patient's medical and surgical oncologists, who were both pleased to have a psychologist on the team.

Family forensic practice. It is common for family psychologists to provide services to individuals, couples, or families who may be involved in the legal system (e.g., separated or divorcing couples, child custody disputes, child or elder abuse; Grossman & Okun, 2003). *Family forensic psychology* may be defined as a "special application of family psychology and forensic psychology that provides expert-level services to families involved with the legal system, their attorneys, and the courts. Expert services may be rendered in the form of intervention, consultation, testimony, research, or evaluation" (Welsh, Greenberg, & Graham-Howard, 2009, p. 703). It is important to distinguish between the forensically informed family psychologist and the forensic family psychologist (Welsh et al., 2009): The former requires a forensic perspective and basic knowledge of the legal system and legal issues, whereas the latter requires significantly more expertise.

The provision of routine family psychology services may inadvertently result in complex court-related issues—for example, provision of couples therapy to a couple who later end up divorcing and one of the two requests that the clinician provide a letter of support for his or her parenting ability in a child custody case. Thus, family psychologists who encounter forensic issues are encouraged to consult with a family forensic psychologist or attorney. They should be especially careful around any form of advocacy in a legal case or the provision of testimony on psycholegal questions that exceeds their expertise. Family psychologists who regularly provide clinical services to court-ordered clients for custody disputes require a higher level of expertise and forensic knowledge to qualify as a treating expert (Greenberg, Gould-Saltman, & Gottlieb, 2008).

Sex therapy. The treatment of sexual concerns has been central to family psychology from its origins, as one of its early organizations was the Academy of Psychologists in Marital, Sex, and Family Therapy (American Board of Couple and Family Psychology, 2015). Therapies founded on a systemic epistemology counter the individualized behavioral approach sometimes used to address sexuality; for instance, systemic sex therapy, originated by Gerald Weeks, is an integrative approach that provides attention to individual aspects of sexual disorders but also includes interpersonal and social factors in a comprehensive treatment (Hertlein, Weeks, & Gambescia, 2009). Well-known methods, such as sensate focus, are incorporated into couples therapy and treated within the context of the relationship (Weeks & Gambescia, 2009). Specific family psychology treatments may also be tailored to treat sexual disorders, such as solution-focused brief therapy (Trepper et al., 2009) and the Bowen-informed sexual crucible approach (Schnarch, 2010).

Consultation

Family psychologists may extend practice beyond psychotherapy to consultation "to individuals, groups, programs, or organizations (at any level of the system or subsystem) based on a systemic epistemology in order to assess needs, proffer recommendations, and engage in interventions using specialty skills and ability to achieve desired outcomes" (Stanton & Welsh, 2011, p. 114). The reliance of family psychology on systems theory makes it especially amenable to extend competence to consultation (Wynne, McDaniel, & Weber, 1986). Family psychologists bring a systemic understanding that benefits many consultation venues, including consultation within integrated health care (Ruddy & McDaniel, 2013); family–school (Carlson, Funk, & Nguyen, 2009); consultation at the intersection of families, schools, and health care (Carlson, Kubiszyn, & Guli, 2004); and organizations (Fuqua & Newman, 2002). Family business consultation is an ideal match for family psychologists with expertise in family process and organizations; in a family business, the business system, the ownership or governance system, and the family system overlap (F. W. Kaslow, 2006).

Education

Family psychologists routinely educate students and colleagues, most commonly by teaching family psychology and supervising couple and family therapy.

Supervision of couple and family therapy. Supervision is a specialty competency and a primary methodology to develop students in family psychology. Historically, family psychology supervision involved in-depth inculcation of one of the therapy schools (e.g., structural, strategic, experiential therapy) exhibited by a charismatic "master" clinician. More recently, there have been three significant shifts in family psychology supervision: (a) an increasing focus on the evidence-based support for the model(s) being taught in supervision, (b) the need for adherence to model protocols to ensure similar outcomes to the research (Sexton & Turner, 2010), and (c) a deeper concentration on developing student competency. Developing student outcome competencies shifts the supervision orientation from particular treatment models to an integrative approach that develops student competence across behavioral domains (Celano et al., 2010).

Family psychology supervision often involves live supervision or cotherapy to model competency skills (e.g., “how to develop, enhance, and repair an alliance”; Celano et al., 2010, p. 40). Supervision in family psychology requires knowledge (specialty theoretical and treatment knowledge, as well as knowledge of family psychology supervision approaches), skills (teaching systemic thinking and specialty competencies in supervision), and attitudes (commitment to self- and other-growth; commitment to professionalism; Stanton & Welsh, 2011).

Teaching family psychology. Some family psychologists serve as faculty members in undergraduate, graduate, postdoctoral, or continuing education programs in the specialty. Effective family psychology instruction entails full comprehension of the specialty competencies, the ability to design curriculum, and the skill to present specialty theory and methods in a manner that facilitates the desired student learning outcomes (Stanton & Welsh, 2011).

There is little research on the provision of education in systems theory to psychology students (Peterson, 1996), but there is research on K–12 models for developing systemic thinking that can be applied to psychology education (Sweeney & Sterman, 2007). This research clarifies how individuals learn to think systemically and the skills necessary for comprehension and application. Sweeney (n.d.-a) has identified the need to activate the three core learning capabilities of understanding living systems, making systems visible, and talking about systems to facilitate student adoption of systems thinking.

Distinctive to family psychology teaching are skills to facilitate a systemic orientation and scientific practice by creating an environment that allows students to relinquish existing rules of thinking and experiment with new ways of thoughts (Gregoire, 2003). Cultural competence develops out of a systemic framework as education and training moves beyond individualism to embrace the collectivistic values and behaviors of many cultures (Harway et al., 2012).

Outside the United States, family psychology education varies by country. For example, the specialty “is not a recognized academic discipline in the UK in the same way as it is in the US” (Stanton et al., 2009, p. 139). Family therapy training institutes that are validated by university alliances and accredited by the U.K. Association for Family Therapy and Systemic Practice have a strong presence in the United Kingdom, in which family psychology is subject to the influence of individual professors in particular universities. In Europe, the European Family Therapy Association supports systemic practice by awarding a certificate in family psychotherapy, but some countries may limit reimbursement to specific psychotherapies, whereas others, such as Italy and the Netherlands, allow only psychiatrists and psychologists to practice systemic therapy. Still, there are about 1,400 individual members of the European Family Therapy Association in 27 countries (Stanton et al., 2009).

Research

Family psychologists engage in research and apply it to practice. There is an emerging science of family intervention that links research questions with those faced by clinicians so that the findings may affect professional practice (Liddle et al., 2002). Creative research design models that utilize recent technological advances are being implemented to better represent the complex reality of dynamic social systems (Lunkenheimer & Dishion, 2009). The research base for couples therapy continues to increase (Gurman, 2013; Lebow, 2014a), including research on specific aspects of treatment that transcend individual models, such as partner agreement on the presenting issues in couples therapy (Biesen & Doss, 2013) or core treatment strategies (Lebow, 2014b).

Family Psychology Organizations

The specialty of family psychology is manifested in a network of organizations that function autonomously but collaborate to promote specialty practice, board certification, education, clinical training, and professional specialty identity (Nutt & Stanton, 2008). As the precursor to the Society for Family Psychology, in 1984 the Academy of Psychologists in Marital, Family, and Sex Therapy evolved to become a formal part of the APA as the Division of Family Psychology (Division 43). Other family therapy organizations were in existence (the American Association of Marriage and Family Therapy, founded in 1942, and the American Family Therapy Academy, founded in 1977), but there was no formal home in APA for family-oriented practitioners and researchers who identified primarily as psychologists until the founding of Division 43.

The Society for Family Psychology is part of the family of family psychology organizations. They include the American Board of Couple and Family Psychology, which has awarded the American Board of Professional Psychology Diplomate since 1990, and the Family Psychology Specialty Council, which has overseen the recognition of family psychology as a specialty by APA's Council for the Recognition of Specialties and Proficiencies in Professional Psychology (CRSPPP) since its initial recognition in 2002.

International Activities

Family psychology has connections that spread around the globe, but it is most developed as a distinct specialty in the United States. Complicating factors are the lack of differentiation between family psychology and family therapy in different countries or regions as well as cultural, religious, and academic distinctions by country (F. W. Kaslow, 2009).

In the United States, the Society for Family Psychology sponsors a biannual international family psychology symposium at the APA national conference and an award for outstanding contributions to family psychology around the world. On the global level, family psychologists formed the International Academy of Family Psychologists in 1990, with representatives from 30 countries at its conferences (F. W. Kaslow, 2009). Family psychologists are also active in the International Family Therapy Association, which hosts yearly international conferences to promote, strengthen, and improve the quality of family therapy and the quality of relationships within families. Trends or circumstances that affect the practice of family psychology internationally include immigration; dislocation or forced migration; ethnic or religious strife and communal violence; family violence and abuse, sometimes condoned by societal norms; the globalization of business, including the separation of families for business purposes; bicultural, biracial, and bireligious marriages; and sexual orientation diversity within cultures (F. W. Kaslow, 2009).

KEY ACHIEVEMENTS

The primary achievement of family psychology has been to position systems theory and systemic thinking as a viable clinical model of psychology, adopted by many psychologists, especially in the treatment of couples and families (Lebow, 2005). The corresponding challenge for the specialty is that this recognition has been limited to a population-based perspective that misses the epistemological transformation that could affect significant change in the way in which psychologists conceptualize, research, assess, and treat (Nutt & Stanton, 2008). That said, the achievement of specialty status, the establishment of peer-reviewed journals, and the development of education in the specialty are highlighted next as key accomplishments by family psychology.

Achievement of Specialty Status

Family psychology was enhanced by recognition as a specialty by the CRSPPP and approved by the APA Council of Representatives in February 2002. Recognition by CRSPPP was the result of a multiyear process of defining the distinctiveness of family psychology, differentiating it from marriage and family therapy, describing doctoral programs providing education in the specialty, and providing a review of the literature on the effectiveness of family psychology treatments (Nutt, 1998). CRSPPP recognition, combined with status as a specialty board in the American Board of Professional Psychology, solidified the position of family psychology within the profession of psychology.

Establishment of Specialty Journals

Multiple journals devoted to marital and family therapy preceded the formation of APA Division 43, but family psychology did not have its own until 1988. Four years after the establishment of the Division of Family Psychology, the division launched the *Journal of Family Psychology*, with Howard

Liddle as its first editor (1988–1992). Fifty-six percent of the first year's articles reported on empirical research, and the volume included articles on theory and model-building (Liddle, 1988). In 1993, the *Journal of Family Psychology* transitioned from a division publication to an official journal of APA.

The history and progress of family psychology are found in editorial comments as the journal transitioned editors. For example, Levant (1993–1997) enlarged the journal's mission, focused attention to systemic methodologies, and increased the emphasis on empirical research. Feature articles included a focus on primate research, family stress, teen violence, and observational coding (Levant, 1997). Parke (1998–2003) continued the emphasis on cooperation between research and practice, noting progress in understanding family functioning; the measurement of affective processes and their link with family functioning; and how cognitive models, biological processes, behavior genetics, and animal models can provide important insights about families (Parke, 1998). By 2008, submissions had risen to 325, and the number of issues per year increased from four to six (Kazak, 2009).

N. J. Kaslow is the fifth editor (2010–2014). She summarized the state of the field: "As families have become increasingly diverse and complex units that span the life cycle and that interact with other systems, the specialty of family psychology has broadened and become more inclusive" (N. J. Kaslow, 2010, p. 1). Paralleling the growth and importance of the field, in 2012 the number of submissions rose to 398.

Couple and Family Psychology: Research and Practice also originated in the Society for Family Psychology. The Society for Family Psychology's leadership wanted to create a journal that would focus on the nexus of research and practice in couple and family psychology. The journal, launched in 2011, is conceptualized around theme issues that highlight a current topic in the specialty by inviting or soliciting three to four major contributions that would include comprehensive literature reviews and recent research on the topic (Stanton, 2012). Initial themes demonstrated the breadth of family psychology as they addressed the systemic epistemology of couple and family psychology, families coping with HIV risk and infection, the treatment of depression in the context of couples, technological advances, the neuroscience of relationships, integrated family health care, and emerging couple and family forms.

Development of Graduate Education

Doctoral education in family psychology is a critical element of extending the specialty. Family psychology has migrated from an emphasis on postdoctoral residency programs to the coordination of doctoral education and continuing education to meet specialty eligibility standards for board certification (Stanton & Nurse, 2005). A 2006 survey of doctoral programs with family psychology courses and practicum experiences identified that most have only one or two courses, whereas some have an elective track, and a few offer substantial content (Stanton, Harway, & Eaton, 2006). The major deficit for most programs is the absence of a course or even a substantial portion of a course that focuses on the systemic epistemology of the specialty. This is problematic for a specialty that is defined by its reliance on systems theory. The concern is that this reduces family psychology education to a focus on a specific model of couples or family therapy or, perhaps worse, to techniques based on systemic principles but without sufficient understanding to apply the techniques well in complex treatment settings.

A series of recommendations for education in family psychology was approved by all family psychology specialty organizations and the Council of Specialties (Stanton & Harway, 2007). These recommendations recognize the need to provide a broad and general education in the science and practice of professional psychology based on a systemic epistemology, fulfilling the accreditation requirements of all graduate programs in psychology. The systemic education and training in these programs prepares family psychologists for practice in a wide array of clinical contexts and settings to treat the breadth of psychological disorders.

Currently, the American Board of Couple and Family Psychology provides fast-track eligibility status for board certification to graduates of programs with an emphasis, while creating a continuing education model to assist individuals who completed a track or courses in their doctoral program to enhance their education in the specialty and qualify for eligibility toward specialty examination (American Board of Couple and Family Psychology, 2015).

Division 43 programming at the annual APA convention regularly includes sessions that provide continuing education in the specialty that meet these criteria, and there are online courses identified or approved by the American Board of Couple and Family Psychology, so it is possible for a psychologist to secure the additional coursework needed to pursue board certification in the specialty.

FUTURE DIRECTIONS

There are a number of exciting initiatives on the horizon to advance family psychology. They reflect the flexibility of family psychology to adopt emerging trends and advances.

Family Psychology at the Center of Integrated Health Care

The shift to integrated health care requires psychology to rethink its focus on intrapsychic dynamics and to adopt a more systemic approach (Ruddy & McDaniel, 2013). This will be a market-driven force that graduate psychology programs cannot ignore if they want to prepare their students for the employment opportunities that will be increasingly available (Harway et al., 2012). At the very least, psychology education will need to provide coursework in systems theory and biopsychosocial approaches to integrated care so that their students are prepared for the demands of service in complex delivery systems. Family psychology's focus on systemic thinking is a natural fit for integrated health care, and family psychology competencies prepare psychologists for service in that arena (Alvarez et al., 2013).

Advancing New Models of Research

Family psychology recognizes that the study of social systems necessitates diverse research methods that reflect its foundational theories (Snyder & Kazak, 2005). Only recently have technological advances allowed for more sophisticated approaches that capture the recursive and multidimensional aspects of social systems. Special issues of the *Journal of Family Psychology* in 2005 and 2011 described advances in several types of family science methodology. For example, integrating qualitative and quantitative methods may allow creative measurement models previously unconsidered to better understand family process (Weisner & Fiese, 2011). In particular, such models may facilitate the understanding of cultural differences.

Recently, more far-reaching innovators recognize that dynamical systems require a research transformation to adopt complex models that elucidate collective variables ("an observable phenomenon that captures the interrelatedness of diverse systemic elements"; Lunkenheimer & Dishion, 2009, p. 290), describe the trajectory of such variables, identify points of transition, and incorporate control parameters (Stanton & Welsh, 2012). These approaches approximate the complexity of social systems more thoroughly. Early adopters are already applying such models to psychotherapy research, but we expect significant advances in the future.

Translating Research Into Practice

Clinical feedback systems offer the potential to transform practice and research in couple and family psychology through the integration of two essential elements: systematic measurement and clinically useful feedback about treatment satisfactions and outcomes. Feedback provides information about what does and does not seem to be working so that clinicians can be more responsive to the needs of the client by continuing, discontinuing, or altering treatment plans (Lambert, 2001). Feedback systems are composed of two components (Bickman, 2008). The first is a measure or a battery of comprehensive measures administered regularly throughout treatment to collect ongoing information concerning the process and progress of treatment. The second component is the presentation of this information to provide timely and clinically useful feedback to clinicians. The research evidence, at least in individual therapy, demonstrates that feedback systems decrease premature dropouts and redirect therapists when treatment is not progressing as expected (Lambert & Shimokawa, 2011; Lambert et al., 2003).

Clinical feedback based on systematic measurement is essential to clinical responsiveness. It shines a light on complex psychotherapy processes and outcomes, and thus enables psychologists to examine their clinical activities and adjust them. In that way, it enhances clinicians' ability to match their treatments to the unique needs of their clients.

Treatment Adherence

Studies of adherence in family-based treatment programs have demonstrated that for efficacious programs to achieve success in community settings, the programs must be consistently delivered in a manner that adheres to the models' specifications. Moreover, therapist adherence to a clinical treatment model is related to the distal outcomes such as adolescent re-offense rate and incarceration (Barnoski, 2004). Follow-up studies have also demonstrated that therapist adherence predicts improvements in family relations and reductions in youth recidivism rates (Schoenwald et al., 2000). Despite the importance of model adherence, little is known about those processes or variables that influence therapist adherence. Because family-based treatment models have clearly articulated treatment goals and related therapist treatments, as well as a wide body of research supporting their successful outcomes, these models are ideal for future studies that examine those factors that influence model adherence.

Culturally Adaptive Treatments

Family psychology intervention science recognizes the need to ensure that evidence-based treatments are appropriate and effective when applied across diverse populations. Generic treatments may inadequately attend to distinct cultural features. Recent efforts have focused on adaptive treatments that can address variations within groups and between groups (Santisteban, Mena, & Abalo, 2013). Family psychology treatments are strong candidates for adaptation because they already incorporate a systemic framework that allows for cultural complexity and subsystem interaction. Current research attempts to improve treatment outcomes by targeting a specific group characteristic or modifying a treatment for a specific group. Adaptive treatment is "an intervention developed to address the individual treatment needs of a patient/client" (Santisteban et al., 2013, p. 254). Clinicians use decision rules to determine when and how to modify the intensity or course of a treatment based on the client's needs and responses. This type of research holds great potential for addressing the needs of particular cultural populations, such as the growing Latino population in the United States, and it may facilitate improved outcomes after manualized treatment approaches leave the ideal setting of efficacy trials and enter real-world conditions (Santisteban et al., 2013).

Evolution of Competencies

As the understanding of professional competency matures in psychology, it is important that family psychology continues to develop and refine specialty competencies. Emerging market forces may affect the evolution of specialty competencies, such as the shift to integrated health care requires many family psychology competencies and adapts them in specific ways to the medical environment (Alvarez et al., 2013). Evolving diversity in couple and family composition will require refinement of the diversity competency (Harway et al., 2012), including focused subcompetencies if a family psychologist works with a particular population, such as Latinos (Falicov, 2014). New research methodologies and the resultant evidence-based treatments will advance the understanding of the scientific and intervention competencies (Stanton & Welsh, 2012). Ultimately, the final arbiter of the definition and evaluation of specialty competencies is the American Board of Couple and Family Psychology, in its role as examiner of applicants for board certification as couple and family psychologists (American Board of Couple and Family Psychology, 2015).

Education and Accreditation

APA accreditation is currently limited to clinical, counseling, and school psychology, with some allowance for emerging specialties; however, in practice, it is difficult to demonstrate satisfaction of the standards for accreditation if a program does not fall into one of these primary areas of psychology. Consequently, doctoral education in family psychology occurs primarily within individual courses or program tracks (Stanton et al., 2009). Currently, family psychology organizations are developing online and face-to-face venues in which specialty education may be secured at the postdoctoral level, primarily through continuing education and postdoctoral internships. These education and training opportunities provide a pathway for the psychologist who desires to become a couple and family psychologist.

Family psychology emerged out of the epistemological revolution that established systems theory as a major paradigm for the sciences. As it evolved into a specialty in psychology, it retained linkage to the broad family therapy and family sociology movements, especially on the international scene, yet adopted the characteristics of psychological science. Today it is established in the United States as a recognized approach to the treatment of various disorders and populations, as evidenced by the treatment models that have demonstrated efficacy and/or effectiveness. The systemic foundation of family psychology facilitates inclusion and adaptation to individual and group diversity. It provides the framework for researchers to study the complexities of life. Finally, it allows clinicians to "see the system" and to work effectively in various contexts, including emerging fields such as integrated health care.

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CHAPTER 11

COMMUNITY-CLINICAL PSYCHOLOGY

Leonard A. Jason and Darrin M. Aase

Community-clinical psychology is a specialty area within clinical psychology that emphasizes new perspectives, as well as new roles, for psychologists collaborating with citizen groups and community-based organizations. Because direct service provision will never meet all the needs for psychological services, community-clinical psychologists embrace a systemic perspective that includes expanding the reach of services, training and supervising paraprofessionals, consulting with change agents, engaging in advocacy efforts, and analyzing social policy. Community-clinical psychologists often collaborate with and seek input from citizen and community organizations and may themselves act as change agents within their communities by developing prevention programs and working for community change (Iscoe, Bloom, & Spielberger, 1977).

Community-clinical psychologists often rely on an ecological model (Kelly, 1985, 2006), which attempts to understand how people adapt to and become effective in diverse social environments. An ecological analysis seeks to understand behavior in the context of individual, family, peer, and community influences (Bronfenbrenner, 1979). The ecological paradigm underlies—sometimes explicitly, at other times implicitly—the application of diverse methodologies to the analysis of community-level data and the amelioration of social ills. The use of a variety of rigorous quantitative and qualitative methodological approaches (Jason & Glenwick, 2012a, 2012b) to research individual–environment interactions reflects another major value within the specialty.

As the field evolves, certain recurring themes have emerged: emphasizing prevention over treatment, highlighting competencies over weaknesses, collaborating across disciplines, exploring the ecological understandings of people within their environment, promoting diversity, and focusing on community building (Moritsugu et al., 2013). The field has also maintained a strong social justice orientation as well as a commitment to promoting empowerment and civic engagement.

Although there is no universally agreed-upon definition for *community-clinical psychology*, Dalton, Elias, and Wandersman (2001) proposed the following: “Community psychology concerns the relationships of the individual to communities and society. Through collaborative research and action, community psychologists seek to understand and enhance the quality of life for individuals, communities, and society” (p. 5). We believe that this is an accurate definition, as it captures the broad elements described earlier without being overly specific.

CONDENSED HISTORY

Many of the core areas of community-clinical psychology were developed in the 1950s and 1960s. The field was born out of the desire of some psychologists to become more active in solving the social and community problems confronting the United States at that time (Cowen, 1973; Levine & Levine, 1970). Early community-clinical psychologists felt that the constraints of the medical, person-focused model of psychotherapy did not allow for all

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potential ways to solve these problems. Key figures in the development of the field in the United States were Gerald Caplan and Erich Lindemann, who are regarded as two of the earliest promoters of mental health consultation, prevention-oriented programs, and the community mental health movement. These leaders also oversaw the training of many prominent community-clinical psychologists (e.g., Erchul, 2009).

After World War II, people began to recognize that mental health institutions were overcrowded, understaffed, underfunded, and often inhumane, and they did not effectively treat people with mental illnesses. In 1955, Congress called for the creation of a Joint Commission on Mental Health to analyze the human and economic problems of mental illness (Gillon, 2000). The commission recommended that although state hospitals must still provide mental health services, the main providers should be community centers located in neighborhoods that could be easily accessed by patients living in the community. In the early 1960s, U.S. legislators aimed to cut the mental hospital patient populations in half and to create a national network of community mental health centers. People were moved out of institutions by the thousands, but adequate community resources were never provided. As a result, many chronically ill patients ended up homeless, incarcerated, or in nursing homes.

During this time, George W. Albee (1968) critiqued the status quo in human services, observing that the number of human service professionals trained by institutions of higher education would be increasingly insufficient to meet the ever-growing population of those in need of psychological services. By devoting most of our mental health resources to those with chronic disorders, we were giving ourselves the daunting challenge of attempting to cure refractory, entrenched problems—problems with a disappointing track record of success. Furthermore, not only were traditional services inadequate in amount and limited in efficacy but the most disadvantaged segments of the population were also receiving a disproportionately smaller share of services and resources.

This community-clinical perspective crystallized in 1965 at a meeting in Swampscott, Massachusetts (Bennett et al., 1966). Following this conference, the field became increasingly organized with the establishment of Division 27 of the American Psychological Association in 1967 and the initiation of academic journals such as the *American Journal of Community Psychology* and the *Journal of Community Psychology* in the early 1970s.

A core belief of this community-clinical approach was that the flow of human casualties could be reduced by modifying social systems to make them more responsive and health inducing, or by teaching persons how to live behaviorally healthy lifestyles (Cowen, 1973). Thus, through community-based prevention and promotion, it was hoped that cost-effective services could be implemented with fewer resources solely devoted to remediating hard-to-cure, entrenched problems. To understand human behavior in context, community-clinical psychologists developed an understanding of the social institutions and forces in which individual humans are enmeshed. Community-clinical psychologists' focus on these themes directly points to the application of complex, dynamic systems theories.

A number of theorists and researchers influenced the development of this focus beyond the individual. Lewin's (1951) seminal work emphasized the interdependence of the person and the environment in determining behavior, and R. G. Barker (1968) continued this work with an emphasis on the nonpsychological environment (i.e., behavior settings that have a clear time and space, have their own internal structure, and are independent of any particular behavior). Moos (1984) and Sarason et al. (1977) also elaborated on this approach. Many studies pointed to the important effect of the environment in shaping individuals. As an example, developmental research involving infants with prenatal complications showed that the infants had few, if any, negative long-term effects if they came from intact families with high socioeconomic status. Conversely, children with the same complications who came from families of low socioeconomic status and unstable environments were more likely to experience academic and health problems later in life (Sameroff & Chandler, 1975).

Another example of the emerging focus on individuals within their environmental context came from Jim G. Kelly (1979), one of the founders of the field of community-clinical psychology, who conducted research in the 1960s involving individuals and their communities. Over a 3-year period, Kelly studied the particular characteristics of two high schools. One school's administration conveyed well-defined norms, offered great flexibility, and encouraged students to be creative. The second school's administration took a more rigid, authoritarian stance but had fewer well-defined norms. This ambiguity produced tension among the students and staff. Kelly's work exemplified the importance of understanding roles and expectations in schools and how some children flourish in one setting rather than another. Whether it be during childhood development, within school systems, or within total institutions (e.g., prisons), it is clear that environmental factors can have both constructive and detrimental effects on growth.

Over the years, community-clinical psychologists have increasingly addressed many challenging social problems, including school violence and gang activity. A key aspect of this work is a focus on both the high-risk individuals as well as the risk and protective factors within the environment. As an example, Thompson and Jason (1988) worked with an anti-gang organization called Broader Urban Involvement and Leadership Development, which focused on community-building efforts to discourage adolescents from joining gangs. In a collaborative study with Broader Urban Involvement and Leadership Development, the community-clinical psychologists investigated the outcomes when some children participated only in anti-gang classroom information sessions, whereas others were provided with after-school sports activities along with the same anti-gang classroom session. About 10% of children who were provided only the anti-gang classroom sessions ultimately joined gangs, but none of the youths joined gangs when they participated in both the community- and school-based intervention. When given both school-based information and alternative after-school activities, the at-risk youths resisted pressures to join gangs.

The lesson from this study and others like it was clear for community-clinical psychologists: look at both the person and the environment, with the understanding that both change over time and affect each other. A downward spiral of negativity between individuals and their environments can lead to restricted opportunities and significant psychological and physical disabilities. Therefore, as neighborhood conditions have been linked to delinquency, personal distress, children's health, and academic performance, community-clinical psychologists have worked with both individuals and community contexts in trying to change complex social problems (Sandler, Braver, & Gensheimer, 2000). Community-clinical psychologists have continued to develop both theories (e.g., sense of community, prevention, and empowerment) and action-oriented methods (Hazel, 2007). Recent decades have seen an increase in methodological innovation and diversity, advocacy efforts, focus on integrating research and practice, as well as public policy work.

Community-clinical psychology is not a U.S.-based specialization, as it is practiced outside the United States. Indeed, the field of community-clinical psychology developed uniquely in other countries and was not dependent on theory development or practice from the United States (Wingenfeld & Newbrough, 2000). Although this chapter focuses predominantly on contributions from U.S. theorists and practitioners, it has also been informed by the important experiences and work of community-clinical psychologists and other key figures outside the United States.

KNOWLEDGE BASE

Conceptual Models

Several conceptual models have been advanced within community-clinical psychology, the principal ones being (a) social competence, (b) empowerment, (c) an ecological approach, and (d) a social action perspective. Some theorists focus on a social competence model, in which the goal is to prevent disorders by enhancing individuals' competencies. Favored by many behaviorally oriented and prevention psychologists because of its emphasis on explicit skills, this approach can assist persons in gaining more resources and increasing their competence and independence (Bogat & Jason, 2000;

Glenwick & Jason, 1980). The Society for Prevention Research has spearheaded activities within this type of prevention.

Another approach is the empowerment model, which attempts to enhance people's sense of control over their own destinies and their ability to create change (Rappaport, 1981). Empowerment is action-oriented and goes beyond the individual level to include social and public policies. Individuals, organizations, and communities can all be empowered, and in the process, they gain greater access, power, and influence over decisions and resources (Zimmerman, 2000).

A paradigm that has captured the attention of many community-clinical psychologists is the ecological model. Kelly and his colleagues have been the leading theorists in this line of research (e.g., Kelly, 1968; Trickett, Kelly, & Vincent, 1985). Kelly's goal was to develop propositions of how people become effective and adaptive in varied social environments.

Kelly (1968) proposed four ecological principles that serve as a conceptual framework for examining settings and behavior: *interdependence*, *cycling of resources*, *adaptation*, and *succession*. Interdependence indicates that any change in a particular component of an ecosystem can affect changes in relationships between other components in the system as well. The principle of the cycling of resources determines how resources can be better used in a setting and how additional resources can be generated. Adaptation refers to the principle that environments shape adaptation. A behavior that is adaptive in one setting may not be adaptive in others. This principle points us toward assessing who participates in defining the adaptive roles and generating normative acceptance and support for a wide range of adaptive behaviors. Finally, the principle of succession suggests that communities are in a constant process of change; over time, there are changing demands for adaptive capacities. Although these principles focus on different aspects of the social context and behavior, they also overlap and complement each other.

The ecological approach involves using multiple methods to understand complex qualities of relationships and systems (Kingry-Westergaard & Kelly, 1990). Another key aspect is a collaborative relationship between the researcher and participant. Concepts are developed and tested by both parties. Many feminists, among others, adhere to this method; they believe that, first and foremost, we listen to others from their points of view. The process has been referred to as *community-based participatory research*. People involved in research projects should be included as participants, not merely as subjects. The ecological approach also works within long-term, collaborative relationships. By actively involving participants in planning community action, participants gain support, identify resources, and become better problem solvers for future issues. Behaviors that arise from active, embedded participants are more likely to endure. In using this approach, community-clinical psychologists can better appreciate the culture and unique needs of the community, which greatly increases the chance of benefiting the community. In a sense, the ecological endeavor is a discovery process in which the different parties share the different constructions of their contexts and work together to define the research activity.

A final model focuses on social action: Change must occur by addressing issues of power, oppression, and liberation (e.g., Albee, 1986; Prilleltensky, 2008). Social change cannot be understood without an understanding of social and political systems and how these systems have historically created unequal power differences to affect resources and opportunities for individuals, groups, and communities (Jason, Beasley, & Hunter, 2014). These inequalities can lead to disproportionate exposure to problems. Many health and social problems are caused by large inequalities evident in societal structure (Wilkinson & Pickett, 2009). In other words, economic inequalities can cause not only stress and anxiety but also lead to more serious health problems. To address these inequalities, a Brazilian educator named Paulo Freire believed that social change efforts could be used either to domesticate or to liberate. Freire (1970/2007) proposed that everyone in the community should participate in the transformation of power and that this process begins by helping people to identify the issues about which they have strong feelings and to search for solutions to their problems.

Forms of oppression include racism, sexism, classism, heterosexism, and ageism, among others, in which individuals belonging to the marginalized group experience limited resources, unequal power, and skewed decision making. For example, African Americans have had an extensive history of unequal treatment and oppression evidenced by slavery, segregation, and laws restricting the right to vote. The women's movement is another example of a social change effort to improve the quality of life and opportunities for an oppressed group. As social changes are achieved, further transformations are sought. Community-clinical psychologists cannot become complacent; although women secured the right to vote decades ago, they continue to face numerous challenges in contemporary society. Some existing challenges for women include institutionalized sexism, threats to basic reproductive health care, inadequate employment rights, disproportionate compensation, and threats to public funding of health programs that women with lower incomes find essential.

In the social action tradition, Jason (2013b) proposed five principles of social change: (a) develop a clear vision of second-order (or systemic) change; (b) identify and weaken power holders; (c) involve citizens and organizations to create coalitions that work together to take advantage of developing events and shifts in power; (d) remain persistent, patient, and willing to do what is necessary over the long haul (maintain long-term commitment to change); and (e) constantly evaluate and refine strategies and tactics to find the most effective means of bringing about change. Additional works emphasizing comparable principles, such as the need for mutual respect in collaborations among researchers and practitioners in the community, include Olson, Viola, and Fromm-Reed's (2011) model of community organization and direct action as well as the earlier works of Rothman, Erlich, and Teresa (1976) in social work.

Practice Competencies

A variety of competencies are needed by community-clinical psychologists. Because the field requires skills that extend beyond most traditional clinical setting, graduate programs offer additional training experiences to aid students in community-based research and practice. These experiences typically include coursework and practica in consultation, program evaluation, prevention, and advanced research methodologies. Recently, a work group for the Society for Community Research and Action proposed a group of desired core competencies for professionals in this specialty (Dalton & Wolfe, 2012). These competencies reflect ideal areas for initial training, although mastery of every competency is likely a career-long journey (Dalton & Wolfe, 2012). Competencies are categorized in the areas of (a) *foundational principles*, (b) *community program development and management*, (c) *community and organizational capacity-building*, (d) *community and social change*, and (e) *community research* (see Exhibit 11.1 for a complete list of these competencies).

EXHIBIT 11.1
Core Practice Competencies for Community-Clinical Psychologists (as Identified by Dalton & Wolfe, 2012)

FOUNDATIONAL PRINCIPLES
1. Ecological perspectives
2. Empowerment
3. Sociocultural and cross-cultural competence
4. Community inclusion and partnership
5. Ethical, reflective practice

COMMUNITY PROGRAM DEVELOPMENT AND MANAGEMENT
6. Program development, implementation, and management
7. Prevention and health promotion

COMMUNITY AND ORGANIZATIONAL CAPACITY-BUILDING
8. Community leadership and mentoring
9. Small and large group processes
10. Resource development
11. Consultation and organizational development

COMMUNITY AND SOCIAL CHANGE
12. Collaboration and coalition development
13. Community development
14. Community organizing and community advocacy
15. Public policy analysis, development, and advocacy
16. Community education, information dissemination, and building public awareness

COMMUNITY RESEARCH
17. Participatory community research
18. Program evaluation

The foundational principles provide the context for competent practice within the specialty. The ecological perspectives and principles of empowerment have been described earlier. *Sociocultural and cross-cultural competence* is the ability to value, integrate, and bridge multiple worldviews, cultures, and identities. This involves an ongoing process of both self-reflection and understanding the community context as it applies to the dynamics of culture, power, and privilege. *Community inclusion and partnership* require efforts to promote genuine representation and respect for all community members and acts to legitimize divergent perspectives on community and social issues. *Ethical reflective practice* involves a process of ongoing ethical improvement involving identifying ethical issues in practice, recognizing the influence personal background can have on practice, and developing a professional network for ongoing consultation.

Community program development and management involve core skills needed to work with local organizations. *Program development, implementation, and management* include the ability to partner with community stakeholders to plan, develop, implement, and sustain programs in community settings. This area may involve activities such as a needs assessment, program evaluation, and other forms of consultation. *Prevention and health promotion* involves articulating and implementing a prevention perspective as well as implementing prevention and health promotion community programs (Dalton & Wolfe, 2012).

Community and organizational capacity-building involves several key skills for consultation and development. *Community leadership* is the ability to enhance the capacity of individuals and groups to lead effectively through a collaborative process of engaging, energizing, and mobilizing those individuals and groups regarding an issue of shared importance. Related to community leadership is *community mentoring*, which is the ability to assist community members to identify personal strengths and other social and structural resources that can be further developed and used to enhance empowerment, community engagement, and leadership. Competency in *small and large group processes* requires skilled intervention in small and large group processes to facilitate the capacity of community groups to work together productively. Examples of activities in this area may include assisting community members with group decision making, consensus building, or conflict analysis/resolution. *Resource development* requires one to identify and integrate the use of human and material resources, including community assets and social capital. Finally, *consultation and organizational development* require facilitation for the growth of an organization's capacity to attain its goals. Some activities in this competence would be assessing organizational capacity, facilitating organizational learning, and assisting with goal development.

The domain of community and social change requires skills in the areas of advocacy and engagement. *Collaboration and coalition development* involve helping groups with common interests and goals to accomplish together what they cannot do apart. Coalition-building and mediating community partnerships are examples of activities in this area. *Community development* occurs when a professional assists a community in developing a vision and taking actions toward becoming a healthier community. *Community organizing and community advocacy* involve working collaboratively with community members to gain the power to improve conditions affecting their community (e.g., assisting with sustained collective action). *Public policy analysis, development, and advocacy* refer to the ability to build and sustain effective communication and working relationships with policy makers, elected officials, and community leaders. Finally, *community education, information dissemination, and building public awareness* require skills to communicate information to various segments of the public, to strengthen competencies and awareness, or for advocacy (Dalton & Wolfe, 2012).

Participatory community research requires the ability to work with community partners to plan and conduct research that meets high standards of scientific evidence that are contextually appropriate and to communicate the findings of that research in ways that promote community capacity to pursue community goals. Furthermore, the use of program evaluation is another core skill. *Program evaluation* is the ability to partner with community or setting leaders and members to promote program improvement and program accountability to stakeholders and funders. Beyond traditional research methodologies, competencies in these domains are highly valuable for community research projects.

MAJOR ACTIVITIES

Community-clinical psychologists have long argued about the ideal methods to bring about prevention and community change. T. D. Cook and Shadish (1986) suggested that there are three ways of implementing social change: incremental change, demonstration projects to test the efficacy of planned innovations, and broad or systemic changes in fundamental social structures. The researchers claimed that the most successful model involves making incremental modifications in existing social problems. Advocates of this approach believe that few policies are approved if they call for more than marginal changes in the status quo. A bolder approach is the use of demonstration programs to test the efficacy of a planned innovation; however, detractors of this model claim that many successful demonstration programs have never been widely replicated.

At the other end of the spectrum are the interventions that change basic social structures. Albee (1986) argued passionately for such an approach, as he believed that we will have excessive amounts of psychopathology as long as we have societal inequalities. Community-clinical psychologists endorsing this perspective attempt to go beyond *first-order interventions*. *First-order change* is defined as person-centered efforts to eliminate deficits and problems for individuals but which rarely address the causes that contribute to those problems (Watzlawick, Weakland, & Fisch, 1974). Unfortunately, first-order change often provides only short-term solutions. First-order change interventions tend to be alluring because they promise to solve the most deeply rooted problems with simple solutions, yet they are not effective for all people, some of whom may be unable to break out of a cycle of crime or addiction. We can see this more clearly by looking at the examples of institutions and homelessness.

Community-clinical psychologists point out that many of our nation's resources are disproportionately used by large institutions, such as prisons, mental hospitals, and other facilities that house some of our most vulnerable citizens. The institutions are not only expensive but they often do not adequately rehabilitate their inhabitants or teach the skills needed to live within the broader community. For example, most incarcerated people will eventually be released back into the community; one study showed that among a group of released offenders, 68% were arrested for a new offense, and 52% returned to prison on a new charge or parole violation within 3 years of release (Langan & Levin, 2002). Alarmingly high prison populations with disproportionate representation among ethnic minorities cost nearly $30 billion, and the current system and its cycle of detention, release, and recidivism is ineffective (Stephan, 2004). The psychological impact of restricted opportunities on prisoners is even worse. There is a need to invest in alternatives to prisons, such as diversionary programs for nonviolent crime, as well as efforts to develop community-based housing and support for those who are returning to the community.

Many community-clinical psychologists focus on both change that influences the individual and his or her social network as well as on all other components of the environment that may contribute to the particular problem. These foci help define *second-order interventions*, which go beyond a reactive response by enacting measures to avoid potential problems. True second-order change also involves altering shared goals, roles, and power relationships (Seidman, 1988).

Sober living homes are one such modality, providing mutual support for sustaining posttreatment or post-prison-release abstinence from drugs and alcohol (Polcin, 2006). Research has indicated that sober living homes extend sobriety and increase the odds of achieving recovery among residents (Jason, Davis, & Ferrari, 2007; Polcin et al., 2010). The odds of remaining abstinent improve as time passes (Dennis, Foss, & Scott, 2007). One unique type of sober living environment is called Oxford House, a network of sober living homes. There are more than 1,600 of these homes that focus on environmental characteristics and peer interactions as catalysts for behavior change. Oxford Houses have no professional staff; they function as independent, self-governed entities (Oxford House, 2006), and they have been empirically validated as promising environments for individuals in recovery. Randomized and longitudinal studies (e.g., Jason et al., 2006, 2007) have demonstrated high rates of abstinence (about 65%–80%) among residents in these programs and that living in an Oxford House for a longer period of time is associated with better outcomes in domains such as employment, legal status, and abstinence (Jason et al., 2006). By studying such organizations, community-clinical psychologists can understand how individuals in recovery, using innovative and community-based techniques, take their problems and transform them into solutions that are cost-effective.

Another example of how community-clinical psychologists seek more enduring change involves homelessness. Although many professionals have focused on addressing first-order individual deficits to help homeless individuals become "housing ready," focusing on the systemic unavailability of affordable housing represents a second-order structural approach (Maton et al., in press). For example, in 1992 a community-clinical psychologist named Sam Tsemberis started the Pathways to Housing program. This program offered individuals apartments directly from the street, without prerequisites for participating in treatment or maintaining sobriety. When compared to the existing system, this program reduced homelessness without increasing substance use (Tsemberis, Gulcur, & Nakae, 2004; Tsemberis et al., 2003). This program was the foundation for "Housing First," which is now implemented widely across the United States and in other countries, including Australia, Canada, Europe (see http://www.endveteranhomelessness.org/conference/2013). Other community-clinical psychologists have been involved in addressing homelessness through prevention programs, such as the Homelessness Prevention and Rapid Re-Housing Program, and through sustained efforts to affect public policy based on research findings (Witte, 2012).

As illustrated earlier, community-clinical psychologists argue that all too often, first-order interventions discount the importance of environments within which we live, a phenomenon coined as *context-minimization error* (Shinn & Toohey, 2003). However, community-clinical psychologists point to research showing that the environment does play a significant role in the onset and trajectory of these problems, and they seek to promote innovations based on context. Outside of psychology, Mohandas Gandhi is perhaps the most famous advocate of such an approach. He was a proponent of classic bottom-up strategies, such as organizing coalitions of people to achieve goals. Gandhi lived in the community for nearly 20 years and became familiar with the cultural, class, political, and religious institutions, allowing him to develop a detailed analysis of the societal infrastructure to tailor his nonviolent interventions to the needs of the people (Du Toit, 1996).

Community-clinical psychologists perform a wide variety of professional activities, and they can follow unique career paths. Some community-clinical psychologists work within academic or industry settings conducting research, teaching, and consulting with organizations. Others work within organizations or as practicing consultants for organizations. Regardless of the type of setting that a community-clinical psychologist works within, several core work activities deserve specific consideration in this section.

Prevention Interventions

Prevention is a foundational component within the field of community-clinical psychology, and it represents the strong influence of the public health model on the work of community-clinical psychologists. Although prevention interventions preceded the field, community-clinical psychologists have been actively involved in the development of innovative and sustainable prevention paradigms (Spaulding & Balch, 1983). One way to conceptualize prevention efforts is using three categories: *primary* (preventing the occurrence of disease), *secondary* (early detection and treatment of disease), and *tertiary* (focused on treatment and relapse prevention) strategies (Caplan, 1964). Another way (Gordon, 1987) to categorize preventive interventions is into three main groups: *universal measures* (targeting everyone), *selective measures* (targeting segments of the population that are above average risk for disease), and *indicated measures* (targeting groups at high risk for disease). The latter terminology allows for consideration of risk factors and a broader conceptualization of mental health issues within a prevention framework and was later adopted by the Institute of Medicine (Mrazek & Haggerty, 1994).

Much of the work of community-clinical psychologists is focused on universal (or primary) prevention programs, although interventions have been developed at each level. In a meta-analysis of primary prevention programs, Durlak and Wells (1997) reported that programs focused on preventing mental health issues in children and adolescents tend to have positive effects (i.e., improved competence, reduced problems, and improved adjustment). Moreover, social-emotional learning programs also have been shown to produce positive outcomes in youths (Durlak et al., 2011).

The community-clinical approach points us toward focusing not just on children or parents but on the transactions between both. Sameroff (1987) has proposed three preventive strategies that incorporate transactional concepts: *remediation*, *redefinition*, and *reeducation*. Remediation involves changing the child to adhere to the normative codes of parents. Redefinition consists of helping parents use existing regulatory systems to guide the child toward normative developmental outcomes (e.g., helping parents identify the possibilities of normal childrearing within what appears to be deviant situations). Finally, reeducation entails teaching the cultural code that regulates a child's development from birth to maturity (e.g., teaching parents how to raise their children). Lorion (1990) adopted this model and applied it most conscientiously to preventive interventions.

Many school-based prevention programs focus exclusively on the youths and, thus, miss an important ecological set of factors that could make their programs even stronger. Community-clinical psychologists have developed and promoted school-based programs that involve the media, parents, or environmental factors that directly affected the youths. As an example, a comprehensive universal (or primary) prevention program was implemented to decrease the incidence of new smokers among African American adolescents in Chicago. The program combined a school-based curriculum with a comprehensive media intervention (Kaufman et al., 1994). A total of 472 elementary schools in Chicago provided students with a copy of a smoking prevention booklet. A newspaper printed a smoking prevention curriculum on its weekly children's page; in addition, a radio station aired a call-in talk show with a focus on helping parents improve communications with their children, and it promoted and aired the winning entries of a Smoking Prevention Rap Contest for school children. Grand prize winners from five age groups had their raps aired on the Friday Night Rap Show, and the overall winner was a guest DJ on that show. A company that owned billboards in the Chicago area sponsored a smoking prevention poster contest, and winning posters were displayed on billboards in locations across the Chicago area. The results of this intervention were encouraging: Students decreased their use of tobacco and reported lower family use of cigarettes, alcohol, and marijuana. These favorable effects were the product of the community-wide, dual component nature of the intervention.

Prevention efforts are not limited to children and adolescents. As more research is conducted by community-clinical psychologists in conjunction with other prevention scientists, however, the importance of promoting nurturing environments for healthy development has become increasingly evident (Biglan et al., 2012). Developing preventive interventions that promote nurturing environments for adults often occur at the secondary and tertiary levels but are no less important. Partnering with community and practice coalitions to effectively facilitate dissemination and implementation of research findings remains an important task for community-clinical psychologists moving forward, as a gap remains between practice efforts and research findings from recent decades (Brown et al., 2012; Kellam & Langevin, 2003). A good example of this type of collaboration is evident in a series of studies completed by Sheppard Kellam in the Baltimore City Public School System beginning in the 1980s involving first grade children and longitudinal follow-ups into adulthood. Kellam et al.'s (2011) series of research studies demonstrated effective long-term outcomes for youths exposed to an epidemiologically based, randomized prevention intervention. Researchers highlighted the importance of developing organizational and community partnerships as they implemented the program. In particular, the authors noted that community coalition-building is a high priority to move from research to sustained implementation (Kellam et al., 2011).

Longitudinal studies have also supported the use of selective (or secondary) and indicated (or tertiary) prevention programs. Some exemplary programs have targeted a variety of at-risk populations. For example, Davidson et al. (1987) designed a study evaluating diversion programs for juvenile offenders compared to programs within the criminal justice system, and they found superior recidivism outcomes in the diversion programs over a 2-year follow-up. Olds et al. (1997) demonstrated longitudinally that a targeted home visitation program involving home visits from nurses for at-risk pregnant women during prenatal and early childhood stages was effective compared to a comparison group that did not receive home visits. A 15-year follow-up study showed that the program was associated with fewer pregnancies, reduced child abuse and neglect, less criminal behavior, and reduced welfare usage (Olds et al., 1997). Another instance of an exemplary preschool intervention program is the High/Scope Perry study, which targeted low-income African American preschool students at high risk of school failure. Follow-up data from preschool students (originally assessed at 3–4 years of age in the 1960s) at 40 years of age demonstrated that those who received preschool education program had better outcomes for high school completion, employment, income, and criminal behavior compared to those who did not receive the intervention (Schweinhart et al., 2005). Community-clinical psychologists have been greatly influenced by longitudinal studies of exemplary programs such as these and have designed interventions accordingly.

For example, a selective preventive intervention involved tutoring as part of a large-scale effort to help vulnerable transfer children in Grades 3–5 gain support and resources to be successful in their new settings (Jason et al., 1992). For some at-risk youths, the intervention focused on working directly with the children; for another group of children in other schools, the intervention focused on working with both the children and their parents by teaching the parents to also be involved in the tutoring of their children. At a follow-up, only children in the school and parent involvement condition continued to improve in their math and reading grades. Results of this research suggested that by working with the parents in addition to the children, school transition interventions were more effective (Jason et al., 1992). The evidence further supported the strength of an ecological model that takes a holistic approach in school-based preventive interventions.

Community-clinical psychologists are uniquely equipped not only to implement prevention science to address systemic and interactional risk factors for the development of mental and physical health conditions but also to optimize rehabilitative environments and to promote healthy functioning among individuals who struggle with these same conditions. Community-clinical psychologists also must attend to how readily prevention programs can be implemented and sustained in local communities. Systemic issues such as stigma, lack of access to resources, and institutional oppression are all potential targets for prevention efforts at any level.

Stress and Coping: Developing Models and Interventions

One of the most significant contributions within community-clinical psychology was a reconceptualization of stress through a model proposed by Barbara S. Dohrenwend (1978). She argued that a defining feature of community-clinical psychologists was a focus on preexisting contextual mediators between individual psychological functioning, stressful life events, and individual outcomes. According to the model, there are three typical outcomes when an individual experiences a stressful life event: effective coping and growth, a return to preevent status, or the development of psychopathology. Dohrenwend suggested that interventions need not solely be implemented in reaction to psychopathology; she also advocated for increased prevention efforts via the strengthening of contextual mediators (e.g., social support, access to resources) and primary prevention efforts promoting competence and well-being. As discussed in the previous section, community-clinical psychologists utilize primary prevention interventions in particular to promote coping strategies.

Community-clinical psychologists develop these types of interventions most effectively when they focus on cultural and community contextual factors. For example, Workman et al. (1997) evaluated cultural differences after they developed a school-based HIV/AIDS prevention intervention. The efficacy of the prevention program was examined using a sample of African American and Hispanic adolescent girls, with a randomized control design. Significant ethnic differences were found, with African American adolescent girls reporting significantly higher levels of sexual assertiveness and comfort discussing AIDS preventive behaviors compared to the Hispanic adolescent girls; both African American and Hispanic girls reported significantly higher levels of sexual assertiveness than those in the attention-placebo control condition. Also, both African American and Hispanic girls who received the HIV/AIDS prevention intervention increased their knowledge of AIDS, significantly more so than participants in the attention-placebo control condition. Overall, the findings of the study indicated that cultural considerations played a critical role in prevention outcomes (Workman et al., 1997).

More recently, Robinson et al. (2014) developed a culturally and contextually sensitive cognitive–behavioral coping with stress intervention, and they adapted it to be culturally appropriate for low-income, urban African American adolescents, with a focus more on general stress reduction related to contextual hazards. The adapted intervention represented a synthesis of culturally specific contextual material integrated into an evidenced-based stress prevention intervention. The adapted model was a multifactorial approach that included (a) reducing negative cognitions, (b) acknowledging and identifying risk factors and life stressors (e.g., being female or living within high-risk environments), and (c) developing/enhancing resiliency factors (e.g., coping skills and high self-esteem). The intervention, which considered the cultural context of low-income, urban African American adolescents, was successful in improving coping skills and reducing suicidal ideation. As in this example, other community-clinical psychologists are often involved in making cultural adaptations to interventions using best practices from the broader field (e.g., Benish, Quintana, & Wampold, 2011; Smith, Domenech Rodríguez, & Bernal, 2011).

Dohrenwend's (1978) model, which includes both individual and contextual variables in response to stress, underscores the action orientation of community-clinical psychologists. Professionals in the field are encouraged to proactively engage in political and media activities that promote access to social services that may act as contextual mediators within the model and promote adaptive responses to stressful life events (Teed & Scileppi, 2007). Community-clinical psychologists are often involved in efforts to influence public policy, frequently with the goal of increasing access to coping resources for disadvantaged groups (Dohrenwend, 1978). Other examples of efforts to provide interventions that address social systems might include consultation with community organizations to improve service delivery, training community leaders in crisis intervention techniques, and developing organizational prevention programs to enhance problem-solving skills (Teed & Scileppi, 2007). Such systemic interventions probably affect many more people than individual interventions.

Research and Interventions Involving Social Support

The concept of social support is not unique to community-clinical psychology but is heavily involved in several activities within the subfield. As community-clinical psychologists are concerned with both individual and contextual variables, understanding social support as helping transactions that occur between people in a wide variety of contexts makes it an important resource for intervention. Social support processes are linked to a number of other areas of focus within the field, such as prevention, psychological sense of community, stress and coping, empowerment, and the general notion of enhancing wellness (Barrera, 2000).

Although social support is an extraindividual concept involving interactions and transactions between people, operational definitions in psychological research, as well as in research within other disciplines, have tended to be based almost exclusively on individual perceptions (Felton & Shinn, 1992). For example, broadly defined, social support has been considered to be a protective factor under stressful circumstances (i.e., *stress buffering model*) and also to have its own independent, beneficial effects on individuals (i.e., *main effect model*; Cohen & Wills, 1985). Components of this support might be *structural* (e.g., the size of a social network) or *functional* (e.g., provide a specific resource such as self-esteem). For example, social support has been put into categories such as emotional (e.g., love, trust) and instrumental (e.g., monetary support) support (House, 1981). Furthermore, the construct of social support can be measured globally or in a way to understand the general availability of resources. Social support can also be measured in a specified way to assess particular functions that are fulfilled by the social resources available (Cohen & Wills, 1985).

Another way social support has been conceptualized by community-clinical psychologists is as *social embeddedness* (i.e., the quantity of connections to significant others), *enacted support* (i.e., availability of actual support among connections), and *perceived social support* (i.e., the participant's perception of how available and adequate support is; Duffy & Wong, 2000). Although there are promising ways to analyze the concept of social support, such as social network analysis, research has still typically been constrained to the perceived social support of an individual, such as the research participant (Barrera, 2000). While conducting studies of social support that view the construct at multiple levels of analysis requires more research resources and has been rarely seen in the literature, community-clinical psychologists recognize the need to refine the concept to reflect extraindividual processes. In some ways, the construct of sense of community overlaps with social support features. Other proposed methods of examining social support include exploring the role of a group or setting itself as a social network member, understanding social network characteristics as both predictors and outcomes, and analyzing the interaction between individual-level variables and social network changes (Felton & Shinn, 1992).

An example of a type of social support intervention that has been explored by community-clinical psychologists is mentoring programming. Mentoring programs seem to be the most successful when they adhere to evidence-based practices (Rhodes, 2008). These connections must cultivate empathy, trust, and reciprocity in the relationship. When these elements are structurally supported by a mentoring program, then youths may derive benefits in social–emotional, cognitive, and identity-related areas of development. However, because not all mentoring programs adhere to evidence-based practices, and because sometimes mentoring is loosely defined, effect sizes have been somewhat modest to date (Rhodes, 2008). Community-clinical psychologists are equipped to address these methodological challenges and to promote effective interventions that promote youth development using social support mechanisms.

Although the idea of social support as transactions between individuals and their environments underlies and informs the field of community psychology (Jason & Glenwick, 2012a, 2012b), theoretical formulations of social support need to be concrete enough to be empirically evaluated with quantitative methods. Moreover, methods for studying social support systems from a transactional perspective are still quite limited: Even advanced statistical techniques, such as multilevel modeling, are primarily useful for studying the effect of context on behavior but not the reverse (e.g., Todd, Allen, & Javdani, 2012). In contrast, some community-clinical psychologists have begun using a dynamic network approach that provides both a framework for thinking about and describing two-way transactional dynamics as well as a methodological approach for studying such systems empirically.

Network approaches in the field of community-clinical psychology have remained limited largely to studies of "personal" networks—that is, the personal friendships or other significant relationships reported by study participants. Personal networks, however, do not include the relationships of named individuals with each other. In contrast, "whole" networks do include the relationships of named individuals with each other. In other words, a personal network involves a person in a group just rating all others in the group, whereas a whole network involves a person in the group rating not only all other group members but also being rated by others. In contrast, whole network approaches have the advantage of studying an entire social ecosystem, typically measured from multiple viewpoints (not just one person), which more precisely admits controlling for structural constraints in multieffect dynamic network models. Conceptualizing settings as a group of interdependent, evolving social networks that can be modeled jointly appears to be a promising direction for research within the field (Jason, Light, et al., 2014). Using these methods, community-clinical psychologists seek to bring clarity to complex interpersonal phenomena.

Promoting Empowerment

Enhancing empowerment through research and practice is significant part of the work of community-clinical psychologists (Rappaport, 1984). Empowerment can be observed at the individual (e.g., perceived situational control), organizational (e.g., increased organizational influence), and community (e.g., increased community capacity to obtain resources) levels (e.g., Hunter, Jason, & Keys, 2013; Trickett, 2009). Community-clinical psychologists have highlighted the complexities of implementing empowerment interventions at the organizational level. Factors involved within the organizational culture—such as power, control, inclusion, and trust—as well as how individuals react to organizational culture can influence the outcome of empowerment initiatives (Foster-Fishman & Keys, 1997). Findings have suggested that within a large organization, a system-level intervention may not be appropriate if different sites within the organization have different individual-organization interaction patterns. At times, localized efforts to promote empowerment may be more appropriate. This example highlights how community-clinical psychologists must attend to multiple levels of context when designing and implementing interventions to promote empowerment within organizations.

A significant application of empowerment theory toward practice occurred during the 1990s through the development of *empowerment evaluation*. Empowerment evaluation is a strategy that applies the principles of program evaluation to organizations to help people help themselves by facilitating self-evaluation and reflection (Fetterman, 2002). Empowerment evaluation has been defined as

> an evaluation approach that aims to increase the probability of achieving program success by (1) providing stakeholders with tools for assessing the planning, implementation, and self-evaluation of their program, and (2) mainstreaming evaluation as part of the planning and management of the program/organization. (Wandersman et al., 2005, p. 28)

The process of facilitating an empowerment evaluation helps organizations to build capacity through collective participation and the cultivation of sense of community. This technique has been applied in a variety of settings by community-clinical psychologists.

Through community-clinical psychology, Fawcett et al. (1996) developed a framework for empowerment evaluation as a capacity-building activity at the community level that requires four key elements. First, agenda setting involves assessing the needs and concerns of the community as well as available resources. Second, planning involves developing the mission, objectives, and action plans. Third, implementation involves the facilitation and monitoring of processes and outcomes. Finally, outcome involves the documentation of community competence as well as community-level outcomes. Fawcett et al. have applied this framework effectively to aid in numerous community initiatives, such as preventing adolescent pregnancy and substance abuse prevention. These interventions followed the framework described earlier and helped to build capacity by empowering coalitions of different community groups to work together toward their common goals.

Experimental Social Innovation and Dissemination (ESID)

ESID was a professional activity initiated by community-clinical psychologists in the late 1960s as an offshoot of experimental social innovation (Fairweather, 1967). In essence, ESID reflects a humanitarian values orientation and provides a framework for the actions of researchers within the field. A key component of ESID involves placing the researcher within a naturalistic setting, with the goal of developing innovative solutions to social problems.

One of the earliest innovations was developed by George Fairweather in the 1960s. Fairweather noted that many patients with mental illness were stable but showed great institutional dependency. Adaptive behaviors in the hospital did not translate well to the community, and recidivism was common among formerly hospitalized patients (Fairweather, 1967). He promoted a psychosocial rehabilitation model for such individuals (Fairweather, 1980) that involved communal living and collaborative employment for patients with mental illness in what became known as *lodges* in the community, without direct intervention provided by mental health professionals. Each lodge was to be a self-governing organization, thereby allowing its members more participative roles in management and decision making. Fairweather (1979) had previously found that when professionals were present along with patients in such settings, the professionals assumed top leadership positions and thus dominated the organization. To avoid this problem, professionals were assigned the roles of consultants so that they could play a meaningful part in the creation of the setting without taking it over. Also as part of the program were opportunities for productive work roles, as members owned and operated their own business. The program was not designed to be transitional but to function as a surrogate family (Tornatzky & Fergus, 1982). This innovative approach went against traditional thinking with regard to managing patients with mental illness. Outcomes research suggested that these settings had positive effects on employment and recidivism compared to other settings (e.g., Backer, Liberman, & Kuehnel, 1986).

Beyond developing these innovative solutions within naturalistic settings, the model also highlights another key component of community-clinical psychology—dissemination. Indeed, numerous promising research initiatives have been developed, only to lack follow-through after the initial demonstration studies. Community-clinical psychologists who utilize ESID must try to balance the unique needs of local communities to the fidelity of implementation of the innovative intervention. They are in a strong position to negotiate interdisciplinary differences and to use multiple research methodologies to ensure that their interventions are not only effective but are sustainable and generalizable to local communities (Mayer & Davidson, 2000).

KEY ACHIEVEMENTS

The innovative concepts and major activities described in the preceding sections can be considered key achievements for the field in and of themselves. The research and practice by community-clinical psychologists have helped individuals, organizations, and communities internationally to address a wide variety of problems. Next, we discuss four additional achievements of the field.

Contextualization

Community-clinical psychology developed largely in response to the limits of understanding psychopathology as in intraindividual phenomenon. The application of the social competence, empowerment, an ecological approach, and a social action perspective represents a profound shift in our understanding of the etiology and course of mental disorders. As such, community-clinical psychologists have strived to understand not just individuals but individuals within their group, organizational, and community contexts (Trickett, 2009).

Related to this principle of contextualization has been the adoption of a public health approach to addressing mental health and social problems. The focus on proactive investigation and intervention has helped the field to make strides toward effective prevention and health promotion. This emphasis represents a departure from the traditional medical model of intervening when pathology manifests itself and conceptualizing mental health problems as primarily biologically based.

As an example, Jason et al. (1991) developed an intervention with town officials in Woodridge, Illinois, that involved fines for minors in possession of cigarettes and fines and/or suspended licenses for venders caught selling to minors. The rate of cigarette sales to minors decreased from an average of 70% to less than 10%, and adolescent smoking decreased more than 50%. Ultimately, these types of procedures were widely implemented nationwide through the Synar Amendment (Substance Abuse and Mental Health Services Administration, 2015). DiFranza, Savageau, and Fletcher (2009) later found that due to the Synar Amendment and state efforts to reduce youth access to tobacco, there has been a 21% decrease in the odds of 10th graders becoming daily smokers. By focusing on neighborhood/contextual tactics instead of only individual intervention, collaborators ultimately were able to have a broader impact. Such contextual considerations are also found in social policy interventions (Jason, 2013b). The implications of context for interventions are far reaching, and many examples have been discussed in this chapter.

Methodological Pluralism

Community-clinical psychologists have both developed and embraced a variety of methodological approaches to analyzing communities. These approaches have allowed those in our field to address the complex questions that arise when considering both individual and environmental variables (Trickett, 2009). As such, methodological pluralism has remained a guiding principle for the field since its formation.

Although much of the early history of research in community-clinical psychology was dominated by the use of quantitative methodologies, a greater appreciation for and emphasis on qualitative research methods has emerged over time (C. Barker & Pistrang, 2012). Using mixed-methods approaches that combine both quantitative and qualitative research approaches has several advantages. These advantages include (a) being able to draw on both approaches when either is inadequate to address a question, (b) dealing with both exploratory and confirmatory questions within the same study, (c) making stronger and more valid inferences from the data, (d) using one approach to assist with design issues for the other approach, and (e) inviting more diverse perspectives into research activities (Tebes, 2012).

A good example of a mixed-methods research design was implemented in an evaluation of a community-based, postassault care organization for victims of sexual assault known as the Sexual Assault Nurse Examiner (SANE). The SANE program provides both immediate medical attention following an assault as well as a forensic evaluation to assist with legal proceedings. Through multiple studies, researchers integrated criminal justice statistics, medical/forensic data, and interviews with victims, police officers, nurses, and prosecutors at various stages to approach the research question (Campbell et al., 2012). The findings suggested an increase in rates of prosecution due to the program. Qualitative findings helped characterize the increase as an indirect effect of SANE, which focused on health and well-being as opposed to pressuring victims to engage in the legal process. By using mixed-methods, a complex societal problem involving multiple systems was evaluated with more confidence in the conclusions.

There are three levels of methodological pluralism (C. Barker & Pistrang, 2012). One level is to combine different research methodologies within the same study to enhance explanatory power. The second is to incorporate multiple methodologies across a broad program of research, completing research studies that complement one another and provide a diverse perspective on research phenomena. The third level of pluralism is more aspirational, pertaining to the field as a whole as reflected in the methodologies represented in publications, at conference presentations, and within funded research studies. Although community-clinical psychologists have no doubt pioneered methodological pluralism as a core value, leaders within the field acknowledge that there is still more work to be done to embrace broader methodological and theoretical perspectives.

Community-Based Participatory Research

One of the major contributions of the community-clinical perspective has been *participatory action research*, which is concerned with research–participant interactions, obtaining sound data, engaging in appropriate ethics, and ultimately bringing about some action. Participants should be involved in the design of the research. This might encourage investigators to have a greater appreciation of the culture and unique needs of the community and, therefore, heighten the possibilities of the research findings being used to benefit the community. Input from community research participants can occur in formal or informal conversations. Discussions usually involve different levels of partnerships but always include questions such as "Given your expertise, what is the most important piece for us to study about this topic?" The goal of such a collaborative partnership is to have dialogue in an authentic relationship for full and honest information to be shared. Community partners often know little about experimental or qualitative designs or about coding and statistical techniques. However, research offers a possibility in which the expertise of the researchers can be offered to the relationship and initiative as a resource. For communication to work well, participatory researchers are best when they are flexible and help educate through dialogue (Freire, 1970/2007).

These methods advocate collecting community input at the outset and throughout the research process. Community-based participatory research methods, utilized from the start of a project, can help prevent irrelevant research. For research to be relevant, it has to be understood and meaningful, and not solely by the researchers themselves. In the clinical psychological sciences, making research more "relevant" often takes the form of post hoc efforts to "translate" research into practice (Jason et al., 2004). In contrast to translation, participatory action research can be seen as a form of upfront ecological translation. Alignment between research and action goals occurs from the outset, so later translation to make the result ecologically relevant and actionable becomes unnecessary.

One additional goal of participatory action research is that the outcomes are intended to lead to eventual "action" in terms of real-world impacts. The "action" in participatory action research comes from a sense of urgency, held by all stakeholders, to use data as soon as possible to good effect. Not all data are actionable. Interpretation, discussion, dissemination, program refinement, advocacy, or policy change are all central to participatory research. Community participants play a role in every step, including helping to make action happen. Moreover, there are dispositions that can enhance the relationship building and communications between community-clinical psychologists and community change agents (Jason, 2013a). As an example, some decisions that are made based on intuition can be as effective as ones made via deliberate cognitive processes. Intuition can be used by community-clinical psychologists to steer them through the maze of misleading information, paradoxes, and obstacles to help us deal with stigma, discrimination, and power inequalities. Clearly, good communication and relationship building skills are critical to forming enduring and constructive partnerships that work for social and community change (Maton et al., in press).

On the practice side of the field, by actively involving participants in the planning of interventions, the recipients of the programs receive support, learn to identify resources, and become better problem-solvers who will be more likely to make effective decisions when faced with future issues. Change efforts that are not well integrated into the setting are unlikely to produce effects that will last. Interventions that have been generated from collaboratively defined, produced, and implemented change efforts are most apt to endure. A core value of this ecological model is its egalitarian enterprise.

Interdisciplinary Collaboration

At the core of research and practice activities, collaborative efforts are constantly emphasized. Community-clinical psychologist practitioners have consulted with a wide variety of organizations; have helped to develop community coalitions; and have an increasing role to play within emerging, broad-based systems of care (J. R. Cook & Kilmer, 2012). Researchers in the field have traditionally collaborated with a variety of other academic disciplines, and they are uniquely equipped to help bridge the gap between initiatives that focus on individual psychological outcomes and public health initiatives that focus on community-level health outcomes (Green, 2008). Indeed, most of the studies discussed in this chapter involved considerable creative collaboration with other disciplines as well as community stakeholders.

The potential impact of these principles and strategies on health and mental health promotion would appear to be considerable. Indeed, much current activity in health and education is already grounded in these principles by intervention agents and service providers. The challenge is to develop more interventions in which these approaches are applied more systematically and thoughtfully.

FUTURE DIRECTIONS

Community-clinical psychologists have challenged approaches that targeted first-order change occurring only at the individual level, and there is a growing awareness of the limitations of this. A focus on the social change perspective conceptualizes individual behavior as embedded within communities and has given rise to a new generation of social problem analyses and interventions based on the transactions between persons and community-based structures. Such an orientation—both more nuanced and broader—requires sophisticated second-order methodologies to simultaneously analyze community-level and individual-level phenomena and their mutual impact (Jason & Glenwick, 2012a, 2012b). Moreover, community-clinical psychologists may also begin to focus more on *third-order intervention* strategies, which seek to alter the fundamental cultural landscape in which individuals, systems, and social structures reside, and shift them toward social awareness, ongoing evaluation, and change (Bartunek & Moch, 1987). Community-clinical psychologists have not widely adopted third-order intervention strategies due to a number of challenges. However, such interventions have the potential to help communities address existing problems and build the capacity to address future problems.

The community psychology field has been dominated by a U.S.-centric vision and methodology of intervention (most leading journals and textbooks are produced by U.S.-based faculty and training programs; Fryer, 2008). Many social and community interventions developed in the United States do not deal with some types of power abuses and resource inequalities. There are examples in this chapter of more systemic and structural second-order interventions, and surely more are needed. Community-clinical psychology developed uniquely in other countries and was not dependent on theory development or practice from the United States (Wingenfeld & Newbrough, 2000). Important contributions that have tried to bring a more systems-oriented approach have emerged by psychologists from countries around the world (e.g., Kagan et al., 2011; Reich et al., 2007; Vázquez Rivera et al., 2010). International perspectives on public policy work are quite valuable, because local strategies for analysis and intervention have emerged in several nations. An ongoing area of emphasis for the field is to recognize these important contributions of the international community to the field as well as collaborating to share methodological and practice strategies.

Community-clinical psychologists have been collaborating with professions and disciplines outside of psychology. However, there remains room for further incorporation of concepts from other subdisciplines within psychology. The challenge is to creatively draw concepts from those areas that have heuristic value, such as in social, environmental, and developmental psychology. However, there are also major advances occurring within the scientific world involving genetics and the use of artificial intelligence (e.g., data mining) and systems theory to help solve human and social problems from a multidisciplinary perspective. For example, innovative new studies have used available genetic information to inform prevention research in substance abuse. Recent longitudinal results have suggested that prevention interventions can have strong protective effects on individuals with genetic susceptibility to substance abuse (Brody et al., 2014) and that tailoring interventions based on genetic risk factors may be particularly effective (Schuckit et al., 2012). Community-clinical psychologists have a significant role to play in future studies using these advanced methodologies to further understand interactions between intraindividual and contextual factors.

Clearly, there are many significant problems that remain challenges for community-clinical psychologists, including poverty, wasted resources, and environmental degradation. Nonetheless, the field of community-clinical psychology is committed to finding ways to focus on improving the quality of life through research and action. The community-clinical perspective points the way to new directions and further advances. In the future, community-clinical psychologists will utilize a widening array of research and social action methods to address questions of import for the communities in which they work.

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CHAPTER 12

CLINICAL HEALTH PSYCHOLOGY

Timothy W. Smith, Paula G. Williams, and John M. Ruiz

With the benefit of hindsight, the emergence and growth of clinical health psychology over the last 40 years now seems inevitable. By the latter half of the 20th century, the acute infectious diseases that were previously the leading causes of morbidity and mortality in industrialized nations were increasingly brought under control, largely through advances in public health (e.g., improved sanitation, hygiene, nutrition) and medicine (e.g., development of vaccines and antibiotics). Noncommunicable illnesses (e.g., cardiovascular disease [CVD], cancer, diabetes) soon emerged as the leading causes of morbidity, mortality, and health care expenditures in these nations.

These noncommunicable medical conditions differ from acute infectious illnesses in two major ways that signaled a growing need for the type of research and services that define clinical health psychology. First, the development and course of the major noncommunicable diseases are heavily influenced by specific behaviors (e.g., smoking, diet, physical activity levels) and psychological processes (e.g., stress, emotional adjustment, social relationships). A scientific understanding of the determinants of these modifiable behavioral and psychosocial influences on disease and the nature of their association with health outcomes could help uncover solutions. It was also increasingly important to develop and disseminate evidence-based interventions to address behavioral and psychosocial influences on these conditions. Second, these noncommunicable conditions are largely chronic diseases. Compared to acute infectious diseases, individuals who develop chronic diseases typically face prolonged and far-reaching adaptive burdens and demands as well as a greater level of involvement in their own medical care. Often the most burdensome effects of chronic disease are symptoms (e.g., pain, fatigue) that are incompletely managed by even the most effective medical and surgical treatments. Also, to be maximally effective, many related medical treatments require adherence to medical regimens that are complex, burdensome, and often include unpleasant side effects. Hence, adherence to medical treatment is a lynchpin behavioral mechanism that directly influences the effectiveness of even optimal medical treatments. Further, chronic medical illnesses often produce major disruptions in the individual's functioning in major social and vocational roles and can be the source of significant emotional distress. Thus, to optimize health care and address all aspects of patient functioning, psychological assessments are often needed to identify not just contributions to chronic medical illness but also consequences of these conditions and related medical or surgical care. Furthermore, when problems are identified, evidence-based adjunctive psychosocial interventions are required to address the full range of patient health.

In response to these growing needs, clinical health psychology has emerged as an important specialty of psychology. This chapter provides an overview of the specialty, its history, scientific foundations, the current evidence base, and major activities. Within industrialized nations, ethnic and cultural diversity is important to the science and

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practice of clinical health psychology (Whitfield et al., 2002), as are the differing but increasingly similar health care agendas across all nations around the globe (Creer et al., 2004; Mathers & Loncar, 2006). Therefore, we also review these multiple aspects of diversity in the field. Finally, we discuss the major achievements of the specialty and offer speculations regarding its future directions in practice, research, theory, and training. It is evident in this review that what was once a novel specialty has become an increasingly central part of a more broadly defined field of health services psychology (Health Service Psychology Education Collaborative, 2013; Larkin & Klonoff, 2014).

DEFINITION

With its relatively rapid emergence and evolution as a distinct scientific field and psychological specialty, formal definitions of clinical health psychology have been a frequent and important focus of discussion. At its annual meeting in August 1997, the Council of Representatives of the American Psychological Association (APA) archived what has become the most widely recognized definition:

> The specialty of Clinical Health Psychology applies scientific knowledge of the interrelationships among behavioral, emotional, cognitive, social, and biological components in health and disease to the promotion and maintenance of health; the prevention, treatment and rehabilitation of illness and disability; and the improvement of the health care system. The distinct focus of Clinical Health Psychology is on physical health problems. The specialty is dedicated to the development of knowledge regarding the interface between behavior and health, and to the delivery of high quality services based on that knowledge to individuals, families, and health care systems. (France et al., 2008, p. 574)

This definition emphasizes the unique place of clinical health psychology at the intersection of traditional psychological services and medical care. It further emphasizes a rejection of the long-standing separation of psychological and biomedical influences on health and well-being, and it describes a range of potential applications across the full time course of medical illness, from early indications of risk to the management of the illness during its later stages. Even in a rapidly evolving context for health services within and beyond psychology, and equally rapid developments in the scientific foundations of those services, this view of clinical health psychology has remained relatively constant.

BRIEF HISTORY

The roots of clinical health psychology run deep. They are evident in descriptions of the importance of behavior and mental states in the earliest medical writings and appear virtually throughout the history of psychology in general and clinical psychology in particular (Belar, McIntyre, & Matarazzo, 2003; H. S. Friedman & Adler, 2011). The more formal beginnings within psychology involve William Schofield's (1969) landmark report to the APA describing the emerging importance of psychology in a more broadly defined vision of health services. Rather than a sharp boundary dividing traditional medical care and mental health care, with psychology mostly involved in the latter, Schofield foresaw greater integration on the horizon and a larger role for psychology in health care broadly defined. Some of this integration involved addressing psychological issues commonly arising in medical settings and populations, a longer standing field often labeled *medical psychology* (Matarazzo, Carmody, & Gentry, 1981). The focus of medical psychology on psychological aspects of medical illness and medical care was also evident in other preexisting fields, such as consultation-liaison psychiatry and psychosomatic medicine (Novack et al., 2007). Other early indications of an integrative view of psychology as part of a broader set of health care professions were apparent in discussions of the effects of traditional psychological interventions on health care use and related expenditures in medical settings (e.g., Cummings, 1977).

In response to this emerging view of a potential new set of research opportunities and professional identities, in 1973 the APA Board of Scientific Affairs appointed a task force to help identify new areas for psychology in health research. The resulting report suggested a wide range of opportunities: "There is probably no specialty field within psychology that cannot contribute to the discovery of behavioral variables crucial to a full understanding of susceptibility to physical illness, adaptation to such illness, and prophylactically motivated behaviors" (APA Task Force on Health Research, 1976, p. 272).

Not long after, the APA Division of Health Psychology was formed in 1978, as was the multidisciplinary Society of Behavioral Medicine. Two founding figures in the field, Joseph Matarazzo and Stephen Weiss, served as the first and second presidents of the Division of Health Psychology, respectively. Both were strong advocates for the development of clinical applications of psychology in traditional medical research and health care. Early in its emergence, behavioral medicine was closely aligned with operant and classical conditioning models in learning theory applied to the development, prevention, and management of disease (Pomerleau & Brady, 1979; Surwit, Williams, & Shapiro, 1982). That is, *behavioral* medicine was largely based in a predominantly behavioral tradition and was, as the name suggests, an interdisciplinary field.

By contrast, health psychology, from the outset, was characterized by a broader view of behavior and psychosocial aspects of health and illness, with an explicit involvement of social, clinical, developmental, experimental, physiological, and personality subfields (Stone, Cohen, & Adler, 1979). Moreover, health psychology was explicitly a part and specialty of the discipline of psychology. Currently, behavioral medicine and health psychology are similar in the considerable conceptual and methodological breadth of psychological aspects of their overlapping fields.

One of the landmark events in the history of health psychology was the Arden House Conference on education and training sponsored by the APA Division of Health Psychology. The conference produced recommendations for the preparation of psychologists interested in careers in research, practice, and policy at the interface of psychology and medicine (Stone, 1983). The conference endorsed a detailed model of science training for health psychologists strictly interested in research, emphasizing the importance of training in traditional psychological content and research methods but also content and methodological training in related biomedical fields. The Arden House Conference also recommended a scientist–practitioner model for those trained to provide health services, again combining relevant training in basic psychology, traditional aspects of clinical and applied psychology, and appropriate content and experience in related health sciences and services. Thus, this conference clearly identified clinical health psychology as distinct from the broader scientific field of health psychology but, nonetheless, endorsed the importance of clinically relevant science and science-based based practice in the training of clinical health psychologists. These distinctions and emphases have remained key elements in models of training and practice in clinical health psychology (Belar & Deardorff, 2009; Larkin & Klonoff, 2014).

The importance of ethnic and cultural diversity, as well as related health disparities, can be seen throughout the history of clinical health psychology. These influences on health are included in the foundational conceptual frameworks of the specialization (Engel, 1977, 1980), and on a regular basis the issues have taken center stage, as in the 1992 National Conference on Behavioral and Sociocultural Perspectives on Ethnicity and Health (N. B. Anderson, 1995). Given the rapidly changing demographics of most industrialized nations and health challenges that often differ by socioeconomic status and ethnicity, there is a growing need for "culturally competent" research and service delivery, which, in turn, creates a need for attention to issues of diversity in training. The central place of ethnic, cultural, socioeconomic, and other aspects of diversity in research and practice in clinical health psychology was reaffirmed at the Future of Health Psychology Conference (T. W. Smith & Suls, 2004), sponsored by the APA Division of Health Psychology (Yali & Revenson, 2004). These and other diversity issues (e.g., research and practice with lesbian, gay, bisexual, and transgender populations) are central in more recent training guidelines in the specialization (France et al., 2008; Larkin & Klonoff, 2014).

The maturing status of clinical health psychology is also evident in its representation within the American Board of Professional Psychology (ABPP). Board certification is increasingly recognized and required in health care settings, and ABPP formally added health psychology as a specialty in professional psychology in 1991, later adding the term *clinical* to the designation to be consistent with evolving terminology in the field that distinguished between health psychologists strictly involved in research from those who also provide health services (Belar & Deardorff, 2009). Thus, the American Board of Clinical Health Psychology became a formal member board of ABPP, with its own independent credentialing requirements and procedures.

The firm grounding of clinical health psychology in scientific research was closely related to the evidence-based medicine movement (Sackett et al., 1996) that emerged and became prominent in the broader biomedical research and health care communities during the same period of time that saw the development of the clinical health psychology specialization. The emphasis within clinical medicine on evidence-based training and practice created common ground for the specialization with both medicine and various fields within applied psychology (e.g., clinical psychology), one that was formally embraced in both clinical health psychology and the broader field of behavioral medicine (Davidson et al., 2003, 2004). A mutual emphasis on evidence-based practice provided opportunities for a “level playing field” as clinical health psychology made inroads into medical care, sometimes against resistance or skepticism within the conventional biomedical community. That is, evidence of clinically valuable improvements in disease, symptoms, and patient functioning arguably had the same scientific standing in evidence-based decisions about care regardless of whether they resulted from traditional medical or surgical treatments or from psychological interventions.

KNOWLEDGE BASE

Clinical health psychology comprises three interrelated topics: psychobiological effects of stress and related psychosocial factors on the development and course of physical disease, health behavior and prevention, and psychosocial aspects of medical illness and medical care. Research in the first topic identifies associations of stressful circumstances and related risk and protective factors (e.g., social isolation vs. support, job stress, chronic anger, depression, optimism) with the development and clinical course of medical illness as well as the neuroendocrine, cardiovascular, immune, and inflammatory stress responses believed to underlie these associations. Research in this area has the ultimate goal of the development of interventions that can reduce psychosocial risks and promote protective factors for the development and progression of disease and alter the underlying psychobiological mechanisms. As such, this issue is relevant both to the prevention and clinical management of disease.

In the study of health behavior and prevention, research examines associations of daily behaviors (e.g., physical activity, diet, smoking, sleep) with the development and course of medical illness, as well as the determinants of these behaviors. The findings of such research forms the basis for interventions intended to prevent or manage medical illness through health behavior change.

Research in the third topic area examines the impact of physical illness and the associated medical/surgical care on several aspects of functioning in patients and their families, such as physical distress, emotional adjustment, social and vocational roles, and disability. Clinical health psychology research includes basic studies in this third general topic as well as more applied research examining the value of psychosocial assessments and interventions as additions to routine medical care. Such interventions are intended to improve the various aspects of functioning described earlier and, in many instances, to improve symptoms of the disease (e.g., pain, fatigue) and alter the underlying pathophysiology.

Conceptual Foundations

Basic and applied research in clinical health psychology is firmly grounded in the biopsychosocial model, as are the related clinical services and approaches to training. The biopsychosocial model as originally proposed by Engel (1977) is best understood in contrast to the traditional biomedical model, which emphasizes biological processes as providing a sufficient basis for the prevention and treatment of disease. In the biomedical view, disease reflects the interplay of genetic factors and abnormal functioning of cells, tissues, organs, and organ systems. The success of this approach is undeniable, as evidenced by the rapid and far-reaching progress in the diagnosis, treatment, and prevention of many sources of disease and premature mortality. However, for many decades the approach has been described as incomplete, given mounting evidence of the importance of psychological, interpersonal, socioeconomic, and other social and cultural processes in the development, course, and management of the major sources of morbidity and mortality (Suls, Luger, & Martin, 2010).

Engel (1977) proposed the biopsychosocial model to address these limitations of the prevailing biomedical approach. Beyond the traditional focus on only basic biological processes, the biopsychosocial model holds that disease and its treatment are best understood as involving reciprocal influences among hierarchically organized systems or levels of analysis (von Bertalanffy, 1968), from those included in the traditional biomedical approach to higher levels addressing the complete individual and the interpersonal, social, and cultural levels in which the individual is embedded. In this approach, phenomena within each level of analysis influence, and are influenced by, processes occurring within the adjacent levels.

The biopsychosocial approach is inherently interdisciplinary. Each of the levels of analysis is the focus of individual research disciplines or fields (e.g., molecular genetics, biochemistry, medical physiology, psychology, sociology, epidemiology and public health), each with their own conceptual and methodological approaches and traditions. Yet, more complete understanding of a given disease or medical condition requires consideration of adjacent levels of analysis and utilization of the concepts and methods traditionally found in those levels. For example, solid tissue cancers involve uncontrolled cell division, recruitment of a blood supply, and the breakout of malignant cells from the original site and their attachment and growth in new locations (i.e., metastases). The molecular biology of these multiple complex processes is required for a full understanding but so too are processes occurring at the level of the individual, such as the effects of health behavior, stress, and emotional adjustment on these pathophysiological processes (Antoni et al., 2006). Abundant evidence has accumulated demonstrating the importance of health behavior (E. B. Fisher et al., 2011), stress and emotional adjustment (Chida & Hamer, 2008; Chida et al., 2008; Steptoe & Kivimäki, 2013), personality (T. W. Smith, Williams, & Segerstrom, 2015), and other psychological factors in the development and course of most of the major forms of noncommunicable and chronic disease.

In research, the application of the biopsychosocial model typically requires the collaboration of investigators representing the relevant levels of analysis. Each must have a working understanding of the concepts and methods beyond one's own field to facilitate the essential collaborative effort. In the provision of health services, a working appreciation of the fields adjacent to one's own and interdisciplinary collaboration is similarly required. This is why traditionally trained psychologists cannot simply move from mental health care to medical care contexts; training is required not only in the translation of traditional psychological services to the novel context of medical care but also in acquiring a sufficient working understanding of the basic knowledge and clinical approaches of other health care professionals to facilitate effective multidisciplinary collaboration (Belar & Deardorff, 2009; Larkin & Klonoff, 2014).

In elaborating the implications of the biopsychosocial model for medical care and describing the importance of moving beyond the narrow focus of the biomedical approach, Engel (1980) cautioned against the biomedical reductionism underlying traditional approaches, noting that "while the bench scientist can with relative impunity single out and isolate for sequential study components of an organized whole, the physician does so at the risk of neglect of, if not injury to, the object of study" (p. 536). This endorsement of expanding the historical approach to medical care added approaches typically associated with psychology. For the clinical health psychologist, the major implication of this view is that well-informed consideration of levels of analysis "above" and "below" the traditional focus of clinical psychology is an essential part of informative research and effective care.

Conceptual perspectives above the individual level of analysis have undergone a similar evolution and expansion in clinical health psychology. The importance of social networks (e.g., social support and integration vs. social isolation) as influences on health behavior, the pathophysiology of development and course of physical illness, and adaptation to disease have been well recognized since the earliest years of health psychology and, in fact, played an important role in its emergence (Holt-Lunstad, Smith, & Layton, 2010; Uchino, 2006). More recently, specific close relationships, especially marriage and similar intimate relationships, are increasingly recognized as an important influence on the development and course of physical illness (Robles et al., 2014; T. W. Smith, Baron, & Grove, 2014). Being in a committed intimate relationship (e.g., marriage) is associated with better health compared to being single, widowed, or divorced. However, the quality of intimate relationships matters as well; marital stain and disruption are associated with increased risk. Marital quality is similarly related to adjustment to chronic medical conditions (e.g., Hagedoorn et al., 2008; Leonard, Cano, & Johansen, 2006). Recently, interventions for behavioral risk reduction and improving adaptation to chronic illness have included couple-based approaches (e.g., Martire et al., 2010; Shields et al., 2012).

Higher levels or broader aspects of social context are increasingly recognized as important influences on health and hence are relevant to the services provided by clinical health psychologists. The work environment provides an example. Chronic job stress is a well-established risk factor for the development of CVD (Kivimäki et al., 2012), and effective health behavior change and prevention programs have been developed for worksites (Goetzel & Ozminkowski, 2008). Qualities of neighborhoods (e.g., conduciveness to physical activity, safety) predict the development of physical illness (Diez-Roux & Mair, 2010). Socioeconomic status is perhaps the most well recognized higher level social influence on health (Matthews & Gallo, 2011). Low socioeconomic status is associated with higher rates of morbidity and mortality as well as with smaller declines in major sources of morbidity and mortality that have occurred in recent years, largely due to higher rates of behavioral risk factors and less access to effective screening and treatment procedures (Byers, 2010). At an even higher level of analysis, public policy and environmental interventions (e.g., higher taxes on tobacco products; reduced smoking in public places) can alter health behavior and subsequent rates of morbidity and mortality (E. B. Fisher et al., 2011). Hence, the activities of clinical health psychologists are embedded in important higher level influences on health and disease.

Methodological Foundations

The field of clinical health psychology is firmly grounded in evidence-based practice. For evidence regarding interventions, randomized clinical trials (RCTs) and systematic reviews of RCTs are the top tiers of evidence in this approach, as they are generally in clinical psychology. Across research topics a second generation of intervention research is underway in which prior findings are subjected to replication and extension in more rigorous tests, with increased attention to advance registration of clinical trials and analysis strategies that protect trial integrity and convey the clinical significance of treatment effects. Intervention effects in clinical health psychology are heavily influenced by the nature of comparison groups (Freedland et al., 2011). The common approach of comparing adjunctive psychosocial interventions to usual medical care alone can be faulted, for example, for failing to control for participant or patient expectations and other nonspecific factors. Thus, the considerable growth and future potential of clinical health psychology in recent decades has been accompanied by more challenging standards for demonstrating the value of its contributions.

More rigorous evidence of the efficacy of clinical health psychology services from RCTs and meta-analyses is not the only methodological challenge facing the field. Evidence of effectiveness in "real-world" health care settings beyond the tightly controlled context of research clinics is increasingly recognized as a critical concern (Glasgow, 2008). Beyond this essential evidence of generalizability along the efficacy–effectiveness continuum, another methodological issue involves consideration of the number of individuals affected by these interventions. In terms of population health, a highly efficacious intervention will have a minimal impact if it reaches a limited number of individuals who might otherwise benefit from it, perhaps because of high costs or limited access. In contrast, an intervention with a more modest level of efficacy could have a much larger effect on population health if it reaches a very large segment of the population. This issue involves the extent to which interventions can be scaled for delivery to large numbers of relevant patients, but it also involves issues of access to such services, a major contributor to ethnic and socioeconomic health disparities (Hao et al., 2011; Popescu, Cram, & Vaughan-Sarrazin, 2011).

The Reach, Efficacy, Adoption, Implementation, and Maintenance (RE-AIM) framework developed by Glasgow and colleagues has been an important contribution to health psychology in this regard, both for health behavior change and prevention efforts (Glasgow, Vogt, & Boles, 1999) as well as for the management of chronic medical illness (Glasgow et al., 2001). As presented in Exhibit 12.1, the potential impact of any intervention on population health is the product of its reach and efficacy (Impact = Reach × Efficacy). The extent to which the potential is actualized, however, depends on the extent to which the intervention is adopted by health care organizations and providers, the fidelity and consistency of its implementation in those settings, and the degree of maintenance of that initial implementation.

EXHIBIT 12.1

The Reach, Efficacy, Adoption, Implementation, and Maintenance (RE-AIM) Framework

Reach	Proportion of the target population participating in the intervention
Efficacy	Success rate if intervention is implemented as intended in guidelines
Adoption	Proportion of settings, practices, and health care plans adopting the intervention
Implementation	Extent to which intervention is implemented as intended in real-world settings
Maintenance	Extent to which intervention program is sustained over time

Note. From Glasgow, Vogt, and Boles (1999).

The RE-AIM framework identifies new methodological challenges in the empirical foundations of clinical health psychology. Processes affecting the dissemination of efficacious and effective treatments, their adoption, and implementation in health care settings are novel elements of the research agenda facing clinical health psychology and behavioral medicine (Kerner, Rimer, & Emmons, 2005), as they are elsewhere in clinical psychology (McHugh & Barlow, 2010). In describing this emerging field of translational science, Spring (2011) suggested that, “the behaviors in need of change are not just those of our patients, but also those of our main professional partners” (p. 1). For clinical health psychologists, these include their psychological colleagues but perhaps even more importantly other health care professionals, health administrators, and policy makers.

Another important development in the scientific foundations of clinical health psychology involves the outcomes studied in intervention research. In some ways, the field has come full circle. Early studies in the field often relied on self-reports of health outcomes (e.g., symptoms, retrospective reports of illness) rather than the more objective outcomes common in medical research (e.g., physiological assessment, medically verified disease diagnoses; T. W. Smith, 2011). An important development in recent decades has been the routine adoption of more objective outcome indicators that are widely used in medical research. This has provided more compelling evidence of the value of clinical health psychology interventions as well as important points of comparison with traditional medical and surgical approaches. Of course, some highly important outcomes involve behavior (e.g., physical activity levels, dietary intake), and in other cases key challenges in medical management involve subjective impacts of the illness (e.g., pain and fatigue in rheumatoid arthritis). In other instances, objective intermediate indicators have been straightforward in treatment research (e.g., blood pressure reductions, weight loss, plasma lipid changes).

In recent years, health research broadly defined is increasingly focused on subjective and functional outcomes. This represents an expanded view of health, moving beyond the traditional focus on mortality and biologic indicators of morbidity and risk, to include behavioral outcomes (e.g., functional activity) and subjective endpoints tied to disease processes (e.g., fatigue, pain, emotional adjustment). This developing trend was evident when the National Institutes of Health established the Patient Reported Outcomes Measurement Information System (http://www.nihpromis.org) and then expanded the program in 2010. The goal of this program was the development and dissemination of patient reports of physical, mental, and social well-being. A primary objective of the initiative is the utilization of sound, standardized measures that can be used for a variety of medical conditions and contexts. Through the use of standardized assessments, the impact of a wide variety of medical conditions and interventions can be compared on a common set of metrics, facilitating an integrative and comparative approach to the evaluation of health care interventions and policies. Although standardized outcome measures that permit broad comparisons are quite valuable, major sources of health disparities create the need for valid measures that take into account ethnic, cultural, and economic differences (Garcini et al., 2015).

This overall approach is similarly evident in the Patient-Centered Outcomes Research Institute (http://www.pcori.org), established in 2010 as part of the Patient Protection and Affordable Care Act. Here, the stated overall mission of the institute is to develop and disseminate information to facilitate optimal decision making about health care, on the basis of empirical evidence regarding the effectiveness, benefits, and harms of various diagnostic and intervention procedures that patients and providers consider. This information includes traditional outcomes, such as longevity and objective biomedical endpoints, but also aspects of patient functioning, symptoms, and quality of life. Whereas the "softer" and subjective outcomes were once seen as a weakness of the evidence base regarding the value of interventions, these recent trends reflect the fact the policy makers and health care professionals increasingly recognize that they represent an essential aspect of a more comprehensive approach to understanding the costs and benefits of all health care procedures.

Outcome measures that integrate morbidity, mortality, and these multiple aspects of patient functioning and quality of life are increasingly used not only to evaluate specific services but also in comparative analyses of the benefits of different interventions and diagnostic procedures. For example, quality-adjusted life years weight each year lived by a care recipient by the quality of life during that year (Kaplan & Groessl, 2002; Passchier & Busschbach, 2015). This outcome facilitates comparisons of a wide variety of interventions on a common metric and is useful in calculating various aspects of benefit per unit of cost. Given that clinical health psychology interventions often have positive effects beyond traditional biomedical measures of morbidity, this broader focus on patient functioning, symptoms, and quality of life could produce even more compelling evidence of the value of these services. Evidence of benefits relative to resources expended will be an increasingly important issue in efforts to include clinical health psychology services in evolving approaches to health care. Given that weightings for quality of life include subjective evaluations of various aspects of symptoms and functioning, attention to diversity in this aspect of methodology in clinical health psychology is an important concern (Craig et al., 2014).

Assessment and Consultation in Clinical Health Psychology

Assessment and consultation account for a substantial portion of the services provided by clinical health psychologists. A comprehensive review of evidence-based assessment in clinical health psychology is beyond our present scope, but such sources are available (Andrasik, Goodie, & Peterson, 2015). However, some general issues are noteworthy. The biopsychosocial model describes the range of issues relevant in assessments for specific medical problems or patient populations (Belar & Deardorff, 2015). At the level of the individual patient, assessment of affective, cognitive, and behavioral factors are a familiar focus of psychological assessment, but in clinical health psychology these targets also include potentially novel issues related to health (e.g., the patient's understanding of a disease and its treatment, health beliefs, daily health habits). Effective assessments in clinical health psychology also include biological or physical factors not typically included in clinical assessment, such as the specific medical condition, related aspects of treatment, and subjective impacts. The hierarchical systems aspect of the biopsychosocial model also calls for inclusion of family, sociocultural, and health care system factors (Belar & Deardorff, 2015).

A critical consideration is the fact that assessment instruments or procedures validated in traditional mental health populations and settings cannot simply be imported into the medical care context. Rather, evaluations of measurement properties (e.g., structure, reliability, validity) and the utility of assessments must be conducted with medical patients in medical settings to provide the necessary evidence base for assessment in clinical health psychology. For example, some symptoms and items that are highly informative indicators of emotional difficulties among medically well persons seeking mental health services (e.g., fatigue, concerns about appearance) often simply reflect the underlying medical problem with few implications for the presence, form, or severity of emotional dysfunction. Thus, evidence-based assessment requires a foundation of research in the specific medical settings and populations of interest. Similarly, assessment procedures must be evaluated for specific ethnic and cultural groups. Such assessment research should not only evaluate psychometric properties across ethnic, cultural, and socioeconomic groups but also be sensitive to the often related issues of discrimination, mistrust of medical professionals, and acculturation (Garcini et al., 2015).

One current issue in clinical health psychology research involves the utility of such assessments. Emotional distress is common in medical settings and is often associated with poor subjective, functional, and objective health outcomes. This had prompted calls for routine screening in medical patient populations, but some studies suggest that such screening does not necessarily lead to improved identification of patient needs or improved patient functioning (e.g., Palmer, van Scheppingen, & Coyne, 2011; Thombs et al., 2008). Given the general focus on evidence-based practice and the need to justify health care expenditures, assessment research in clinical health psychology will increasingly need to go beyond traditional psychometric issues to demonstrations of effects on health care outcomes and related costs.

Clinical health psychologists are often called upon to provide consultation to colleagues in health care settings. Common examples include requests in primary medical care settings for evaluation and recommendations regarding management for depression and somatoform disorders. Randomized trials that include comparisons to usual medical care indicate that such consultations can improve patient symptoms and functioning as well as reduce associated health care utilization (van der Feltz-Cornelis, Van Os, et al., 2010). Given this increasingly common role for clinical health psychologists, more trials of consultation activities across a variety of populations and settings are needed. As in the case of assessment research, trials evaluating the effects of consultation tailored to meet the needs of various ethnic and cultural groups are also needed (e.g., Bedoya et al., 2014).

Intervention in Clinical Health Psychology

To date, interventions in clinical health psychology have had two major foci—the modification of daily health habits or behavior and adjunctive treatments for various medical conditions. These are not mutually exclusive topics, as many interventions for chronic disease include modification of health habits. However, we review these topics separately here, given the field's long-standing distinction between them.

Prevention and health behavior change. Given the pervasive role of various behaviors as risk factors for major sources of morbidity and premature mortality, modification of health behavior plays a major role in the prevention and management of medical illness. Smoking, physical activity levels, intake of calories and fat, and obesity predict the development and course of CVD, several forms of cancer, diabetes, and premature mortality generally (C.-D. Lee, Sui, & Blair, 2009; C.-D. Lee et al., 2011; D.-C. Lee et al., 2011). Recent decreases in rates of death from CVD and cancer are due in part to decreases in these behaviors in the population (Ford & Capewell, 2011). Despite this progress, approximately 80% of CVD and diabetes are due to unhealthy lifestyles, as are 40% of cancers (Spring, 2011). Compared to the costs of medical treatment for CVD, diabetes, and cancer, prevention efforts focused on reducing these behavioral risks are considerably more cost effective (Gordon et al., 2007).

Several of the most important topics in intervention research on health behavior change and prevention (e.g., smoking) are covered in detail elsewhere in this handbook. In the following section, we review the evidence base for psychological interventions for a few health behaviors not covered in detail elsewhere. These concern weight loss, physical activity and exercise, prevention of HIV infection, and the special intervention challenge posed by the commonly occurring need to change multiple behavioral risk factors.

Weight loss and obesity. Typically defined as a body mass index greater than 30 kg/m2, obesity is a risk factor for coronary heart disease (CHD), Type 2 diabetes, some forms of cancer, and mortality. With an adult prevalence rate of more than 30%, obesity is now considered “epidemic” (Stein & Colditz, 2004). Thus, behavioral weight loss interventions are central to clinical health psychology.

According to a recent review of behavioral treatments for obesity, intervention studies report an average of 10% decrease in body weight. Despite the improvements in health that come with even modest weight loss, maintenance continues to be the key challenge. Efforts to prevent weight regain have focused on prolonged contact between patients and providers, prescribing high levels of physical activity, and supplementing behavioral intervention with pharmacotherapy (Butryn, Webb, & Wadden, 2011). For example, a recent randomized controlled trial utilized naltrexone/bupropion therapy in addition to intensive behavior modification for obesity with positive effects (Wadden et al., 2011). Both in-person support and remote intervention delivery by weight-loss coaches have also been shown to produce clinically significant weight loss over 24 months (Appel et al., 2011). In general, higher levels of website utilization appear to result in greater weight loss in RCTs of web-based intervention (Bennett et al., 2010). An innovative recent RCT demonstrated that teaching “stability skills” focused on maintenance prior to a weight loss intervention resulted in less weight regain (Kiernan et al., 2013).

In addition to examining efficacy, recent RCTs have also calculated cost of weight loss interventions. Using written materials complemented by an interactive website and brief telephone/e-mail coaching of varying intensity, Hersey et al. (2012) found significant weight loss, increased physical activity, and decreased blood pressure in a large sample of obese adults. Cost-effectiveness ratios were $900 to $1,100/quality-adjusted life year for the two lower intensity interventions and $1,900/quality-adjusted life year for the higher intensity intervention (web intervention plus coaching)—figures that compare favorably to many health care interventions. Adding motivational interviewing to weight loss interventions results in increased weight loss according to a recent meta-analysis (Armstrong et al., 2011). Overall, the current state of the science in behavioral weight loss suggests that continued support (in a variety of modalities), as well as teaching maintenance skills before weight loss, helps mitigate the high relapse rates, and these enhanced support efforts are cost effective.

Sustained physical activity has been deemed critically important in the prevention of obesity, successful weight loss among obese individuals, as well as maintenance of weight loss. Importantly, however, substantially higher activity levels than the 30 min of daily exercise recommended for overall health may be necessary for weight loss and maintenance (e.g., to 45–60 min daily; Goldberg & King, 2007). Moreover, it is the case that physical activity interventions alone usually produce only modest weight loss results; thus, dietary change may also be required to achieve significant weight loss for obese individuals.

Comorbidity between obesity and depression is also an important consideration in behavioral weight loss intervention (Fabricatore & Wadden, 2006). Depression at baseline predicts attrition from clinical weight loss trials as well as poor early weight loss (Fabricatore et al., 2009). An RCT that randomized women with comorbid obesity and depression to behavioral weight loss or behavioral weight loss combined with cognitive–behavioral depression management found that women in both groups demonstrated significant weight loss and reduction in depression (Linde et al., 2011).

It is also important to consider ethnicity and minority status in weight loss efforts. Meta-analysis of psycho-behavioral interventions in preventing weight gains or reducing weight has indicated that multicomponent (vs. single component) lifestyle interventions were efficacious in treating ethnic minority groups. Further, incorporation of individual sessions, family involvement, and problem-solving strategies are recommended (Seo & Sa, 2008).

Recent research has also focused on environmental approaches to healthy eating (Story et al., 2008) and worksite weight loss intervention (L. M. Anderson et al., 2009) as alternatives to traditional individual- or group-administered weight loss interventions. Given the dramatic increases in childhood obesity, it is clear that intervention efforts targeting weight loss in children are essential. Family-based approaches (Epstein et al., 2007), school-based weight control intervention (Katz, 2009), as well as environmental and policy strategies for prevention of childhood obesity (Brennan et al., 2011) have shown promise.

Physical activity and exercise. Sedentary behavior and level of physical activity are risk factors for the development of many negative health conditions including obesity, hypertension, Type 2 diabetes, and CHD. Interestingly, sedentary behavior appears to be a distinct risk factor, independent of physical activity level, for a variety of adverse health outcomes in adults (Thorp et al., 2011). Although the recommended amount of physical activity necessary for optimal health continues to be debated, it appears that even light activity improves health in sedentary individuals. Indeed, small, gradual increases in activity help to mitigate the incidence of adverse health events and improve long-term adherence to physical activity regimens (Powell, Paluch, & Blair, 2011). Given the strength of association with the development of chronic illness, interventions focused on increasing activity levels and exercise behavior are a key area of focus in clinical health psychology. For example, increasing physical activity is effective in the prevention and treatment of obesity (Goldberg & King, 2007) and in the management of Type 2 diabetes (Umpierre et al., 2011). Exercise is an effective treatment for depression generally (Hoffman et al., 2011) and appears to be effective in reducing depressive symptoms in individuals with chronic medical conditions (Herring et al., 2012). Exercise is also one of the few behavioral strategies that improve cognitive functioning, including attention, processing speed, executive functioning, and memory (P. J. Smith et al., 2010), which are often impaired in chronic medical conditions.

Environmental factors appear to be central to declining physical activity and increases in sedentary behavior in the population; thus, interventions efforts have increasingly expanded beyond individual approaches. Worksite interventions (Abraham & Graham-Rowe, 2009) and ecological approaches (increasing the "walk-ability" of communities, access to recreation sites) have been effective in increasing physical activity (Sallis et al., 2006). Moreover, given the success of focusing on physical activity in adult-focused diabetes prevention efforts (Diabetes Prevention Program Research Group, 2002) and the increase in childhood obesity, school-based exercise programs have demonstrated improvement in body composition, fitness, and insulin sensitivity in children (Carrel et al., 2005). Maintenance of such benefits over prolonged school vacations can be problematic, however (Carrel et al., 2007). In summary, given the many mental and physical health benefits of physical activity, assessment and intervention in this domain will continue to be a central part of clinical health psychology research.

Prevention of HIV infection. HIV continues to be a major public health concern, with rates of new infections in recent years averaging around 50,000 in the United States (Prejean et al., 2011). Thus, the development and implementation of preventive interventions are an important continuing focus in clinical health psychology and behavioral medicine. Behavioral targets continue to be important, such as condom use, reduction in presex drug and alcohol use, and reduction in needle sharing among drug users. Biomedical approaches focus primarily on the use of antiretroviral medications among HIV+ individuals to reduce transmission. These approaches and broader social, economic, and political intervention strategies can reduce HIV infection risk behaviors by 25%–50% (Rotheram-Borus, Swendeman, & Chovnick, 2009), but limitations in public funding and a problematic policy environment have interfered with their wide-spread implementation.

HIV infection prevention efforts increasingly focus on specific high-risk groups, including young men who have sex with men, and African American men and women. Young men who have sex with men are the only risk group that shows an increase in HIV infection, and African Americans have an estimated HIV incidence rate several times higher than European Americans (Prejean et al., 2011). For young men who have sex with men, Internet-based interventions, integration of biomedical and behavioral approaches, and community and social network interventions have been supported at least in preliminary research (Mustanski et al., 2011). For African American women, several specific approaches have been found effective, including the use of gender- or culture-specific materials, female intervention providers, skills training in condom use and safe sex negotiation, and role-playing to these negotiation skills (Crepaz et al., 2009). Individuals with prior sexually transmitted disease are at higher risk for HIV infection, and targeted interventions for this group delivered through sexually transmitted disease clinics are effective (Scott-Sheldon, Fielder, & Carey, 2010).

Multiple risk factor change. Behavioral risk factors are correlated, and individuals often display more than one unhealthy behavior. For example, smokers often are physically inactive, and people who are sedentary often consume a poor diet. Depression and related emotional difficulties are risk factors for the initial development of chronic diseases such as diabetes and CVD, and they predict poor medical outcomes (e.g., reduced survival) in such patients. These emotional difficulties are also associated with higher rates of behavioral risk factors (T. W. Smith, 2010b). Thus, approaches to multiple risk behavior change are an important challenge in prevention and medical management (Prochaska et al., 2010).

In some cases, multiple risk factors pose only minimal difficulties. For example, treatment of additional behavioral risks such as diet or sun exposure does not appear to limit the effectiveness of smoking cessation (Prochaska et al., 2006). However, other combined risks can be problematic. Smokers often worry that quitting will cause them to gain weight, and weight gain can lead to relapse after initial smoking cessation. In such cases, combining interventions for smoking cessation and weight management can increase abstinence and reduce weight gain.

Depression and related aspects of emotional distress are common challenges in weight loss (Fabricatore & Wadden, 2006). Obesity and depression are consistently correlated, most likely because they influence each other over time (Markowitz, Friedman, & Arent, 2008), although the prospective association of initial depression levels with subsequent weight gain is somewhat stronger than the association of initial weight with later levels of depression. Initial depression is also related to failure to complete weight loss programs, possibly due to poor early weight loss (Fabricatore et al., 2009).

For overweight women with depression, some evidence suggests that combining behavioral weight loss intervention with cognitive–behavioral therapy (CBT) for depression can produce significant weight loss and reduction in levels of depression but not more than the weight loss intervention alone (Linde et al., 2011), perhaps because both interventions included behavioral activation, problem-solving training, social support, and cognitive restructuring. Hence, the weight loss intervention may have included elements of useful treatment for depression.

Smoking and depression also commonly co-occur (Aubin et al., 2012). Smoking cessation programs can be successfully adapted for smokers with depression and other emotional disorders (Hall et al., 2006). Some initial evidence suggests that CBT for depression may be a useful addition to smoking cessation interventions for persons prone to depression (Kapson & Haaga, 2010). Given that exercise can have beneficial effects on depression and may facilitate abstinence after smoking cessation (Prochaska et al., 2008), physical activity interventions may be useful for depressed smokers, although additional research is needed.

Psychological interventions in medical illness and medical care. Clinical health psychology interventions have been developed and evaluated for a wide variety of chronic diseases and other major presenting problems in health care. Patients and their families face a variety of challenges in chronic disease, including physical distress, limitations in physical functioning and major roles, emotional distress, and adherence to complex and sometimes unpleasant medical regimens. Across a wide variety of medical conditions there are common elements in approaches to adjunctive psychosocial care, including cognitive–behavioral interventions for pain and other physical symptoms, stress, emotional adjustment, and sleep difficulties. Rehabilitation for medical problems often involves operant condition programs to increase functioning and exposure-based treatments to address fears of potentially painful activities. Although not yet a common practice, couple and family-based approaches have received preliminary support in some conditions. Finally, exercise and related interventions can improve function activity and emotional adjustment and can even address the underlying disease process for some conditions.

Clinical health psychology interventions for several of the most common and pressing medical conditions (cancer, chronic pain, sleep problems, somatoform disorders) are presented in detail elsewhere in this handbook. In what follows, we review intervention research on other major topics in the field, specifically CVD, diabetes, and HIV/AIDS.

CVD. CVD is the leading cause of death in the United States, as it is in most industrialized nations. Of the three most common forms, hypertension contributes to the other two: CHD and stroke. For all three, a variety of psychosocial interventions are useful adjunctive treatments.

Hypertension. Behavioral interventions are central components in the management of high blood pressure. In mild cases, they are the initial management approach and are also key components of care for more severe hypertension. The most important of these behavioral interventions are increased physical activity, weight loss, and dietary changes. This regimen overlaps with approaches to obesity described previously, as adiposity is a common cause of hypertension. The Dietary Approaches to Stop Hypertension (DASH) and DASH-low sodium diets are effective in preventing and treating hypertension (Appel et al., 2006). Compared to a typical diet in the United States, the DASH diet is considerably lower in saturated fat, red meat, and refined sugars, and it is higher in fruits, vegetables, and low-fat dairy products. A large portion of the diet consists of whole grain, fish, poultry, and nuts. This diet has been found to produce clinically meaningful reductions in blood pressure (i.e., 5–10 mmHg) in high-risk individuals, and it reduces risk of CHD and stroke by 20% (Fung et al., 2008).

These benefits of the DASH diet are greater still when combined with exercise and weight loss interventions (Blumenthal et al., 2010). Importantly, this multicomponent approach to hypertensive treatment improves not only standard clinic-based measurements of blood pressure but also the more informative prognostic indicator of ambulatory blood pressure as well as other measures of vascular, cardiac, and metabolic risk (e.g., arterial stiffness, left ventricular mass, insulin insensitivity, and plasma lipids; cholesterol and triglycerides; Blumenthal et al., 2010). The combination of exercise and weight loss has the additional benefit of reducing depressive symptoms among people with hypertension (P. J. Smith et al., 2007). Blood pressure normally drops during sleep (i.e., nocturnal “dipping”), and smaller nighttime decreases are an independent risk factor for CVD. This risk pattern is more common among African Americans than European Americans. Preliminary evidence suggests that that the DASH diet can improve nocturnal blood pressure dipping among African Americans (Prather et al., 2011).

Chronic stress can contribute to the development of high blood pressure (Sparrenberger et al., 2009), and stress management and relaxation therapies can be useful adjunctive treatments (Dickinson et al., 2008). However, methodological limitations in some of the individual studies on the benefit of these approaches in hypertension care (e.g., small sample sizes, failure to control nonspecific factors) make this conclusion more tentative than in the case of dietary, weight loss, and exercise interventions. As a result, exercise, dietary, and weight loss interventions have stronger support as treatments for hypertension compared to stress management. Medications for hypertension are clearly effective in lowering blood pressure and reducing risk of CHD and stroke, but adherence is often poor (Baroletti & Dell'Orfano, 2010). As a result, improved adherence is also an important goal of adjunctive care for hypertension.

CHD. For decades, the standard medical management for CHD has included behavioral interventions as key components. Prudent diet (i.e., reduced calories and saturated fat), smoking cessation, and regular exercise are standard recommendations, and adherence to these recommendations by CHD patients is associated with a 40%–50% reduction in recurrent coronary events, such as additional myocardial infarctions ("heart attack"), need for angioplasty or coronary bypass surgery, hospitalization for heart disease, or death from heart disease (Chow et al., 2010). Although approximately one third to one half of CHD patients who smoke quit smoking on their own after a cardiac event or CHD diagnosis, smoking cessation interventions increase cessation (Barth, Critchley, & Bengel, 2008). Exercise-based cardiac rehabilitation is a mainstay of the medical management of CHD, and a large body of evidence demonstrates its effectiveness in reducing recurrent cardiac events and death (Rutledge et al., 2013). However, poor adherence often interferes with these otherwise important benefits.

Psychological stress and negative emotion are well-documented risk factors for the initial development of CHD and for the course of established disease (R. B. Williams, 2008). Work stress (Eller et al., 2009) and conflict and disruption in close relationships (DeVogli, Chandola, & Marmot, 2007; T. W. Smith et al., 2012) are among the specific sources of stress that predict CHD. In addition to contributing to the initiation and progression of asymptomatic atherosclerosis, stress can precipitate cardiac events (Bhattacharyya & Steptoe, 2007). A major portion of this evidence concerns anger and hostility, two key unhealthy elements of the broader Type A pattern. More recently, a substantial body of evidence indicates that depression and anxiety are also risk factors for the initial development of CHD and contribute to poor prognosis among CHD patients (Nicholson, Kuper, & Hemingway, 2006). This research serves as the foundation for a variety of studies regarding the effectiveness of stress management and interventions for negative affective symptoms and conditions.

In an early demonstration of the potential value of such approaches, the Recurrent Coronary Prevention Project found that group therapy to reduce Type A behavior among CHD patients not only modified this behavioral endpoint but also produced a nearly 50% reduction in subsequent coronary events (M. Friedman et al., 1986). Meta-analyses of RCTs of stress management and similar interventions for patients with CHD report a significant reduction in recurrent coronary events (Linden, Phillips, & Leclerc, 2007; Rutledge et al., 2013). These interventions were more effective when initiated 2 months or more after the initial coronary event rather than closer in time to hospitalization. Curiously, these benefits were limited to men, with no detectable benefits among women (Linden et al., 2007).

Recent studies have confirmed the effectiveness of stress management interventions (Gulliksson et al., 2011), and a recent well-controlled trial of cognitive–behavioral stress management tailored for women with CHD (Orth-Gomér et al., 2009) reported a significant reduction in mortality over a 7-year follow-up. Given the evidence regarding the role of anger in CHD and the availability of evidence-based treatments for problematic anger (T. W. Smith & Traupman, 2012), it is somewhat surprising that few studies have evaluated such interventions among CHD patients. However, preliminary evidence suggests that anger management interventions may be useful additions to standard medical care for CHD (Davidson et al., 2007). Stress management interventions have also been found to produce improvements in biomarkers of CHD severity, such as lower stress-induced cardiac ischemia and less arterial stiffness (Blumenthal et al., 2005). Such findings suggest possible physiological mechanisms contributing to the positive effects of psychosocial interventions on CHD.

In another important psychosocial approach to managing CHD, Ornish and colleagues (e.g., Ornish et al., 1990, 1998) have examined a comprehensive lifestyle program involving a low-fat diet high in whole grains, fruits, and vegetables; regular exercise; stress management training; and support group meetings. In RCTs, the program improved biologic coronary risk factors, reduced extent of coronary artery disease as measured by angiography, improved other diagnostic indicators of underlying disease severity, and reduced coronary events (Ornish et al., 1990, 1998). Subsequent research has replicated these effects and demonstrated additional beneficial effects on quality of life and health care costs (for a review, see Vizza, 2012).

Mounting extensive of the role of depression in the course of CHD has prompted efforts to examine the effects of depression treatment for CHD patients. A variety of psychological and exercise-based interventions for depression produce at least modest improvements in depressive symptoms (Rutledge et al., 2013). In a landmark multicenter RCT, the Enhancing Recovery in Coronary Heart Disease study (Berkman et al., 2003) selected more than 2,000 CHD patients primarily for elevated levels of depression, but also for social isolation, and tested effects of a CBT intervention on cardiac outcomes. In comparison to a control condition, the intervention produced small improvements in depression and social isolation, but it had no effects on death and recurrent coronary events. Additional analyses suggested at least some significant beneficial effects on these primary outcomes for White men (Schneiderman et al., 2004) and those patients who had received at least some group-based CBT as opposed to only individual sessions (Saab et al., 2009).

Similar CBT has been found to improve emotional adjustment among CHD patients experiencing depression following coronary artery bypass graft surgery (Freedland et al., 2009). Telephone-based collaborative care that includes psychoeducation and supportive counseling was found to be effective in reducing negative mood symptoms, improving quality of life, and increasing levels of physical functioning among patients with depression following coronary artery bypass graft surgery (Rollman et al., 2009). A depression care intervention in which CHD patients self-selected into either pharmacotherapy or problem-solving therapy reduced depression and adverse cardiac events, although the latter outcome should be considered preliminary given the small number of events (Davidson et al., 2010). Studies evaluating pharmacotherapy for depression in CHD patients have found some beneficial effects on depression levels but no evidence of improvements in cardiac outcomes (Kop & Plumhoff, 2012).

Given that depression is quite common in CHD patients and is associated with recurrent cardiac events and mortality in this population, the American Heart Association has endorsed screening and depression management for CHD patients (Lichtman et al., 2008). However, to date there is no evidence that such additions to routine patient care produce improved outcomes (Thombs et al., 2008). Because depression is a direct threat to quality of life and interferes with exercise programs and smoking cessation, depression treatment should be included in the clinical management of CHD, even though the benefits might not be as strong as would be hoped.

Among CHD patients, depressive symptoms and disorders overlap with other negative emotional symptoms and disorders that also predict adverse cardiac outcomes (T. W. Smith, 2010a). Hence, interventions that address common rather than unique features of various negative affective problems might prove useful. Also, difficulties in close relationships (e.g., high conflict, low support) also influence the development and course of CHD (e.g., Rohrbaugh, Shoham, & Coyne, 2006). As a result, CHD patients might benefit from empirically supported treatments for relationship difficulties.

Stroke. Traditionally, rehabilitation psychologists and neuropsychologists have been involved in the rehabilitation and management of stroke patients, rather than clinical health psychologists. However, in addition to cognitive rehabilitation and physical therapy, behavioral interventions described for hypertension and CHD are core elements of the medical management of stroke patients (Caplan, 2010). In addition, depression is common among stroke patients, especially among patients with more severe and disabling strokes (Hackett & Anderson, 2005). Adjunctive psychological therapies are least somewhat effective for preventing depression in stroke patients (Hackett, Anderson, House, & Halteh, 2008). Among stroke patients who have already developed significant levels of depression, pharmacological therapies may be more effective than psychological therapies (Hackett, Anderson, House, & Xia, 2008).

Diabetes. Diabetes is the term for a group of diseases characterized by problematic and sustained high levels of blood glucose. These abnormalities can result from inadequate production of insulin production, impaired functioning of insulin, or both. Previously called insulin-dependent or juvenile-onset diabetes, Type 1 diabetes is an autoimmune disorder that develops when the immune system destroys insulin-producing cells in the pancreas. People with this form of diabetes must have insulin delivered by injection or a pump to survive. Type 1 typically begins in childhood and early adulthood, although it can occur at any age.

Previously called non-insulin-dependent or adult-onset diabetes, Type 2 diabetes represents the majority of cases and is characterized by insulin resistance, as opposed to a primary defect in insulin production. However, as the need for insulin rises over time, the pancreas gradually loses its ability to produce it in sufficient amounts. Type 2 diabetes occurs more frequently among older individuals, physically inactive and overweight persons, those with a family history of diabetes, and women with a history of gestational diabetes. Type 2 diabetes is also more common among African Americans, Hispanic/Latino Americans, American Indians, and some Asian Americans and Native Hawaiians or Other Pacific Islanders, compared to European Americans. The prevalence of diabetes in adults in the United States is rising, having now exceeded 20 million (Cowie et al., 2010). Given the central role of health behavior and other psychosocial factors, diabetes has become a major focus in clinical health psychology and behavioral medicine.

In addition to a complex and demanding medical regimen of blood glucose monitoring and insulin administration, diabetes management involves extensive lifestyle changes, including weight loss/dietary changes and exercise. Some evidence suggests that stress management interventions may also be useful (Surwit et al., 2002). Patients with diabetes must take a very active role in monitoring blood glucose and adjusting self-administered insulin. Hence, adherence to this demanding medical regimen represents an essential psychosocial concern beyond the extensive lifestyle changes involving weight loss, diet, and exercise. The importance of these behavioral aspects of disease management is evident in the findings of large RCTs. Even modest weight loss and exercise changes improve blood glucose levels and reduce the major medical complications otherwise stemming from the disease (Diabetes Prevention Program Research Group, 2002; Schulze & Hu, 2005).

Depression is common among people with diabetes, and a growing literature suggests that emotional distress is not only a consequence of the seriousness of the illness and its demanding management regimen but also predicts the development of Type 2 diabetes (Knol et al., 2006). Furthermore, among patients with diabetes, depression and related psychosocial risk factors predict poor glucose control and poor prognosis (i.e., increased risk of complications, reduced longevity; Chida & Hamer, 2008). Hence, the likely bidirectional association between depression and diabetes is a major concern. Interestingly, emotional distress specifically related to diabetes may be a better predictor of impaired glucose regulation than general depression (L. Fisher et al., 2010). As in other medical conditions, depression is associated with poor adherence to medical regimens among patients with diabetes (Gonzalez et al., 2008).

Several psychosocial interventions are effective in treating depression in patients with diabetes, but parallel improvements in glucose regulation are not typically found (van der Feltz-Cornelis, Nuyen, et al., 2010). Despite a lack of clear effects on metabolic control, collaborative medical care for depression in patients with diabetes is cost effective in reducing depression and overall health care costs (Simon et al., 2007). A recent RCT targeting the combination of Type 2 diabetes and depression evaluated an intervention in which integrated care managers collaborated with physicians to offer education and guideline-based treatment recommendations and monitored adherence to treatment and clinical status (e.g., glucose regulation). Compared to usual care, the intervention resulted in an increased percentage of patients meeting treatment goals for both diabetic control and depression (Bogner et al., 2012).

Given the prevalence of diabetes, group-based interventions are valuable. Such approaches have some efficacy (Deakin et al., 2005), but individual treatment approaches are more effective (Sperl-Hillen et al., 2011). Patient-centered, computer-assisted, self-management interventions can also improve diabetes outcomes (G. C. Williams, Lynch, & Glasgow, 2007). Also, family-based intervention targeting negative and/or inaccurate illness perceptions can improve metabolic control (i.e., better glucose regulation) in patients with poorly controlled Type 2 diabetes (Keogh et al., 2011). Reviews of RCTs of dietary approaches and diet interventions combined with exercise treatment of Type 2 diabetes suggest that regular exercise promotes better glycemic control (Nield et al., 2007).

HIV/AIDS. The development of highly active antiretroviral therapy produced a marked decrease in AIDS-related morbidity and mortality, beginning in 1996. This has produced a major change in medical and adjunctive psychosocial approaches to the disease. Instead of an acute threat to life, HIV has become more of chronic disease. The impact of HIV on psychosocial functioning has become a major focus of current approaches care. However, the medication regimen that made this possible is highly complex and quite demanding, often resulting in major side effects.

Adherence to the current medication regimens has become a difficult, life-long challenge, especially because a high level of adherence is required to successfully control the disease. Life stress, depression, and other psychosocial factors are associated with decreasing adherence to highly active antiretroviral therapy over time (Gonzalez et al., 2011). A multicomponent intervention addressing barriers to adherence, supporting the patients' autonomy in meeting treatment-related challenges, and promoting social support produced important improvements in adherence (Koenig et al., 2008). CBT for depression has been found to be effective in both reducing depression and improving adherence in this population, with sustained effects after treatment (Safren et al., 2009).

In quantitative reviews, psychosocial factors (e.g., stress, depression) predict the course of HIV over time (Chida & Vedhara, 2009). Psychobiologic effects of chronic stress and negative emotion may contribute directly to the medical course of HIV (Cole, 2008). Some evidence suggests that psychosocial interventions such as CBT and relaxation therapies can favorably affect these mechanisms (McCain et al., 2008). However, quantitative reviews indicate that stress management does not have beneficial effects on immune functioning, despite positive effects on various measures of emotional adjustment and quality of life (Scott-Sheldon et al., 2008).

Other interventions. Although a comprehensive review of health disorders is beyond the scope of this chapter, it is important to note that psychosocial interventions are useful for a variety of other medical conditions. For example, educational–behavioral interventions to improve medication adherence (De Geest et al., 2006), psychotherapy for reduction of depressive symptoms (Baines, Joseph, & Jindal, 2004), and mindfulness-based stress reduction (Gross et al., 2010) have been shown to be beneficial in patients following organ transplantation. Behavioral interventions such as CBT and relaxation training have been found to be useful in reducing physical symptoms and related emotional distress for patients with irritable bowel syndrome and other gastrointestinal disorders (Lahmann et al., 2010; Moss-Morris et al., 2010). CBT has similar beneficial effects on symptoms of fatigue and depression among patients with multiple sclerosis (Cosio et al., 2011).

Strengths and Weaknesses in the Knowledge Base

Especially in recent decades, methodologically compelling evidence of valid assessments and efficacious interventions has accumulated in the case of many health-relevant behaviors and medical conditions addressed by clinical health psychologists. In intervention research, this includes evidence from larger and more sophisticated RCTs that are conducted and reported in accordance with current guidelines for medical research (Altman et al., 2001). Objective medical outcomes that were often missing in an earlier generation of research are now routinely included in RCTs, and when combined through systematic reviews and meta-analyses, the results support the value of these interventions and are having a growing impact on evidence-based care.

Despite long-standing evidence of ethnic, cultural, and socioeconomic disparities in health and access to medical care, these issues are only beginning to be addressed adequately in assessment and intervention research. Thus, there are critical gaps in the evidence base. Further, inclusion of a broader array of patient-centered outcomes and aspects of health care utilization in treatment evaluation, and evaluations of the effects of assessment and interventions relative to their costs, will be important in the further development of the evidence base to maximize the contributions of clinical health psychology to health care and health policy decisions.

MAJOR ACTIVITIES

There is considerable breadth in clinical health psychology in terms of the specialty's major activities. Indeed, the extensive range of problems addressed, settings in which services are delivered, modalities of service delivery, and populations served has remained a central feature of the field. Belar et al. (2003) described this breadth as defined by three dimensions—the type of service provided; level of focus on the service (e.g., individual, family, sociocultural context); and the specific health problem addressed, specifically the range of problems described in the World Health Organization's (2007) *International Statistical Classification of Diseases and Related Health Problems, 10th Revision*. Figure 12.1 depicts this structure of clinical health psychology services.

A few specific examples may illustrate the wide range of major activities. In the case of an individual scheduled to undergo coronary artery

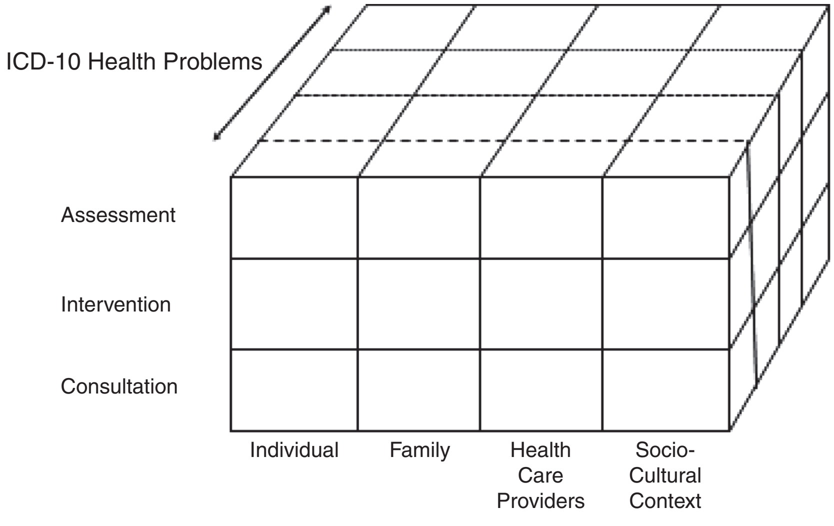

FIGURE 12.1. Clinical health psychology services × Focus × Health problems. ***ICD–10 = International Statistical Classification of Diseases and Related Health Problems—10th Revision*.** **Adapted from "Clinical Health Psychology: A Health Care Specialty in Professional Psychology," by C. D. Belar, 2008, *Professional Psychology: Research and Practice*, *39*, p. 231. Copyright 2008 by the American Psychological Association.**

bypass surgery, a clinical health psychologist might be called to assess for the presence and severity of depression—an emotional problem associated with poor medical outcomes in this population. In another instance, the clinical health psychologist might consult with primary medical care providers on optimal ways to engage recalcitrant smokers in the process of cessation. In a third instance, the focus might be the reduction of work stress and emotional strain among nurses on the staff of a hospital burn unit. The various combinations of specific condition, type of service, and level of focus of that service can occur across the full time course of a medical problem, from primary prevention, secondary prevention, tertiary care, rehabilitation, and palliative or terminal care.

Common types of problems addressed by clinical health psychologists are presented in Table 12.1. Across the range of services and problems addressed described in Figure 12.1 and Table 12.1, clinical health psychologists work with many different types of physicians and health care professionals (e.g., nurses, dentists, physicians assistants, physical therapists). This collaboration occurs in many different types of medical services, including primary care (family practice, pediatrics, internal medicine, obstetrics, and gynecology), cardiology, oncology, rheumatology, orthopedic and neurosurgery, and anesthesiology, among others. These activities occur both in traditional outpatient primary medical care facilities, inpatient units in medical and surgical hospitals, and a wide variety of specialty clinics.

Assessments in clinical health psychology reflect the variety of specific populations, problems, and settings described earlier. However, there are common, overarching themes and goals in this wide variety of specific applications (Belar & Deardorff, 2015), reflecting detailed attention to the levels of the biopsychosocial model as a guide to the practice of clinical health psychology. Beyond the usual foci of clinical psychological assessments, assessments in clinical health psychology include careful and thorough consideration of biological issues involved in the specific medical problem and related aspects of medical and surgical care.

The major intervention activities often take the form of individual and small-group direct care, similar to traditional clinical psychological services but transposed to the unique problems and settings of medical care. The intervention "toolkit" is illustrated in the review of the knowledge base provided previously and includes many approaches common in evidence-based interventions in traditional clinical psychology (e.g., CBT, stress management,

TABLE 12.1

Common Problems Addressed by Clinical Health Psychologists

Problem category	Examples
Psychological factors secondary to disease, injury, or disability	Depression, posttraumatic stress disorder in patients or family members
Somatic presentation of psychological dysfunction	Emergency room admission for chest pain in patient with panic attack
Symptoms with psychophysiological component	Pain, headache
Physical conditions or symptoms responsive to behavioral intervention	Asthma, incontinence
Somatic complications associated with behavioral factors	Condition exacerbation due to poor medical adherence
Psychological presentations of organic disease	Depression in hypothyroidism
Psychological aspects of medical treatment	Stress management preparation for stressful or painful procedures
Behavioral risk reduction	Smoking cessation, exercise, weight loss
Problems of health care providers	Provider–patient communication, burnout, health care team functioning

Note. Adapted from "Clinical Health Psychology: A Health Care Specialty in Professional Psychology," by C. D. Belar, 2008, *Professional Psychology: Research and Practice*, *39*, p. 230. Copyright 2008 by the American Psychological Association.

behavior therapy, motivational interviewing, relapse prevention, couple therapy), although additional education and training are required for their appropriate application in medical contexts.

Consultation-liaison services are another major component of the typical activities of clinical health psychologists, and they can be focused directly on the patient, on the medical staff's management of the patient, or on issues arising for health care providers. Increasingly, clinical health psychologists serve as members of interdisciplinary teams that provide integrated care, as seen in the *patient-centered medical home* and other integrative service models, where consultation and direct services are combined in an ongoing process (Landon et al., 2010; Stange et al., 2010). Thus, the clinical activities of many clinical health psychologists overlap with those described in other chapters in this volume, including pediatric psychology, clinical geropsychology, general hospitals, primary care, physical rehabilitation, and veterans affairs.

Many clinical health psychologists conduct research on one or more of the three general topics in the field described previously: psychobiological effects of stress and related psychosocial factors on the development and course of physical disease, health behavior and prevention, and psychosocial aspects of medical illness and medical care. This is particularly true for clinical health psychologists working in academic medical centers or other research hospitals. In such instances, clinical health psychologists often have a mix of research and clinical service roles (Robiner et al., 2014). Given the interdisciplinary nature of most research in the field and growing attention to psychosocial issues in other aspects of biomedical research, clinical health psychologists often function as the behavioral or psychosocial methodological specialist on research teams that include multiple types of professionals. They also often play a very different, though no less important, role on institutional review boards that evaluate ethical issues in the treatment of human participants in biomedical research. In this role, clinical health psychologists bring a unique and highly valuable perspective to institutional review boards largely composed of physician researchers and other health professionals.

The maturity of clinical health psychology is evident in the emergence of a new focus of related research: translational science (Spring, 2011), as described previously. Even when multiple well-controlled clinical trials have identified useful psychological interventions for the prevention or management of medical illness, health care systems are often slow to adopt these practices. When they are adopted, the implementation, delivery, and maintenance of the new psychosocial approaches are often imperfect, resulting in reduced improvements in care and patient outcomes. Translational research directly examines the influences on this complex process, with the goal of improved care and patient outcomes through better adoption and implementation of evidence-based services.

Finally, many clinical health psychologists are involved in education and training. For some, this involves traditional undergraduate and graduate teaching in university arts and sciences settings (e.g., departments of psychology). For others, it involves more advanced teaching and supervision of trainees in health care settings, not only clinical health psychology trainees but also trainees in other health professions (e.g., medical students, nursing students). Given the growing trend toward the inclusion of traditional psychological assessment and intervention services in medical settings (e.g., primary care) and the associated need for staffing such positions, this education and training role sometimes involves postdoctoral respecialization or continuing education for doctoral-level psychologists seeking to transition from a more traditional mental health service background.

MAJOR ACHIEVEMENTS

Despite its relatively recent appearance among the applied specialties in psychology, clinical health psychology can claim a variety of significant achievements. First and foremost is the substantial and rapidly expanding evidence of useful assessments and interventions reviewed previously in this chapter and elsewhere in this handbook in chapters on cancer, pain, sleep, smoking, and other applications of psychological services to medical problems.

Put simply, clinical health interventions produce healthier and happier humans.

The emergence and now central place of clinical health psychology research within clinical psychology is also evident in the series of special issues in the *Journal of Consulting and Clinical Psychology*, the flagship outlet in the broader field (Blanchard, 1982, 1992; Christensen & Nezu, 2013; T. W. Smith, Kendall, & Keefe, 2002), and in the series of chapters in the benchmark intervention textbook in clinical psychology, Bergin and Garfield's *Handbook of Psychotherapy and Behavior Change* (Blanchard, 1994; Creer et al., 2004; Pomerleau & Rodin, 1986; T. W. Smith & Williams, 2013). Clinical health psychology research has always appeared quite frequently in the major outlets in the broader fields of behavioral medicine and health psychology, and it continues to do so in outlets based in the United States and elsewhere around the world. More important, this research also appears with increasing regularity in the major outlets for medical research, suggesting a growing place in evidence-based medicine.

Another major accomplishment has been the emergence of a consensus view of education and training in clinical health psychology. As described previously, the Arden House Conference on education and training sponsored by the APA Division of Health Psychology in 1982 produced recommendations for education and training to prepare psychologists for careers in research, practice, and policy at the interface of psychology and medicine (Stone, 1983). The conference participants recommended a scientist–practitioner model for trainees seeking to provide health services, in which relevant training in basic psychology, traditional aspects of clinical and applied psychology, and appropriate content and experience in related health sciences and services were essential elements.

Two other key conferences on clinical health psychology represented major achievements in defining the field, its future directions, and the training experiences required to meet these evolving challenges: The Future of Health Psychology Conference in Pittsburgh, Pennsylvania, approximately 25 years after the founding of the Division of Health Psychology (T. W. Smith & Suls, 2004), and a meeting in Tempe, Arizona, in 2007 to develop training guidelines for clinical health psychology (France et al., 2008). The Pittsburgh conference described emerging areas of challenge and opportunity for health psychology. For example, although the evidence base documenting effective interventions in the prevention and management of chronic illness has grown steadily, the standards for evidence in health research continue to rise, creating the continued need for rigorous intervention research as well as efforts to implement the well-supported interventions (Nicassio, Meyerowitz, & Kerns, 2004; T. W. Smith, Orleans, & Jenkins, 2004). Escalating health care costs and the resulting pressures on limiting new and potentially costly elements of care, clinical health psychology increasingly must demonstrate that its services make cost-effective contributions to care, and the education and training of clinical health psychologists must include attention to these issues (Tovian, 2004). Finally, given the changing demographics of industrialized nations and the related health disparities that involve socioeconomic status and ethnicity, there is a pressing need for culturally competence in research, service, and education (Yali & Revenson, 2004).

Specialty training in medical illness and care as well as in the specific issues involved in translating psychological services to the medical context (Belar & Deardorff, 2009; Olbrisch & Sechrest, 1979) were addressed at the Tempe conference on training guidelines in clinical health psychology (France et al., 2008). Noting that clinical health psychology shares important foundational competencies in common with professional-scientific psychology, the conference also described foundational competencies unique to the specialty. These competencies in clinical health psychology were in the areas of assessment, intervention, consultation, research, supervision and training, and management and administration. The Tempe conference framework has resulted in an expanded and updated set of training guidelines in clinical health psychology (Larkin & Klonoff, 2014), which parallel competency and training guidelines in closely related fields such as primary care psychology (McDaniel et al., 2014).

In a related achievement, the Council of Clinical Health Psychology Training Programs grew out of a prior council that included all graduate training programs in health psychology. Annual meetings of the Council of Clinical Health Psychology Training Programs have been instrumental in articulating positions and guidelines regarding training and other professional issues. Furthermore, as noted previously, the development of ABPP certification in health psychology also represents a major development that demonstrates the maturity of the specialization.

One additional major accomplishment may be emerging, related to the changing relationship of clinical health psychology with the older and historically broader field of clinical psychology. Recent developments suggest that clinical health psychology may be positioned to become the broader health services field. The role of psychology in integrated health care (Kelly & Coons, 2012) and the emerging field of primary care psychology (McDaniel & deGruy, 2014) provide examples. They are based on a model of training and service delivery in which psychologists are broadly trained in both traditional clinical psychological services and the delivery of such services in interdisciplinary health care settings. These services include but are not limited to traditional mental health services. Importantly, unlike traditional training and practice, clinical health psychology and primary care psychology emphasize the interface of psychology and medical care (Larkin & Klonoff, 2014; McDaniel et al., 2014). Hence, once seen clearly as a specialization within clinical psychology, clinical health psychology now seems poised on the brink of a possible figure-ground reversal, in which it may come to be a broader and perhaps more common science-based profession in which psychological services are increasingly delivered as an integrated component of routine health services.

Whether this change comes to pass, it is clear that the many accomplishments in clinical health psychology have placed it in a key position in a rapidly evolving health care environment. This is evident in the steady growth in the numbers of psychologists employed in medical schools, academic medical centers, and other health care settings (Robiner et al., 2014).

FUTURE DIRECTIONS

Our historical and content review indicates that clinical health psychology has developed rapidly and made substantial contributions to medical care in its 40-year history. Several factors will shape its continued development and contributions in near future.

Changing Demographics

Paramount among these factors is the increasing ethnic and racial diversity in the United States and other industrialized nations. Currently, there are substantial differences in morbidity and mortality rates across racial and ethnic groups, as well as differences in risk factors and access to medical care. These differences are largely maintained when parallel ethnic and racial differences in socioeconomic status are controlled. In the United States, African Americans are the largest minority group and are at increased risk of CVD, diabetes, and cancer. This group also has elevated rates of obesity, especially among women and girls. Given the rate of growth in this segment of the U.S. population, Hispanics will soon surpass African Americans as the largest minority group. Compared to non-Hispanic European Americans, rates of diabetes are higher among Hispanics.

Although ethnic and racial minorities often have elevated levels of modifiable risk factors, they are also underserved in terms of access to preventive services. Ethnic and racial minorities are also less likely to have a usual source of medical care, are more likely to be uninsured (DeNavas-Walt, Proctor, & Smith, 2013), and are less satisfied with their health care (Saha, Arbelaez, & Cooper, 2003). Each of these factors complicates the delivery of health care generally and the potential delivery of clinical health psychology services as well.

Ethnic and racial minority groups also present unique opportunities for nontraditional health care delivery, such as lay health care workers among Hispanics (Balcázar et al., 2009) and churches in African American communities (Campbell et al., 2007). Initial evidence suggests that tailored or culturally enhanced interventions can increase the effectiveness of health behavior change interventions (Barrera et al., 2013). Given these important racial and ethnic differences in many aspects of health and health care, the growing diversity in the United States poses a major challenge to clinical health psychology.

The population in many industrialized nations is also aging. This suggests that age-related chronic disease will pose an even greater challenge in the future. As a result, health behavior change to prevent and manage chronic disease will increasingly need to incorporate theory and research from adult development (Aldwin, Park, & Spiro, 2007). In the future, prevention of diseases of aging may come to include increased intervention efforts in childhood and adolescence (T. W. Smith et al., 2004).

Global Trends in the Burden of Disease

In the Unites States, the *Healthy People* initiatives by the Department of Health and Human Services are intended to reduce preventable death and promote higher levels of quality of life and functional activity (http://www.healthypeople.gov/2020). These goals are consistent with the focus and activities of clinical health psychology. Hence, national interests are aligned in such a way as to increase the relevance of the field over time, as they are in other industrialized nations.

Less developed countries tend to face different health challenges. Developing nations typically face a greater burden from perinatal conditions and infectious disease compared to the greater morbidity and mortality from CVD and cancer in industrialized nations (Oldenburg, de Courten, & Frean, 2010). However, this is changing rapidly, as the burdens of perinatal and infectious diseases other than HIV/AIDS fall in developing nations, and rates of morbidity and mortality from CVD, tobacco-related diseases, and obesity rise (Mathers & Loncar, 2006). Hence, across the globe the need for evidence-based prevention and management of chronic noncommunicable disease will continue to grow.

Evolving Models of Health Services

In most emerging health care models, clinical health psychology services are a component of integrated care. In such approaches, clinical health psychologists work in direct collaboration within the same setting with other health care providers rather than providing separate services in distinct settings. This trend is evident in the concept of the patient-centered medical home (Bodenheimer & Pham, 2010) and in the emerging field of primary care psychology (Frank et al., 2004). Thus, clinical health psychology may be on the cusp of becoming a more frequent contributor element of multifaceted, comprehensive health care. In this emerging model, the traditional distinction between mental health services and clinical health psychology will become increasingly blurred.

The need for preventive and management interventions for chronic illness and other conditions is likely to exceed the resources available, even with an expanded role for clinical health psychologists. Hence, alternative delivery modalities will be an increasingly important component of health services, such as interactive computer and telephone delivery (Bennett & Glasgow, 2009; Glasgow et al., 2001). Telephone systems can address some problems with health care access but still require the availability of health care providers. Computer-based interventions have the potential to dramatically increase access to health behavior change and chronic illness management interventions. Such approaches could become a common first step in stepped care, with the direct services of clinical health psychologists reserved for patients who need additional assistance.

These trends suggest something of a divergence in the future of clinical health psychology. On the one hand, clinical health psychologists may play a greater role in direct health care delivery, through greater integration of their assessment, intervention, and consultation activities in both primary care and tertiary medical care settings related to specific problems or populations (e.g., oncology, pain medicine, sleep disorders, diabetes, cardiology, organ transplantation, bariatric surgery). On the other hand, clinical health psychologists may become increasingly involved in the design, dissemination, and implementation of different modes of service delivery that through new technologies can reach far greater numbers of individuals than traditional services for individuals and small groups.

Developments in Clinical Medicine and Biomedical Research

Developments in basic biomedical science and medical care will create new opportunities and challenges for clinical health psychologists (Saab et al., 2004). For example, organ transplantation has become commonplace, with more than 20,000 transplants occurring each year in the United States alone. Transplantation often has highly significant positive effects on morbidity, mortality, and quality of life. The growth in transplant surgeries has created an increased need for related psychological assessments and adjunctive interventions, as behavioral and psychosocial issues both influence and are influenced by various aspects of this complex medical/surgical procedure (Gibson et al., 2015). Similarly, with the rising prevalence of obesity and the limited success of behavioral and pharmacological interventions for more severe and medically dangerous levels of obesity, bariatric surgery has grown rapidly. A growing body of research indicates that the various forms of bariatric surgery for severe obesity produce important effects on key sources of morbidity and premature mortality. Psychological assessments and adjunctive interventions are also needed here to address the several psychosocial influences on long-term success versus failure of this increasingly common class of procedures (Olbrisch, Bean, & Stewart, 2015).

Advances in cancer treatment have led to many more people living after successful treatment for many years. However, some patients experience a variety of psychological, social, and even cognitive difficulties long after treatment, creating the need for research and evidence-based clinical services for the growing population of long-term cancer survivors (Stanton, Rowland, & Ganz, 2015). Implantable cardioverter defibrillators represent a potentially life-saving technology for many patients otherwise susceptible to serious cardiac arrhythmias. These devices result in reduced mortality relative to the most effective and common medical alternatives (i.e., pharmacological treatments of arrhythmias), but the rather painful and stressful experience of device discharge (i.e., shock) can produce significant and sometimes prolonged emotional distress. Fortunately, adjunctive psychological interventions (i.e., CBT for anxiety) can produce important reductions in distress and improvements in quality of life (Sears et al., 2011).

There are few better examples of how developments in basic biomedical science and clinical medicine will drive clinical health psychology than molecular genetics (McCaffery, 2010). From the continuing identification of specific genes for major sources of morbidity and mortality to the promise of personalized medicine, these developments will shape research on each of the three main topics in health psychology. For example, the efficacy of some behavioral risk reduction efforts may be moderated by specific genetic factors. Hence, the biomedical foundations in the education and training of clinical health psychologists will increasingly include attention to genetics, as will the clinical training in which the effects of genetic testing and their use in guiding assessment and intervention become an increasingly common topic (Lerman et al., 2002). In general, advances in medical care often create new challenges for clinical health psychologists, including the evaluation of psychosocial effects of new treatments and the development of adjunctive assessments and interventions.

Expanding Challenges in Evidence-Based Practice and Policy

Finally, there is a growing need for research beyond traditional RCTs of intervention efficacy, with greater attention to effectiveness in actual health care settings and to diverse populations and health disparities. More work will be done in the dissemination, implementation, and maintenance of evidence-based approaches. Just as evolving service roles for clinical health psychologists require increased collaboration with other health care professionals, this future research agenda will also require new partnerships with colleagues in medicine, health services research, health care policy, and health economics. Thus, the rewards for the accomplishments accrued during the first 40 years of clinical health psychology include a new and perhaps even greater set of challenges in both science and practice.

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CHAPTER 13

CLINICAL NEUROPSYCHOLOGY

Robert J. Spencer and Kenneth M. Adams

In this chapter, we review the specialty of clinical neuropsychology, discussing its historical roots, primary activities, and knowledge base. We end the chapter with what might become of the field in the years to come.

DEFINITION

Clinical neuropsychologists are principally clinical psychologists who study the relationship between brain and behavior. Psychology as it encompasses the study of cognition, behavior, and emotion is concerned with the assessment and treatment of people for whom these processes have gone awry. Neuropsychology is the study of the interface and interplay between brain and behavior, and clinical neuropsychology deals principally with the clinical care of patients when there are suspected disruptions in normal brain-behavior functioning. The specialty is necessarily informed by several distinct knowledge bases, and clinical neuropsychologists usually adopt a broad biopsychosocial perspective.

The practice of clinical neuropsychology involves the blending of biological and social sciences. At its core, however, neuropsychologists are rooted in clinical psychology. Clinical neuropsychologists are licensed psychologists who usually have graduate degrees in clinical psychology (Sweet et al., 2011). According to survey research, numerous contemporary neuropsychologists have completed a postdoctoral fellowship and are board certified, or they are intending to become board certified, in clinical neuropsychology (Sweet et al., 2011). The board certification process includes requirements for advanced education in the foundations of clinical neuropsychology, documentation of supervised postdoctoral training, and demonstration of knowledge and skill that is both objective and peer-adjudicated (Hannay et al., 1998).

After a long history of advances and convergences in the neurosciences, recent decades have seen a rapidly shaping identity of clinical neuropsychology. We briefly review the historical roots of contemporary neuropsychology before discussing present neuropsychology.

CONDENSED HISTORY

Clinical neuropsychology has evolved historically with continuous contributions from distinct fields of study into the workings of the mind. Experimental psychology, cognitive neurology, and psychometrics continue to provide the most unique influences. These fields have distinct discovery trajectories of their own but have nonetheless informed and fostered the development of clinical neuropsychology.

Contemporary clinical neuropsychology, as a science of evaluating the effects of brain disease, has several lines of historical lineage. Neurology, psychometric theory, psychiatry, and clinical psychology form the foundation for what would become clinical neuropsychology. After millennia of recorded debate as to the function of the brain and the implications of brain disease, there has been accelerated interest in the clinical implications of brain-behavior pathology.

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Prehistoric skulls from throughout Europe indicated that people have long attributed significance to the brain, although there is no clear evidence that there was an appreciation for its function. The Edwin Smith Papyrus, which dates to approximately the 17th century BCE, describes medical cases, many of which concern the brain and spine. Alcmaeon of Crofton in the 5th century BCE proposed that the brain was responsible for sensation and thought and that sensations had a specific localization within the brain. However, as recently as the early centuries of the first millennium, CE, there has been debate on whether the brain was the seat of mental functions. The brain hypothesis, backed by Hippocrates, had as its main rival the heart, which was favored by Aristotle as the likely candidate for housing the mind. The matter was more or less settled by the assertion of Galen (130–200) that mental functions were housed in the ventricles of the brain. This hypothesis remained for centuries thereafter.

Persisting largely based on the authority of Galen's surviving writings, the ventricles dominated theories of the mind and brain in Europe from the 4th through the 14th centuries. Such notions did not face serious challenge until the 16th century when anatomists, such as Andreas Vesalius (1514–1564), undertook a detailed study of human neuroanatomy. As interest in anatomy grew, the focus of attention in mental functions shifted from the ventricles to the solid matter of the brain, although there was still little systematic investigation into the precise role of the material brain in the seemingly immaterial workings of thoughts and emotions.

In the late 18th century and into the early 19th century, Franz Joseph Gall (1758–1828), a German anatomist, and his collaborator, Johann Spurzheim (1776–1832), developed a model for localized brain functions based on the contours of the skull. Their theoretical account was developed through observations of the correlations between notable personal characteristics and skull shape. Phrenologists operated under several assumptions, including that the personal attributes were localized within the brain, these attributes corresponded to the size of the relevant brain area, and the adjacent area of the skull reflected the size of the underlying brain area. Viewed from a modern perspective, such notions seem unjustified and speculative. Except in cases of deformity, the shape of the brain has little to no correlation with the size and shape of the skull. The sizes of brain areas reveal little about the specifics of function, and there is no empirical justification for the list of attributes from which Gall and Spurzheim were working.

Although phrenology never gained widespread acceptance among those in the scientific community, it did enjoy periods of popularity for decades. Perhaps the most useful contribution of the phrenologists was the emphasis on the relationship between areas of the brain and specific mental attributes. Although most findings have been discarded, the phrenological emphasis on localized functions shaped much of the discourse in the following centuries.

Much of the criticism over phrenology was rooted in religious grounds. A physical account of mental functions appeared to obviate the need for, or at least the influence of, an immaterial soul. A more serious, scientific argument against localized brain function was mounted by Marie-Jean-Pierre Flourens (1794–1867) of France, who demonstrated that the amount of brain damage was a more significant predictor of behavioral impairment than where the damage occurred. His studies involved creating lesions in birds and observing the consequences. Notwithstanding the fact that damage to lower brain regions could be lethal, the extent of damage to the cortex predicted the degree of behavioral disturbance. The localizationists' arguments appeared to be in peril, were it not for a series of cases of language disturbances following brain injury.

In the 19th century, several cases appeared to implicate the crucial role of the frontal lobes, particularly of the left hemisphere, in producing language disturbances. Indeed, Gall had speculated that the left hemisphere was responsible for speech, and French physician Jean-Baptiste Bouillaud (1796–1881) commented on cases of language disturbances due to frontal lesions. By the midcentury, Marc Dax (1771–1837) and Paul Broca (1824–1880) presented clinical cases in which language disturbances were the result of damage to the left hemisphere of the brain. Broca commented that speech production was affected by an area of the frontal lobes that now bear his name. Soon thereafter, Wernicke described a case of impaired speech comprehension following damage to the left superior temporal gyrus.

While the dysfunctions of discrete brain areas were being linked to problems with speech and language, evidence was accumulating on the functions of other areas of the brain. Through research involving electrical stimulation and ablation, German neurologist Gustav Fritsch (1838–1927) and anatomist Eduard Hitzig (1839–1907) localized the motor cortex of dogs in 1870. By the end of the century, the scientific community was coming to appreciate the role of the frontal lobes in complex mental behavior.

As elucidated in David Ferrier's 1876 book, *The Functions of the Brain*, the frontal lobes were a prime candidate for the seat of higher mental functions because, anatomically, they differed greatly in humans, compared to other animals, and because they were the last to develop in the life span. Indeed, there were many important discoveries in the 19th century implicating the prefrontal cortices. In 1848, American railroad foreman Phineas Gage sustained an injury in which a metal rod was blasted through his head, entering the left side of his face, passing behind his left eye, and exiting through the top of his head. The rod was found 80 ft away, covered in blood and brain material. Although Gage survived his injury (and subsequent treatment) and had little apparent intellectual deterioration, his personality changed. Whereas he was once described as being diligent and hardworking, his new persona was one of capriciousness and immaturity. The Gage incident, similar to subsequent findings of personality changes following frontal tumors, and animal ablation research led to appreciating the role in the frontal lobes in higher mental functioning.

Anatomists began to look deeper into the differences apparent between areas of the brain at the level of the cell. Several authors attempted to provide a map of the cerebral cortex, according to cellular make-up. The most enduring of these attempts was that of Brodmann, who in 1909, through examining the cytoarcitecture of the six cortical layers, devised a map of 52 discrete brain areas. This map is still commonly referenced today.

The contributions of the localizationists continue to be impactful to this day, both in scientific thinking and in popular (mis)conceptions for how the brain works. A more contemporary view for how the brain works was first espoused by British neurologist John Hughlings Jackson (1835–1911) in the late 19th century, and this view was expanded on by subsequent 20th century figures such as Russian neuropsychologists Lev Vygotsky (1896–1934) and Alexander Luria (1902–1977). Their view was that the brain is composed not of discrete areas that perform discrete functions but as hierarchically organized systems.

During the time of advancements in neurology in the late 19th and early 20th centuries, academic psychologists and those involved in education were developing methods of quantifying intelligence and academic performance. These early researchers sought to translate abstract concepts, such as intelligence, into numbers. The 19th century saw great advancements in the science of sensation and perception, and by the later part of the century Francis Galton (1822–1911) set out to quantify the individual variations of different abilities. In France, Alfred Binet and Theodore Simon developed a measure of intelligence that would be adapted for use in the United States and undergo considerable refinement. Other psychologists examined mental properties such as memory, reaction time, and perception, but there was little apparent thought to link such observations to the systematic study of brain disease. Instead, those in neurological research described patients or groups of related patients, but they did not make quantified observations under controlled conditions, as did the experimental psychologists.

In what can rightly be considered a shameful chapter in the history of mental testing, some researchers attempted to use the developing mental sciences as devices to justify notions of European superiority and/or to root out "feeble mindedness" from the gene pool.

Throughout the early 20th century, assessment psychologists, who once worked primarily in academic settings, emerged as new and important players on the clinical field. Two world wars created the need for the screening and classification of military personnel along ability dimensions, as well as the need to care for individuals with brain injuries and other mental health problems coincident with, or caused by, military service. Psychologists involved in assessment in the post-World War II era typically engaged in projective assessment and intelligence testing, but modern neuropsychological testing was not at all commonplace.

Perhaps the most influential early effort to quantify the behavioral and cognitive abnormalities of individuals with neurological disturbances was by American Ward Halstead and colleagues (Halstead, 1947). Halstead explored many potential tests for differentiating between those with and without brain damage, retaining the most sensitive indicators. Although it might seem like a perfectly natural next step to progress from the observational methods of the cognitive neurologists to the quantified methods of the academic psychologists, these methods were not met with widespread acceptance (Reitan, 1994). Through time, however, this general family of quantitative assessment methods gained acceptance and was thought to be valuable for determining the presence, extent, and even location of brain pathology.

Soon after World War II, other neuropsychological laboratories were developing. In Iowa, during the 1950s, Arthur Benton established a laboratory situated in the Department of Neurology at the University of Iowa. Their approach, known as the Iowa–Benton approach, combines the use of a core battery of tests with the patient-centered flexible use of other researched assessment measures (Tranel, 2009). In Boston, another major approach to neuropsychological assessment was taking shape. The Boston Veterans Affairs (VA) medical center attracted scientists that merged research and clinical work, producing innovations in aphasia research and altering the way neuropsychologists go about performing assessments. The Boston approach was that a test score alone may obscure the cognitive processes that are involved in the performance of any given cognitive task (Bauer & Bowers, 2013). Complex behaviors can be broken into qualitative component processes, and performance on tasks related to those components can give the clinician insight into the patient's true deficits. The knowledge of exactly where the patient succeeds and fails in the process can give clues to the specific adaptations that might prove beneficial (Bauer & Bowers, 2013).

In Great Britain, Elizabeth Warrington and her students and colleagues embraced an information processing approach, believing that mental processes could be best understood by carefully examining component mental processes. Her research furthered the notion of the double dissociation, which had been a mainstay of experimental neuroscience. In short, a double dissociation occurs when Lesion A causes Deficit a, but not Deficit b, and Lesion B causes Deficit b, but not Deficit a. Her logical and systematic approach has been called the analytical approach to assessment (McKenna & Warrington, 2009).

These advances to neuropsychological assessment took place at a time when the dominance of behaviorism within academic psychology was fading, and cognition was the study of scientific investigation. Ulrich Neisser's 1967 text *Cognitive Psychology* declared psychology as the study of mental processes (Milberg & Hebben, 2013). During this time, the International Neuropsychological Society was founded, and Ralph Reitan and others were assembling normative data for Halstead's tests. The stage was set for the merger of behavioral neurology, which dealt with the implications of brain disease, with cognitive psychology, which was concerned with information processing in the healthy brain, into contemporary clinical neuropsychology (Feinberg & Farah, 2003).

By the early 1980s, the proliferation of clinical neuropsychology text books reflected this integration. The American Psychological Association (APA) recognized clinical neuropsychology as a separate specialty in 1980, and by the late 1990s, clinical psychologists emerged from the so-called Houston Conference with a set of training guidelines to guide the education of neuropsychologists as a distinct, board-certified specialty.

KNOWLEDGE BASE

To examine the expansion of neuropsychology topics in the literature, we conducted a literature search for the term "neuropsychology" using a combined search of Medline and PsycINFO. Although the term neuropsychology has not become common until recent decades, and some entries were likely duplicates, the results offer a rough glimpse into the expanding literature. In the year the International Neuropsychological Society was founded (1967), there were 49 matches to the term neuropsychology. In 1975, the year that the National Academy of Neuropsychology was founded, there were 356 matches. By 2003, 10 years before this writing, there were 4,764 matches. In 2013, the last year there were complete data as of this writing, 10,101 references were found. In practical terms, if someone were to read all of the published literature in which neuropsychology was a keyword, and reading was confined to 16 waking hours per day for 1 year, he or she would be reading at the pace of one article every 34 minutes and 42 seconds. In other words, some degree of specialization or selectivity is required, as it is no longer feasible to keep up completely with the pace of new literature spanning the specialty.

As with other sciences, academic journals are the primary method for disseminating research to colleagues. Neuropsychologists responding to surveys have identified dozens of journals that they frequently use. There are 28 journals that at least 10% of neuropsychologists either subscribe to or consult on a regular basis (Sweet et al., 2006). The most commonly used neuropsychology journals are *Archives of Clinical Neuropsychology*, *The Clinical Neuropsychologist*, and the *Journal of the International Neuropsychological Society* (Sweet et al., 2011). Likely owing to the fact that the essential knowledge base of neuropsychology cuts across disciplines, neuropsychologists often consult medical journals in other fields, such as neurology. *Neurology* and *Archives of Neurology* appear to be the most frequently referenced nonneuropsychology journals consulted by neuropsychologists. These sources are referenced and have contributions from colleagues from around the world.

Clinical Conditions

Neuropsychologists treat individuals with a variety of clinical conditions. According to recent research, the most common referring diagnoses for neuropsychologists are dementias, traumatic brain injuries (TBIs), and cerebrovascular accidents (CVAs; Sweet et al., 2006, 2011). We briefly review the knowledge base for each of these conditions as well as some of the disorders that neuropsychologists are encountering with increasing frequency.

TBI. TBIs have become increasing visible in recent years, owing to the high-profile nature of sport-related head injuries, blast-induced head injuries sustained in the course of warfighting, and the increase of litigation following motor vehicle accidents in states where so-called no-fault insurance exists. Neuropsychologists possess the knowledge-base, research tools, and clinical acumen to lead the larger medical community in the assessment and treatment of these individuals.

TBIs affect millions of people worldwide each year. A *TBI* is defined as an alteration of consciousness that results from a blow to the head. TBIs range in severity from mild to severe, with most injuries being classified as mild. Table 13.1 displays the most commonly used classification system, which is based on length of loss of consciousness, length of posttraumatic amnesia for events following the injury, and the maximum Glasgow Coma Scale score, which is a rating based on eye-opening, verbal responses, and motor behavior. The prognosis for mild TBI (mTBI) is quite favorable, particularly if the individual sustained only one head injury (Schretlen & Shapiro, 2003). Meta-analyses have indicated that mTBI is less debilitating than other conditions (Iverson et al., 2010). Unfortunately, the public perception of the effects of mTBI is much direr than reality (Block & West, 2013). Moderate and severe TBI have less favorable prognoses in many cases, but even among these individuals improvement is the norm.

TABLE 13.1

Criteria for Traumatic Brain Injury Severity

TBI severity	Criteria
Mild	<30 min loss of consciousness (LOC), <24 hr posttraumatic amnesia (PTA), Glasgow Coma Scale (GCS) of 13–15
Moderate	30 min–24 hr LOC, 1–7 days PTA, GCS of 9–12
Severe	>24 hr LOC, >7 days PTA, GCS of <9

The mechanisms of neurologic damage from TBI differ depending on the severity of the injury. Moderate and severe injuries typically produce stretching or shearing of axons as the brain moves about the skull. The orbitofrontal lobes are particularly vulnerable to damage due to their proximity to bony protrusions from the skull. Additional damage often results from swelling within the brain. Following mTBI, injury is better conceptualized as a transient neurochemical event that causes metabolic disturbances. The effects of mTBI are quite disruptive acutely but dissipate over days to weeks.

The psychological effects of a TBI diagnosis can be powerful. As with other diagnoses, the mTBI diagnosis is not only a physical condition but also a psychological and sociocultural phenomenon. Individuals who have sustained a head trauma are at increased risk of interpreting each headache, memory slip, and lapse in concentration as being the result of the head injury (Mittenberg et al., 1992). Complicating matters, people tend to recall their past functioning in overly favorable terms, making their postinjury functioning seem worse by comparison (Gunstad & Suhr, 2001, 2002).

Internationally, there is significant variability in the symptoms expected from mTBI. For instance, unlike in the United States and Canada, where there is the expectation of chronic symptoms from a head injury, in Lithuania, Germany, and Greece, there is little expectation of chronic problems from a TBI (Ferrari & Lang, 2005). Consequently, mild head injuries almost always resolve completely in those cultures (Schrader et al., 1996).

TBI treatment is determined by the individual needs of the patient and the results of a comprehensive neuropsychological assessment. Proper examination of individuals who have sustained TBI involves taking a careful history, selecting appropriate cognitive tests, and evaluating emotional functioning. When taking a psychosocial history, it is important to note prehead injury psychopathology and overall adjustment, as preinjury functioning is perhaps the most influential factor for predicting postinjury functioning (Bieliauskas, Drag, & Spencer, 2015).

Quite often, there are no objective records to verify the extent of a head injury. When investigating the details of the injury, it is necessary to identify as many of the patient's first-hand memories as possible. This can be accomplished by asking what patients remember prior to the impact and then asking what they remember next in a step-by-step fashion. After gathering a first-hand timeline, examinees can then provide information they have learned second-hand. Quite often, people will have difficulty distinguishing between a period of unconsciousness and a period of posttraumatic amnesia.

Neuropsychological testing for head injuries should include tests of attention, memory, processing speed, executive functions, and performance validity, as these domains are often adversely affected by all head injuries acutely and by moderate and severe TBIs chronically. It is helpful to compare the patient's level of cognitive functioning with his or her preinjury level of functioning. When feasible to obtain, school records or previous standardized testing can be useful to this end. When such records are not available, premorbid functioning can be estimated on the basis of demographic factors, word reading, or some combination of these methods. Caution should be used, however, as such methods provide only rough estimates of preinjury cognitive functioning.

The cognitive complaints of individuals who have sustained head injuries tend to correlate weakly with neuropsychological performance on objective tests, but they correlate highly with tests of emotional functioning (Spencer et al., 2010). It is necessary to assess emotional aspects of functioning because mood and behavioral disturbances can be mistaken for TBI in some instances. When determining whether perceived cognitive problems are consistent with a TBI, it is helpful to bear in mind that cognitive symptoms from head injury tend to improve over time, not wax and wane, and periods of amnesia tend to occur in close proximity to the insult, not long stretches of time remote to the injury. Wildly fluctuating course and extended gaps in autobiographical memory tend to be associated with emotional and psychological factors more than with neurologic causes. Assessment of emotional functioning typically involves a combination of psychometric testing and clinical interview. It is necessary to take time to explore the patient's goals for treatment and to answer questions he or she might have.

Head injury treatment flows from the neuropsychological assessment. Bearing in mind the patient's goals, strengths, assets, resources, and deficits, neuropsychologists formulate a treatment plan, usually in conjunction with an interdisciplinary team of treatment providers.

Treatment of individuals with TBI usually depends on the severity of the TBI, and the focus of treatment is usually on presenting symptoms. *Rest*, defined as a state of relatively reduced sensory stimulation and cognitive demand, is important in the acute recovery phase regardless of TBI severity. After the acute period, it is advisable to gradually increase stimulation during recovery.

In the postacute and chronic phase of TBI, environments offering graded sensory stimulation and opportunities for cognitive activity may facilitate recovery, a finding that is consistent in human and animal literature (Frasca et al., 2013; Johnson et al., 2013). Enriching environments may reduce anxiety and may facilitate neuroplasticity (Hoffman & Harrison, 2009). A systematic review of the human and animal literature concluded that individuals recovering derived benefit from mental, cognitive, and social stimulation (Frasca et al., 2013). This approach is inconsistent with the avoidance-coping often adopted by many individuals following a head injury, who may believe that prolonged "rest" is called for.

Regardless of the severity of the head injury, the most prudent treatment is one of prevention of additional injuries. Each additional TBI increases the risk of additional cognitive and emotional symptoms. Although single mild head injuries have good prognoses, additional injuries prolong the time necessary to return to optimal functioning. It is therefore necessary to encourage safe practices. Athletes should be prevented from returning to play until well after they are asymptomatic. Bicyclists and motorcyclists should be encouraged to wear helmets. When possible, members of the armed services should be allowed ample recovery time.

A large proportion of individuals who present to emergency departments following TBI are intoxicated with alcohol. In fact, alcohol misuse is a significant risk factor for many head injury causes, including falls, fights, and accidents. In many instances, alcohol treatment is a form of head injury prevention.

For mild injuries, it is often helpful to provide accurate information on the acute symptoms of mTBI and the expectation of a favorable prognosis (Mittenberg et al., 2001). In many instances, simply providing information is insufficient to effect meaningful change. Most studies in this area have found that, compared to treatment as usual, providing patients with information does not lead to significant reduction in symptoms (Matuseviciene et al., 2013). On the other hand, cognitive behavioral therapy that targets misconceptions and erroneous cognitions is often found to be effective (e.g., Al Sayegh, Sandford, & Carson, 2010; Silverberg, Hanks, & Tompkins, 2013).

In contrast to these encouraging results with acute injuries, less is known regarding whether similar interventions would be useful for more remote head injuries. The literature on the effectiveness of information-based interventions thus far is mixed, with some studies finding benefits (Bell et al., 2008) and others not (Elgmark Andersson et al., 2007).

Other treatments include computer-based cognitive training through puzzles and games. Such systems are commercially available and have received preliminary empirical support for improving some aspects of cognitive functioning (Kueider et al., 2012), but additional research is needed to examine whether the cognitive benefits generalize to novel tests or, ideally, to functioning beyond the testing environment (Jak, Seelye, & Jurick, 2013).

Often, the treatment of a TBI involves treating the symptoms the patient presents, regardless of the organicity of its origin. Depression and disrupted sleep often result from head injuries, and it is important to address these issues in treatment. Treating poor sleep and nightmares typically results in improved cognitive functioning and fewer postconcussive symptoms (Ruff et al., 2012).

For moderate and severe TBIs, treatment is typically multidisciplinary, focusing on the individual cognitive, emotional, and social needs of patients. Recovery is usually rapid initially, with modest improvements occurring after 1 year postinjury. Rehabilitation usually has the greatest impact if instituted within the first year (Rohling et al., 2009), but there is research support for engaging in rehabilitation beyond 1 year (Tsaousides & Gordon, 2009). Rehabilitation efforts often include practicing cognitive skills, devising strategies for daily living, and attending to emotional needs. Many of the social and behavioral deficits following TBI can be modified by cognitive behavior therapy, applied behavioral analysis, and holistic treatment approaches (Cattelani, Zettin, & Zoccolotti, 2010). Cognitive rehabilitation tends to have modest effects, and much of rehabilitation concerns making adaptations and functional adjustments.

Dementia. Age is the single biggest risk factor for dementia (Bondi, Salmon, & Kaszniak, 2009). As the world population ages, the incidence of dementia will likely rise. The most common forms of dementia include Alzheimer's dementia (AD), vascular dementia (VaD), and dementia with Lewy bodies (DLB), although many other forms exist in smaller numbers. Table 13.2 presents the common forms of dementia and their associated pathophysiological and assessment findings. The pattern of cognitive deficits and clinical signs tends to correspond with distinct types of dementia.

Although within-culture variation should be appreciated, dementia is viewed differently across cultures. Dementia can be a source of shame and viewed as a moral failing in some groups, whereas other groups may be more accepting of the cognitive slips and behavioral changes that accompany dementia. It is important to recognize the strong cultural influences on symptom presentation, help seeking, and caregiving.

Because of their biopsychosocial orientation, neuropsychologists are ideally suited to participate in the diagnosis and treatment of individuals with dementia, which are necessarily conditions that affect the individual, his or her environment, and his or her family. In large-scale correlational research, the onset of cognitive decline is associated with the age of retirement, with cultures with later ages of retirement also observing a later onset of cognitive decline (Adam et al., 2013).

Dementia is defined as the presence of memory impairment, plus one other cognitive deficit (apraxia, agnosia, aphasia, or executive functioning), that is a decline from some previous level of ability and that causes significant impairment in everyday functioning. In the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (American Psychiatric Association, 2013), the term *dementia* has been replaced with the more general *neurocognitive disorders*. There are dozens of types of dementia, with the most common being AD, VaD, and DLB. These conditions are briefly reviewed next.

AD. As the most common form of dementia, AD involves loss of synapses and neurons within the cerebral cortex, producing atrophy of the brain.

TABLE 13.2

Clinical Characteristics of Common Forms of Dementia

Type of dementia	Pathophysiology	Common test findings
Alzheimer's dementia	Amyloid plaques and neurofibrillary tangles, eventually leading to cortical atrophy	Impaired learning and recognition memory are early deficits
Vascular dementia	Cerebral infarcts	Slow processing speed, executive dysfunction, possible focal deficits
Dementia with Lewy bodies	Abnormal aggregates of protein inside neurons	Fluctuating attention, executive dysfunction, visuospatial impairment, vivid visual hallucinations early in the course of the disease
Parkinson's disease dementia	Abnormal aggregates of protein inside neurons	Slow processing speed
Parkinson's-plus dementias	Abnormal aggregates of protein inside neurons	Dementia, autonomic dysfunction, psychological disturbance

At the cellular level, the pathological changes include amyloid plaques (beta-amyloid deposits) and neurofibrillary tangles (accumulations of hyperphosphorylated protein tau within the neuron). These neuropathological changes interfere with the functioning with neurons and are usually most apparent in the medial temporal lobe early in the disease, before spreading to other areas of the brain. Besides advanced age, other risk factors include genetic inheritance, low level of educational and/or occupational attainment, and diets high in saturated fats and simple carbohydrates. Interestingly, one of the main genetic risk factors among individuals of European heritage confers no substantial risk among individuals from Nigeria, a fact that underscores the complex nature of the underlying biology of the disease (Gureje et al., 2005).

The common early cognitive and emotional signs of AD correspond closely with the usual areas of initial pathology—namely, limbic areas of the temporal lobes. On testing, the most apparent cognitive difficulties among individuals with AD are usually with learning and recall. They often have preserved language skills, visuospatial perception, and intact immediate attention, giving the casual observer the impression that there are no apparent cognitive deficits. Oftentimes affected individuals will not appreciate the extent of their cognitive impairments. On formal testing, however, individuals with early AD display a relatively flat learning curve when trying to learn material over successive presentations, show poor memory when asked to recall the information several minutes later, and they benefit from cueing much less than their unaffected peers. These individuals often have poor recognition for what they were asked to learn, and their attempts at recall often include items that were never among the to-be-remembered stimuli. This poor memory, in the presence of grossly adequate attention and remote autobiographical memory, supports the notion that individuals with AD have difficulty consolidating new information into stable memories.

As AD progresses and other cortical areas of the brain show signs of neuropathological changes, other cognitive deficits become apparent. Speech becomes vague, planning and abstract reasoning tasks become difficult, and personality changes emerge.

VaD. VaD affects the brain's vast network of blood vessels that transport vital nutrients. VaD is the result of disruptions of this network either by the accumulation of infarcts, infarcts at cognitively sensitive areas, or by small vessel disease deep within the brain (Bondi et al., 2009). Unlike with AD, the cognitive decline observed among those with VaD tends to progress in a step-wise fashion.

The most apparent initial cognitive deficits among those with VaD are executive functions. These skills include the ability to abstract, strategize, self-monitor, and adjust adaptive behavior. Individuals with VaD often have difficulties with tests involving planning, organizing, and adapting, particularly when such tasks are novel, complex, or timed. These cognitive deficits correspond with the damage to frontal-subcortical circuits usually observed among individuals with VaD. In contrast to the pattern of memory deficits shown in AD, individuals with VaD do not tend to have severe memory deficits early in the disease progression, and their recognition memory tends to be relatively preserved. That is, these individuals can typically attend relevantly to stimuli and consolidate new memories, but they are often inefficient in spontaneously recalling the newly learned information in the absence of cues.

DLB. Behaviorally and neuropathologically, DLB resembles AD and Parkinson's disease dementia (PDD). As in AD, DLB involves a loss of cholinergic neurons, and as with PDD, there is a loss of dopaminergic neurons, which impairs motor functioning. Clinically, DLB is often distinguished from PDD by the chronology of motoric and cognitive symptom onset. When the dementia follows the onset of motoric symptoms by more than a year, the PDD diagnosis is made. Otherwise, the DLB diagnosis is appropriate.

DLB often resembles AD in many respects but can be distinguished by the pattern of neuropsychological deficits and by the rapid onset of symptoms. Individuals with DLB will typically display problems with executive functioning early in the course of the disease. Other prominent features include a fluctuating course and the presence of detailed, vivid visual hallucinations.

Neuropsychologically, individuals with DLB display deficits on visuospatial and constructional tasks with much greater frequency than do individuals with AD. Individuals with DLB also tend to have more pronounced psychomotor slowing than individuals with AD. Behaviorally, individuals with DLB display many of the behavioral features associated with Parkinson's disease. These behaviors include problems with sleep, rigid posture, and masked facial expression.

Other dementias. Dozens of other dementia diagnoses can be found, although in lesser numbers than the three described earlier. For example, when cortical degeneration occurs more posteriorly, affecting parietal regions, a posterior-cortical atrophy diagnosis is made. When atrophy is anterior, a frontotemporal dementia is made. Furthermore, many researchers categorize the frontotemporal dementia further, denoting temporal and frontal variants. Huntington's disease, which has a primarily subcortical pathology, is typified by personality changes and striking deficits in executive functions early in the disease and by distinctive motoric abnormalities later in the disease. Parkinson's disease, which also affects subcortical structures, is associated with a wide spectrum of disorders, extending to Parkinson's disease with dementia. Other Parkinson's-related diseases, often referred to collectively as Parkinson's plus conditions, include multiple system atrophy, progressive supranuclear palsy, and corticobasal degeneration, to name a few.

Routine cognitive screening has consistently been found to accurately distinguish between individuals with dementia and healthy individuals (Salmon et al., 2002). In some ways, this accomplishment has little bearing on neuropsychological practice because individuals who are completely healthy rarely present for clinical assessments, and individuals who are clearly impaired are not as much in need of a diagnosis as they are of a thorough cognitive assessment. The presence of some sort of a problem is often known before a referral is made, and the meaningful task of the neuropsychologist is to detect early manifestations of disease and/or to provide a differential diagnosis.

Comprehensive neuropsychological testing, covering many types of clinical abilities, is often needed to detect subtle cognitive problems and/or determine which diagnosis is most accurate. Neuropsychological evaluations are helpful for providing differential diagnoses and for assessing cognitive strengths and weaknesses. Differential diagnosis is important because each type of diagnosis tends to have its own general pattern of symptom progression and functional decline. This prognostic information is useful for treatment planning and for anticipating services and accommodations in the future. Within each diagnosis, however, there is a large degree of heterogeneity from patient to patient, and relying solely on a diagnosis to infer cognitive abilities is not advised.

Perhaps the most useful initial step toward treatment is to provide the patient and his or her family with feedback on the neuropsychological evaluation. Feedback should be structured, individually tailored, and conducted in a manner so that the patient and his or her family can feel free to ask questions.

The treatment of dementias has typically focused on providing accommodations that allow individuals to retain independence as long as is feasible. It is with this goal of independence and dignity that the results of the neuropsychological evaluation can be translated into meaningful interventions. For instance, poor recall memory in the presence of intact recognition—a pattern often displayed by individuals with VaD, Huntington disease, and Parkinson's dementia—can be compensated for by reminders and memory books. Individuals displaying disorganization on testing and poor medication compliance might benefit from prepacked medication pillboxes and/or reminder alarms. Individual recommendations are customized and necessarily embedded within the patient's culture.

In recent years, a great deal of optimism has grown out of the possibility that cognitive deterioration of dementias might be treated with medications. Cholinesterase inhibitors, such as donepezil, increase the available acetylcholine to postsynaptic cells. Memantine modulates glutamate, thus attempting to prevent cell death. The results of clinical trials indicate that such medications, alone or in combination, slow the progression of AD, but the effect of the treatment is small to moderate (e.g., Rountree et al., 2013), and benefits may be temporary. Similar results have been found with PDD (Rolinski et al., 2012). In contrast to the modest but encouraging results found with these agents, research has found no beneficial effects of humanized antibodies (Salloway et al., 2014) or herbal remedies (Snitz et al., 2009).

In popular lore, mental activity—such as through mentally engaging games or puzzles—is thought to slow the progression of age-related cognitive decline. In fact, epidemiological studies have found that physical and mental activities are associated with a delayed onset of age-related cognitive dysfunction (Adam et al., 2013). The temptation is to therefore assume that cognitive activity, such as through puzzles and games, can prevent, delay, or reverse dementia. However, little research has examined this issue with experimental rigor. In longitudinal clinical trials, computer-based training of cognitive abilities has a small but positive long-term effect on cognitive ability and daily functioning of healthy older adult volunteers (Rebok et al., 2014).

After an individual has entered the phase of a dementia, treatment becomes difficult. Medications provide modest benefits, and rehabilitation efforts are chiefly directed at providing feasible accommodations. The prevention literature, however, has raised some interesting possibilities for reducing the risk of dementia through behavioral changes. For example, studies examining caloric restriction; a Mediterranean diet (consisting of fish, unsaturated fatty acids, and a variety of flora); or the disproportionate consumption of antioxidants, fruits, and vegetables have found a reduced risk of dementia (Smith & Blumenthal, 2010). Interestingly, dietary supplements have much less of a beneficial effect as when the nutrients are within food. Similarly, physical activity and exercise have been found to slow the progression of dementia and, in some cases, even reverse cognitive decline (Zschucke, Gaudlitz, & Ströhle, 2013).

Although alcohol consumption in large amounts can have deleterious cognitive consequences, low to moderate drinking can have neuroprotective effects (Kim et al., 2012). This beneficial effect is especially true for wine and is likely to be most apparent for those who do not have the APOE e4 allele (Panza et al., 2012).

In conclusion, a low-calorie Mediterranean diet, light consumption of alcohol, physical exercise, and mental activity can help prevent the onset of many dementias. Some forms of mental activity may also help delay the onset of dementia. After dementias begin, medications have modest efficacy to slow the progression of symptoms. The bulk of the treatments for dementias involve tailoring accommodations to the individual needs of the patient.

Mood Disorders and Psychopathology

Mood disorders and other manifestations of psychopathology frequently come to the attention of neuropsychologists. Psychopathology frequently co-occurs with neurological impairment. Individuals often experience depression following TBI, have behavioral disturbances in the context of dementia, and display problems in emotion regulation following stroke (Langenecker, Lee, & Bieliauskas, 2009).

The clinical neuropsychologist's assessment and treatment of mood disorders, personality disorders, and other forms of psychopathology are quite similar to that of other clinical psychologists. It is often the case, especially in small clinics, that the neuropsychologist is the only psychologist and, therefore, necessarily functions as a generalist. Even the more specialized neuropsychologists who focus mainly on assessment-related activities pay close attention to matters of personality and psychopathology. Not only are such disorders necessary to consider when providing a differential diagnosis, understanding the psychological make-up of patients is an essential part of a neuropsychological evaluation. Psychopathology is more thoroughly addressed in other chapters of this handbook, and so in the following review we highlight some aspects of mood disorders as they relate to clinical neuropsychology.

Neuropsychologists, in addition to using content obvious checklists, tend to use psychometrically rigorous personality inventories during outpatient assessments (Rabin, Barr, & Burton, 2005). Comprehensive personality inventories, such as the Minnesota Multiphasic Inventory—2 Restructured Form (Ben-Porath & Tellegen, 2011) and the Personality Assessment Inventory (Morey, 2007), allow clinicians to examine multiple aspects of psychopathology, personality, and response biases. These inventories, which are discussed at length elsewhere in this handbook, provide insights into personality that are often not apparent on clinical interview. Perhaps the most advantageous aspect of using psychometrically valid interments is that the user can compare scores with a vast reservoir of research data on culturally and medically diverse populations.

The growing consensus is that mood disorders have a deleterious effect on multiple aspects of cognitive functioning, most notably attention, learning, memory, and emotion recognition (Langenecker et al., 2009). Incomplete recovery is especially problematic among individuals with an onset of depression late in life. Among these individuals, depression is usually accompanied by neurologic changes, and cognitive symptoms often do not improve when depression is treated (Lamberty & Bieliauskas, 1993).

Stroke

Strokes, or CVAs, result from disruptions in the blood supply to the brain. CVAs are consistently among the leading causes of death worldwide and can be debilitating to survivors and their families. There are two main types of CVAs: ischemic and hemorrhagic. In ischemic CVA, the most common type of CVA, blood supply is disrupted, causing brain tissue supplied by that blood vessel to become deprived of oxygen and nutrients, and eventually to die. Hemorrhagic strokes involve bleeding from a rupture in a blood vessel.

Universal risk factors for CVA include age, personal history of CVA, family history of CVA, and lifestyle factors. In the United States, men have CVAs at a slightly greater rate than do women, have a higher survival rate, but do not tend to recover to the same degree (Bondi et al., 2009). Neuropsychologists are often closely involved in the acute care of stroke survivors, postacute rehabilitation, and in longer term follow-up care.

The deficits following CVAs are often apparent. CVAs that occur in areas of the brain that do not produce readily apparent cognitive or motoric deficits are often termed “silent strokes.” It is not uncommon for radiologists examining the brain images of patients, or even presumed neurologically healthy individuals, to comment on the presence of previous infarcts. When CVAs accumulate in quantity, are of large size, or are located in cognitively crucial areas of the brain, deficits can be apparent.

Because many CVAs involve the destruction of circumscribed areas of the brain, affected individuals often display classical neuropsychological deficits. Among the most common deficits are aphasias, apraxia, neglect, and agnosias. *Aphasias* refer to a disruption of the ability to produce and comprehend language that is not the result of deficits to external injuries. Expressive aphasia is associated with disrupted speech despite adequate comprehension, whereas the reverse is true for receptive aphasias. The impaired ability to execute learned movements, despite the gross motoric capabilities to engage in such behaviors, is termed *apraxia*. *Agnosias* refer to the absence of knowledge and constitute a broad category of deficits.

Although these deficits are often described as discrete entities, they usually co-occur and undergo rapid changes during recovery, particularly in the weeks and months following the CVA.

It is often the case that neuropsychologists begin with a standard battery of screening tests that are sensitive to a wide range of cognitive abilities and then hone in on abilities that are in need of further investigation. The assessment often gives treatment professionals information as to which abilities are spared and which need to be compensated for.

Although recovery from CVA tends to be most rapid in the first year, there is ample justification for rehabilitation after this window (Poulin et al., 2012). Rehabilitation is either geared toward improving damaged cognitive abilities in a direct fashion or toward using aids to supplement compromised abilities. Among those who have sustained CVA, there is evidence of improved cognitive abilities after training that stresses attention, concentration, and metacognitive strategies, as well as using external devices such as notebooks, pagers, and organizers (Poulin et al., 2012).

Following CVA, it is important to take a preventative focus. History of CVA is one of the primary risk factors for sustaining a subsequent CVA. For this reason, interdisciplinary efforts are often needed to improve physical function, promote healthy dietary habits, and (in many cases) help patients appreciate the need for medications and medication adherence. It is often necessary to use cognitive, behavioral, or motivational techniques to ensure medication adherence. In many instances, compliance is aided by implementing concrete strategies for remembering to take dosages, using external organizers such as pillboxes, or employing electronic reminders.

Developmental Conditions Persisting Into Adulthood

In many instances, developmental conditions most often associated with children and adolescence persist into adulthood. Oftentimes these conditions go unnoticed and first come to the attention of neuropsychologists. Learning disorders and attention-deficit disorders often come to the attention of neuropsychologists after years of efforts to compensate by patients.

When these disorders are first broached in adulthood, the task of differential diagnosis is often considerable. Current symptomatology is confounded by aging, compensation efforts, and psychiatric comorbidities. Assessments of past symptoms are difficult given recall biases, typical lack of reliable informants, and the usual shortage of objective school records. In some ways, assessment of these conditions in adulthood is akin to a detective opening a cold case file.

MAJOR ACTIVITIES

Clinical neuropsychologists are often called on for their generalist skill set, such as in psychodiagnostic assessment or psychotherapy, or for the research skills common among clinical psychologists. Most often, the clinical work of neuropsychologists concerns the structured assessment and rehabilitation of individuals with suspected neurologic disease.

The practice of clinical neuropsychology has been the subject of development over the past few decades. Neuropsychologists engage in research, teaching, and clinical work (Sweet et al., 2011, 2012). By far, however, the majority of their activities relate to the assessment and care of patients.

The specialized assessment methods that neuropsychologists use for observing and quantifying behavior are unique among clinicians, and therefore neuropsychologists make useful contributions in varied clinical settings. Neuropsychologists typically work in institutional settings, private practice, or both. Common institutional settings include hospital settings with academic affiliations, general hospitals, rehabilitation centers, freestanding clinics, and VA medical centers. Neuropsychologists practicing within institutions are usually housed within departments of psychology, psychiatry, physical medicine and rehabilitation, neurology, or (in some cases) within sovereign neuropsychology departments. Among those individuals in private practice, nearly two in three are the practice's sole proprietor.

Perhaps the most salient activity of neuropsychologists is the neuropsychological evaluation. These assessments are typically tailored to the specific request made by the referring party. Commonly, referring clinicians will ask questions such as, "This patient has noticed an approximately 2-year decline in memory. His wife expressed concerns for dementia. Will you please evaluate for dementia?" Among those working with adults, the most common referral sources are from neurology, primary care, psychiatry, physiatry, and rehabilitation specialists (Sweet et al., 2011). Referring physicians most often refer patients for a diagnostic opinion (Temple, Carvalho, & Tremont, 2006), but other common reasons for referrals include obtaining a description of baseline cognitive functioning, the determination of competency/capacity, and providing data that will inform forensic matters. More than 90% of physicians in psychiatry, neurology, neurosurgery, and geriatrics have made at least one referral for neuropsychological evaluation, and more than 70% of primary care physicians made such a referral; furthermore, nearly 90% of respondents stated that referral questions were addressed to their satisfaction, and more than 90% appreciate feedback on behavioral recommendations offered by neuropsychologists (Temple et al., 2006).

Whereas neuropsychological evaluations were once limited to the more circumscribed issue of determining whether a patient's problem was due to compromised brain integrity versus personality and/or psychiatric factors, contemporary evaluations are more concerned with rendering a detailed cognitive and/or functional description (Vakil, 2012). That is, how does impairment affect a person's life? In the following sections, we provide an overview of some of the most common employment settings for clinical neuropsychologists.

Rehabilitation Settings

Describing the nature and extent of cognitive impairments serves a useful function, both academically and clinically. Increasingly, however, there is a need for cognitive rehabilitation. Often, neuropsychologists provide recommendations in reports or give feedback sessions, during which the reports are translated into a therapeutic intervention. Often neuropsychologists go further, engaging patients directly in treatment. Rehabilitation efforts in clinical neuropsychology typically involves a combination of efforts aimed to (a) directly improve the impaired cognitive functions, (b) develop compensatory strategies, and/or (c) ameliorate the co-occurring conditions that are affecting cognitive functioning.

Compared to cognitive assessment, cognitive rehabilitation has received relatively less research attention, with most studies consisting of small samples, missing or inadequate control groups, and poor accounting for practice effects. Ideally, compared to similarly impaired patients who receive an alternative mode of care, rehabilitation methods should produce measurable benefits to individuals receiving the intervention. The emerging picture is that cognitive rehabilitation appears to have validity with many populations, although the degree of benefit anticipated varies across populations and types of treatment. In general, cognitive rehabilitation had a modest benefit, after accounting for the effects of control interventions (Rohling et al., 2009). It appears that attention training has attention-specific effects, but visuospatial training appears to have generalized cognitive effects. There is empirical support for providing attention training after TBI and for providing language and visuospatial training for aphasia and neglect following stroke. Overall, the treatment effects were larger for individuals who suffered strokes, as opposed to TBI, and if the neurologic insult occurred within 1 year of the intervention. Other reviews have found (a) promising effects for behavioral and social rehabilitation following TBI (Cattelani et al., 2010) and (b) a dearth of quality studies pertaining to cognitive training with people with dementia (Bahar-Fuchs, Clare, & Woods, 2013).

VA Medical Centers

VA hospitals have played a formative role in the history of neuropsychology (see Chapter 23, this volume). War wounds have contributed insights to the workings of the brain for centuries. The VA has a history of care for patients with war injuries—including brain injuries—extending back to the American Civil War. In the 20th century, wars have taken place as the field of clinical neuropsychology has honed increasingly specific investigative methods and more refined models for cognitive functioning and recovery.

With the recent conflicts in the Middle East, many returning service members experience maladjustment when attempting to resume their predeployment activities. The injuries sustained during deployment are often of a complex nature, involving multiple systems of the body. For instance, a service member who comes into close contact with an explosive device will likely sustain bodily damage. The saliency of visible physical injuries often obscures less readily apparent conditions such as posttraumatic stress disorder, TBI, and chronic pain. In recognition of such complexity, the term *polytrauma* was coined, and polytrauma clinics were established within VA medical facilities to assess and treat these multisystemic injuries. Neuropsychologists are usually employed in such clinics to quantify the severity of cognitive impairments, to provide patients with appropriate expectations regarding prognosis and recovery, and to offer psychotherapy when indicated (Spencer & Adams, 2012).

Forensic Settings

Many neuropsychologists conduct assessments in medicolegal settings where the evaluation is not used for clinical purposes but rather to assess individuals seeking financial compensation. Other neuropsychological assessments in the criminal forensic realm are intended to establish capacity or inform legal decisions regarding criminal responsibility. Forensic work constitutes a substantial amount of work with individuals (Vakil, 2012). Typically, one or more individuals will claim for cognitive or emotional damage from the actions or failure of actions of another party. At other times, individuals seek damages from insurance companies. Neuropsychologists are useful in the evaluation of claimed cognitive sequelae. Their knowledge of brain-behavior pathology, clinical training, and objective assessment methods can help quantify the severity of injuries and, in many cases, detect when the claimed injuries are exaggerated or feigned. The forensic context underscores the need for considering the influence of context during an evaluation (see Chapter 14, this volume).

Research Settings

The research activities of neuropsychologists and other neurosciences are often similar and complementary. Whereas neuropsychologists concentrate their efforts on the individual and his or her environment, neuroscientists' research interests vary widely, from those who examine ethological aspects of behavior to those whose sole focus is on properties of anatomical details of individual neurons or glial cells. Clinical neuropsychologists often benefit from, and collaborate in, research in various fields, including the full range of studies under the vast umbrella of neuroscience. Neuropsychological research also has branched out to combine efforts with social psychology, personality psychology, measurement theory, epidemiology, ethology, evolutionary psychology, and many others. The studies in neuropsychological journals tend to be concerned chiefly with the structured measurement of human behavior for research or clinical purposes.

One of the most prominent factors that distinguish the specialty of neuropsychology from related disciplines is the ease with which assessment data can be used for research. The psychometric data gathered over the course of an assessment are objective, quantified, and tailor-made to address research questions. In fact, the pool of research available to the practicing neuropsychologist is expanding at an accelerating rate.

Neuropsychologists are involved in research on efficacy of treatment, detecting types of brain disease, promoting recovery, evaluating practice procedures, and integrating with related disciplines. Neuropsychological test procedures are standardized, and scores are compared to deep reservoirs of normative data and studies on clinical populations. In recent years, the treatment of neuropsychological data has become increasingly complex, embracing an ever wider array of mathematical concepts.

KEY ACHIEVEMENTS

Clinical neuropsychology has evolved into a distinctive field, an APA division (Society for Clinical Neuropsychology), and a board-certified specialty with a blend of rigor and application. Clinical neuropsychology has fostered collaboration between psychologists and medical professionals, creating unique career opportunities. The interdisciplinary and multidisciplinary structures for shared science have resulted in scientific organizations such as the International Neuropsychological Society.

As clinical neuropsychology has matured in terms of clinical acceptance, scientific impact, and development of training programs, the outlines of a specialty have become clear. One of the signal achievements of clinical neuropsychology was becoming the first clinical specialty outside of the core historic areas of clinical, counseling, and school psychology to receive recognition by the APA.

Another achievement was the Houston Conference, in which a consensus set of guidelines for the education and training in clinical neuropsychology was crafted by a diverse group of American and Canadian neuropsychologists (Hannay et al., 1998). These guidelines have formed a basis on which programs of education at the doctoral, internship, and postdoctoral levels have been accredited by the APA Commission on Accreditation.

Another important achievement of clinical neuropsychology has been the promotion of the study of behavioral correlates as well as in vivo behavioral phenomena that can be observed with various neuroimaging techniques. Some initial case investigations with new computed axial tomography in the 1970s provided a direct look at the structures of the brain never before possible (cf. Banna et al., 1978). The pioneering contributions of clinical neuropsychologists in the systematic comparison of neuroimaging results with behavioral features (e.g., Bigler, 1984) were followed over the next 30 years by a rich literature comparing individual protocols of neuropsychological test results with an increasingly powerful realization of the potential of structural imaging along with its limitations. The more recent advent of functional neuroimaging has stimulated a parallel stream of investigations (see Volume 2, Chapter 23, this handbook).

A fourth achievement of clinical neuropsychology is its ability to accurately assess specific abilities or competences to perform certain life activities (e.g., driving a vehicle) in the context of the whole person. Neuropsychological protocols exist to address fitness for duty, eligibility for certain occupations, and also situations in which accommodations might be needed for those with disabilities or challenges.

A fifth achievement of clinical neuropsychology can be seen in the widespread, effective utilization of multivariate measurement and multivariate statistical methodologies in routine clinical practice. Few other areas of applied clinical psychology, save perhaps personality measurement, have drawn so productively on techniques such as factor analysis, cluster analysis, regression, linear discriminant function, and structural equation models. Whereas experimental neuropsychology still retains a strong affinity for univariate comparisons and analysis of variance to test circumscribed questions, clinical neuropsychology can be seen to more often use multivariate methods as particularly suited to the multiple parametric needs involved in practical brain-behavior measurement in the individual subject or patient.

Finally, a most important nexus between clinical neuropsychology and rehabilitation psychology has grown in the last quarter century. It has produced important advances both in rehabilitation assessment and in treatment that is neuropsychologically informed (see Chapter 29, this volume). The pace and productivity in clinical neuropsychology within a broader rehabilitation psychology context have been almost protean, as knowledge about injury and recovery in major conditions such as TBI and stroke has changed the way care is provided for these patients.

Other, more molar contributions have been made by clinical neuropsychology to a number of endeavors, such as in the resolution of forensic disputes. By any standard, clinical neuropsychology has added to the evidence-based practice, knowledge base, and educational development of clinical psychology in important ways.

FUTURE DIRECTIONS

Clinical neuropsychology is likely to evolve as a specialized but separate enterprise in clinical psychology. Clinical neuropsychology has already evolved away from a core identity as a diagnostic discipline to patient care in multiple areas, such as oncology and endocrinology. This trend will surely continue as so many diseases and organ systems can create downstream brain-behavior impact.

It is also likely that neuropsychological assessment will take increasing advantage of technologies to include not just computers but automated and robotic devices to assist test administration and data acquisition. This is likely to occur as devices come into affordable economies of scale for traditional as well as innovative neuropsychological tests. Having said that, there will remain a substantial element of neuropsychological assessment that will require human interaction and monitoring to appraise performance and encourage best effort.

We also foresee an increasing demand for teleneuropsychology in line with a large number of developments in telehealth. Although some individual sites and demonstration projects have been launched with some success, there is no consensus on best practices for delivering neuropsychological assessment via telehealth.

A great deal of effort has gone into the development of functional imaging techniques, but neuroimaging techniques have two serious challenges to overcome in terms of pervasive false positive bias and a lack of direct—rather than inferred—connection to the main parameters of brain functioning. Concepts as basic as the blood-oxygen-level contrast are aspirational tenets rather than settled science. Secondary elaborations of contrast such as diffusion magnetic resonance imaging only take the unproven connections to another level of abstraction. Promise could come from the establishment of functional imaging methods that have direct relevance to behavior.

Clinical neuropsychology will encounter future challenges both within the specialty and in the broader interface with allied disciplines. Many professions will argue for expertise, the capacity to deliver services, and the ability to create change for patients suffering from brain-behavior problems. All of these professions work "in close quarters," and techniques used by one professional group can raise concerns by others who believe the borders of their specialty have been breached by those without sufficient training to provide services in "their" realm. This type of jostling for the brain has currency across all the health professions, including within medicine. Clinical neuropsychologists will need to dispel interprofessional conflicts that could become unproductive at best and destructive at worst.

Roles for clinical neuropsychologists will also continue to develop outside clinical consultation and assessment. Increasingly, clinical neuropsychologists are recruited into roles to develop economic models and to manage such services for insurance carriers, health systems, and policy makers. Some clinical neuropsychologists have become connected with, or employed by, enterprises that are in the business of developing tests and test technology. Roles for neuropsychologists in military, occupational, and environmental settings will grow. Finally, there will be the occasional clinical neuropsychologist who pursues an alternative or traditional career in another profession, just as there are those with previous professions who are attracted to clinical neuropsychology. In either direction, the synergy may be something special.

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CHAPTER 14

FORENSIC PSYCHOLOGY

Ronald Roesch and Patricia A. Zapf

Forensic psychology is the application of psychological research and practice to both the criminal and civil justice systems. It is a specialty of psychology with endless fascination for both the public and the professional. In this chapter, we consider the knowledge base, providing an overview of practice guidelines, expert witness rules and practice, and legal decisions that affect the practice of clinical forensic psychology. We then turn to a review of major activities and roles of forensic psychologists and the application to forensic assessment and treatment in both the criminal and civil justice systems. We conclude with key achievements of forensic psychology as a specialty and its future directions.

DEFINITIONS

Bartol and Bartol (2014) defined *forensic psychology* broadly to include

> both (1) the *research endeavor* that examines aspects of human behavior directly related to the legal process (e.g., eyewitness memory and testimony, jury decision making, and criminal behavior) and (2) the professional practice of psychology within or in consultation with a legal system that encompasses both criminal and civil law and the numerous areas where they intersect. (p. 4)

This definition encompasses both clinical and nonclinical aspects of forensic psychology. On the nonclinical side, researchers might focus on such issues as eyewitness behavior, false confessions, and jury decision making. Psychologists have also prepared *amicus curiae* briefs that have been submitted in U.S. Supreme Court cases in which psychological research and theory may be relevant. For example, briefs summarizing the developmental psychology research on adolescent maturity, impulsivity, and cognitive capacities were submitted to cases before the Supreme Court involving the constitutionality of death sentences (*Roper v. Simmons*, 2005) and life without parole (LWOP) sentences for 16- and 17-year-old offenders (*Graham v. Florida*, 2010). In *Roper v. Simmons* (2005), the Supreme Court held that the death sentence was unconstitutional, and in *Graham v. Florida* (2010), it held that these young offenders could not be given an automatic LWOP sentence. In both cases, the Supreme Court cited the psychological research summarized in the briefs as support for the decisions. As this handbook centers on clinical psychology, the remainder of this chapter focuses on the clinical specialty of forensic psychology.

The "Specialty Guidelines for Forensic Psychologists" were developed to

> improve the quality of forensic psychological services; enhance the practice and facilitate the systematic development of forensic psychology; encourage a high level of quality in professional practice; and encourage forensic practitioners to acknowledge and respect the rights of those they serve. (American Psychological Association [APA], 2013b, p. 7)

http://dx.doi.org/10.1037/14772-014
APA Handbook of Clinical Psychology: Vol. 1. Roots and Branches, J. C. Norcross, G. R. VandenBos, and D. K. Freedheim (Editors-in-Chief)

These guidelines note that

> forensic psychology refers to professional practice by any psychologist working within any subdiscipline of psychology (e.g., clinical, developmental, social, cognitive) when applying the scientific, technical, or specialized knowledge of psychology to the law to assist in addressing legal, contractual, and administrative matters. (APA, 2013b, p. 7)

CONDENSED HISTORY

The roots of forensic psychology date back to the early 1900s when Hugo Munsterberg (1908), often referred to as the father of forensic psychology, published a book titled *On the Witness Stand*, which argued that the legal system should make greater use of psychological research on such topics as eyewitness testimony and false confessions. The response of the legal community was highly critical, as many argued that the claims of what psychology had to offer the legal system were exaggerated and not sufficiently reliable to be useful in making legal decisions (Wigmore, 1909). Despite this criticism, Wigmore (1940) later wrote about the potential for psychology to assist the courts on a range of legal issues.

However, it was not until 1968 that the modern field of forensic psychology began to take shape, when a group of psychologists formed the American Psychology–Law Society (AP-LS), which would later also become a division of the APA (Grisso, 1991). AP-LS now has about 3,000 members, publishes a journal (*Law and Human Behavior*) and a book series, and was involved in the creation of the "Specialty Guidelines for Forensic Psychology" (APA, 2013b).

The rise of forensic psychology was further stimulated by the establishment of psychology and law graduate programs, with the University of Nebraska leading the way with the first such program in 1973. Since 1973, graduate programs at both the Master of Arts and Doctor of Philosophy/Doctor of Psychology levels have been established in many universities, and those interested in forensic psychology can obtain specialty training in both clinical and nonclinical areas (Bersoff et al., 1997; Krauss & Sales, 2014). As of 2014, the AP-LS website lists 26 master's programs and nearly 50 doctoral-level programs. There are also eight programs offering joint-degree programs, with students obtaining both a Doctor of Philosophy and a law degree. Forensic internships and postdoctoral programs have also become available.

Forensic psychology was recognized by the APA as a specialty area in 2001. Forensic psychologists can also become board certified through the American Board of Professional Psychology. Although this chapter focuses primarily on the development of forensic psychology in North America, other countries have experienced similar increases in the extent to which psychologists participate in the legal system. Growth in forensic psychology is evident in Australia, New Zealand, the United Kingdom, South Africa, China, Korea, Japan, and most of Western Europe. Various international professional organizations have developed around the world and increasingly work together to promote the professional practice of forensic psychology.

KNOWLEDGE BASE

The knowledge base for forensic psychology can be conceptualized as encompassing three primary domains—scientific (research), legal (law), and practical (practice)—with varying degrees of intersection among these domains. The scientific knowledge base consists of the ever-expanding body of research on issues relevant to the intersection of psychology and the law, published in academic periodicals and journals, books, and other professional outlets. Given the breadth of topics relevant to forensic psychology, or even *clinical* forensic psychology, the scientific knowledge base is vast and encompasses information published in both primary and secondary sources.

In 1980, only a few scientific journals were devoted to forensic psychology. Since then, numerous specialty journals devoted to issues relevant to forensic psychology have been published. At present there are no fewer than seven journals published in the United States devoted specifically to forensic psychology: *American Journal of Forensic Psychology*; *Behavioral Sciences and the Law*; *Criminal Justice and Behavior*; *Journal of Forensic Psychology Practice*; *Journal of Threat Assessment and Management*; *Law and Human Behavior*; and *Psychology, Public Policy, and Law*. Although these journals are based in the United States, they all publish articles written by authors from many countries, reflecting the international nature of research and practice in forensic psychology. Indeed, there are many journals that publish forensic psychology based in other countries (e.g., *Legal and Criminological Psychology*, *European Journal of Psychology Applied to Legal Context*, and *Criminal Behaviour and Mental Health*) or that address an international audience (e.g., *International Journal of Forensic Mental Health*). In addition there are several journals that address issues relevant to forensic psychology. These include the *American Journal of Forensic Psychiatry*, *International Journal of Law and Psychiatry*, *Journal of the American Academy of Psychiatry and Law*, *Journal of Forensic Sciences*, and the *Journal of Psychiatry and Law*.

Numerous resources exist that provide an overview of the field of forensic psychology and a summary of the available research in various areas. Several handbooks consisting of a compilation of chapters, each dedicated to an area of practice or study within forensic psychology, have been published over the last few decades. The *Handbook of Forensic Psychology*, now in its fourth edition (Weiner & Otto, 2014), provides information on the context of forensic psychology and the application of forensic psychology to criminal, civil, and special proceedings, as well as practical information, such as report writing, testifying, and providing treatment to offenders. The *APA Handbook of Forensic Psychology* presents 35 chapters in two volumes, each addressing a relevant area of research and practice in forensic psychology (Cutler & Zapf, 2015). *Forensic Assessments in Criminal and Civil Law: A Handbook for Lawyers* has chapters written by forensic psychologists to provide legal professionals with a resource for recommended practice in all major areas of forensic assessment (Roesch & Zapf, 2013).

The legal knowledge base for forensic psychology comprises the body of statutes, codes, rules, and regulations as well as legal decisions, commentary, review articles, and case law relevant to forensic psychology. Although each area of practice within forensic psychology has its own base of legal knowledge, there also exists a more general, foundational basis of legal knowledge that applies regardless of specific area. For example, the court's decision in *Daubert v. Merrell Dow Pharmaceuticals* (1993) determined the standard for admitting expert testimony in federal court. This legal decision has broad application beyond forensic psychology, with implications for expert evidence of all types, but makes up part of the legal knowledge base for all relevant areas of practice within forensic psychology.

Perhaps the most relevant legal precedent for the field of forensic psychology was set out more than 50 years ago in *Jenkins v. United States* (1962). A federal appellate court ruled in *Jenkins v. United States* that psychologists with appropriate training and expertise were qualified to offer expert testimony on matters pertaining to mental disorders. Further, this court indicated that possession of a medical degree was not necessary for providing such testimony. The *Jenkins v. United States* decision is widely considered a watershed case with respect to the participation of psychologists within the legal arena in the United States (Otto & Heilbrun, 2002), and this decision distinguishes the United States from other countries in which psychologists do not have the same independent status (e.g., Canada; see Viljoen et al., 2003).

The practical knowledge base comprises the practice literature as well as the growing body of professional practice guidelines. Specifically, this includes the "Specialty Guidelines for Forensic Psychology," first published in 1991 and recently revised and adopted by APA (2013b). As well, this includes professional guidelines for practice in specific areas, such as the "Guidelines for Child Custody Evaluations in Family Law Proceedings" (APA, 2010), the "Guidelines for the Practice of Parenting Coordination" (APA, 2012), and the "Guidelines for Psychological Evaluations in Child Protection Matters" (APA, 2013a). Other resources that emphasize the practical application of the scientific and legal knowledge to forensic practice include guidelines published by related professions, such as those published by the American Academy of Psychiatry and the Law to guide the evaluation of competence to stand trial (Mossman et al., 2007). In addition, various book series publish topics relevant to the field. The AP-LS, the International Association of Forensic Mental Health Services, and the APA all publish books series relevant to forensic psychology. Finally, specialized book series, such as the *Best Practices in Forensic Mental Health Assessment* series (edited by Heilbrun, Grisso, & Goldstein), make an important contribution to the knowledge base, translating research and empirical work for clinical psychologists.

Each area of practice within forensic psychology has its own knowledge base that includes scientific, legal, and practical literatures. The expectation is that practitioners will accumulate the necessary knowledge, skill, training, and experience prior to engaging in the practice of forensic psychology. Indeed, the ethical code of conduct for U.S. psychologists requires that psychologists not practice outside the bounds of their competence and that they obtain the requisite education, training, supervised experience, consultation, or study necessary to practice in a particular area (APA, 2002).

MAJOR ACTIVITIES

The practice activities of forensic psychology are vast and varied. There are two broad areas of practice: forensic mental health assessment and forensic treatment. Forensic mental health assessment is distinguished from other types of clinical assessment by the express purpose of the former to assist legal decision makers by providing relevant clinical and scientific data:

> A forensic assessment is guided by the specific legal question facing the legal decision maker. For every type of FMHA [forensic mental health assessment], there is a body of law controlling the legal decision to be made. The examiner performing the assessment knows the relevant law within the jurisdiction in which the assessment is performed, as well as the legal question. The examiner then determines the types of data that are relevant for that legal question and develops an assessment procedure that is designed specifically to obtain those data. (Heilbrun, Grisso, & Goldstein, 2009, p. 12)

Forensic Assessments in Criminal Law

The applications of forensic psychology within the criminal justice system that are primarily clinical in nature typically include the evaluation of individuals who have been charged with or convicted of a criminal offense for the purpose of attempting to answer one or more legal questions. The most common legal issues evaluated or addressed include criminal competencies, mental state at the time of the offense, risk assessment, jail mental health screening, and juvenile waiver to criminal court. Other clinical applications include evaluations for capital sentencing (Cunningham, 2010) and the evaluation of sexually violent predators (SVPs; Witt & Conroy, 2009).

Criminal competencies. A defendant's competence may be called into question at any stage of the proceedings, from the time of arrest (capacity to waive *Miranda* rights, competence to confess) through the pretrial and trial proceedings (competence to plead, competence to stand trial, competence to waive counsel, competence to proceed *pro se*) to sentencing (competence to be sentenced) and postconviction appeals and proceedings (competence to be executed). The most commonly occurring forensic evaluation is that of competence to stand trial, with an estimated 60,000 or more evaluations conducted annually in the United States. This number does not include evaluations of juveniles' competence to proceed—an increasingly common evaluation request in recent years (Viljoen & Roesch, 2008).

Competence to stand trial. Competence to stand trial is one of the fundamental protections offered by our legal system. Every defendant must have the capacity to understand and participate in any legal proceeding against him or her; to lack this capacity renders one incompetent to stand trial, and the legal proceeding must be either dismissed or suspended until the defendant regains competence (the assumption is that all defendants are competent, and the onus is on a defendant to prove otherwise). The standard for competence to stand trial in the United States was set out in *Dusky v. United States* (1960) and requires that a defendant have "sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding . . . and a rational as well as factual understanding of the proceedings against him" (p. 402).

Psychologists and other mental health professionals (most typically psychiatrists but also social workers or other licensed mental health professionals in some jurisdictions) are called on to evaluate defendants with respect to their competence-related abilities within the context of their criminal proceedings. These evaluations typically involve an interview with the defendant, specific inquiry and/or the administration of psychological tests to provide information about the defendant's competence-related abilities, as well as the collection and review of collateral and third party information. Evaluators focus on the specific issues of relevance (as delineated by the jurisdiction's competency statutes as well as by case law and other relevant legal decisions), taking into consideration the characteristics of the defendant within the context of his or her case and working with a particular defense attorney or team. Competency evaluations occur both in-custody (at a jail or forensic/mental health facility) and out-of-custody (when the defendant is out on bail awaiting trial) and are typically court-ordered, with a written report submitted by the evaluator to the court for distribution among all parties to the proceedings. Evaluators assess the degree of congruence or incongruence between the defendant's current capacities and the abilities that are required of that defendant at trial (or for the next stage of the proceedings) and include the bases for their opinions in their written report. Typically, the court will stipulate to the report or accept the opinion presented in the report without the need for a competency hearing. In some instances, especially when there are opposing opinions regarding a defendant's competence, a hearing will be held to determine the defendant's competency status. Evaluators are typically called to testify in these competency hearings, and the determination regarding a defendant's competence is typically made by a judge (although some jurisdictions allow for this determination to be made by a jury in certain situations).

A large literature exists on competence to stand trial, and much research has been conducted on issues relevant to the assessment of competence (Murrie & Zelle, 2015; Pirelli, Gottdiener, & Zapf, 2011). In addition, numerous instruments have been developed and validated to assist in the evaluation of competence-related abilities (see Grisso, 2014, and Zapf & Roesch, 2009, for reviews). Finally, various practical guides have been published, which provide detailed and relevant information to evaluators regarding the appropriate standards and procedures for conducting competency evaluations with both juvenile and adult defendants.

Capacity to waive *Miranda* rights. Clinical psychologists and other mental health professionals are also called on to evaluate a defendant's capacity to waive his or her *Miranda* rights (also referred to as *capacity to confess*). The literature in this area, although not quite as robust as that pertaining to competence to stand trial, continues to develop, especially with respect to juvenile defendants.

Whenever an individual is subject to interrogation in police custody, he or she must be notified of certain rights in this regard. These rights include the right to remain silent, the right to representation by counsel, and the right to have an attorney appointed if the defendant is unable to afford one. These rights are referred to as *Miranda* rights, in reference to the Supreme Court case in which the constitutionality of these rights was upheld (*Miranda v. Arizona*, 1966). Every individual has the ability to waive *Miranda* rights and to proceed with interrogation without an attorney present, as long as he or she waives these rights in a voluntary, knowing, and intelligent manner. Research shows that most suspects waive their rights and agree to be interviewed by law enforcement. Some groups, particularly younger offenders and those with mental health disorders or deficits due to the presence of fetal alcohol effects, may be especially vulnerable to waiving their rights without a full understanding and appreciation of the meaning and intent of the waiver (McLachlan et al., 2014).

In cases where the individual's capacity to waive *Miranda* rights is in question, psychologists or other mental health professionals are called on to evaluate the individual in an attempt to make a determination regarding the capacities of that person at the time that he or she waived these rights. This retrospective evaluation requires the evaluator to assess an individual's current level of functioning in this regard and to extrapolate with respect to that individual's functioning at the time that these rights were waived.

As is the case with competence to stand trial, various assessment instruments have been developed to assist evaluators in determining the relevant abilities and capacities of the evaluee. Grisso's (1998) Instruments for Assessing Understanding and Appreciation of Miranda Rights were the first tools published for this purpose. These have since been updated and revised to reflect new developments and knowledge in this area (Goldstein, Zelle, & Grisso, 2009). In addition, Rogers et al. (2012) have recently published the Standardized Assessment of Miranda Abilities for use in these evaluations.

Competence to be executed. Defendants convicted of capital offenses and sentenced to death must be competent at the time of execution. That is, in order for the punishment to be carried out, the convicted offender must understand the nature of the sentence as well as the reasons why that sentence has been imposed. The constitutionality of executing the insane was addressed by the U.S. Supreme Court in *Ford v. Wainwright* (1986). The Supreme Court ruled that the Constitution's Eighth Amendment prohibited "cruel and unusual punishment" and therefore prohibited the execution of an "insane" person. The Supreme Court, however, failed to specify a proper legal test of incompetence in the execution context. Only Justice Powell, in his concurring opinion, addressed the issue of the legal test for competency for execution, stating that the Eighth Amendment "forbids the execution only of those who are unaware of the punishment they are about to suffer and why they are to suffer it" (*Ford v. Wainwright*, 1986, p. 2608). In *Panetti v. Quarterman* (2007), the court broadened the legal standard for competency for execution to include a defendant's rational understanding beyond simple awareness or factual understanding.

Although relatively infrequent, prisoners sentenced to death sometimes experience deterioration in their mental health while on death row. When this occurs, psychologists or other mental health professionals are called on to evaluate the mental status of the convicted offender in an attempt to determine whether he or she has the capacities necessary for execution to be carried out. This "last" competency is a low base-rate phenomenon and, as a result, a limited research literature exists in this area. Some researchers have proposed guidelines to assist in these evaluations (Zapf, Boccaccini, & Brodsky, 2003), whereas others have provided elucidation of the special concerns involved in working with capital offenders (Cunningham, 2010).

Competency for execution, more than any other area within forensic assessment, has been fraught with controversy regarding whether, and to what extent, psychologists should become involved in this type of evaluation. Indeed, the personal outcome for the defendant, who serves as the evaluee in this type of evaluation, weighs heavily in this debate.

Mental state at time of the offense. Most jurisdictions in the United States allow provisions for the acquittal of defendants who, because of their mental state at the time of the offense, are considered legally insane and therefore not criminally responsible for their crime. Even in those jurisdictions that do not have an insanity defense provision per se, provisions exist for consideration of the impact of a defendant's mental state on the elements of a crime or on the degree of culpability. This is a longstanding tradition with the fundamental concept of *mens rea*, which refers to the mental state of an individual and whether he or she had the capacity to form the intent to commit a crime. This concept has roots dating back more than 2,000 years to the earliest recordings of Hebrew law.

The modern underpinnings for insanity defense standards used throughout the United States date back to the English case of Daniel M'Naghten in 1843. M'Naghten was acquitted by reason of insanity for the killing of Sir Robert Peel's secretary (with the actual target being Sir Robert Peel himself, the leader of the Tory party). M'Naghten's trial is widely recognized as the starting place for the test that

> to establish a defense on the ground of insanity, it must be clearly proved that, at the time of the committing of the act, the party accused was laboring under such a defect of reason, from disease of the mind, as not to know that nature and quality of the act he was doing; or, if he did know it, that he did not know he was doing what was wrong. (M'Naghten's Case, 1843, p. 722)

Although the M'Naghten test was rapidly adopted in the United States, it was almost immediately subject to challenges on the basis that it was too narrow and, as a result, came to be modified significantly in some jurisdictions.

Controversy over various definitional and procedural aspects of the insanity defense occurred throughout the first half of the 20th century, and various jurisdictions adopted modified tests for insanity. Various iterations of the insanity test used throughout the United States include the "irresistible impulse" test (*Commonwealth v. Rogers*, 1844), the *Durham* rule (*Durham v. United States*, 1954), the American Law Institute (1962) standard, and the *Brawner* rule (*United States v. Brawner*, 1972), among others.

In reaction to the acquittal by reason of insanity of John Hinckley Jr. for the attempted assassination of President Ronald Reagan in 1983, many states adopted guilty but mentally ill (GBMI) provisions as an alternative to the insanity defense. The rationale for the GBMI verdict is that it would allow jurors to recognize the impact of mental illness on a defendant's behavior without having to acquit the defendant (*People v. McQuillan*, 1974; Steadman et al., 1993).

Psychologists are often called on to evaluate defendants with respect to their mental state at the time of the offense to assist the court in making determinations regarding their criminal responsibility. These evaluations are, by definition, retrospective in nature and require that clinicians attempt to reconstruct what the defendant was thinking, feeling, seeing, hearing, and perceiving at the time of the offense. Collection of collateral information regarding the defendant's mental health history as well as his or her actions or behaviors surrounding the time of the offense is crucial to this reconstruction. Unlike the case with competency to stand trial, few instruments have been developed to assist clinicians in the evaluation of mental state at the time of the offense. Indeed, only one forensic assessment instrument has been deemed acceptable by forensic evaluators for use in criminal responsibility evaluations (Lally, 2003)—Rogers Criminal Responsibility Assessment Scales (Rogers, 1984). The Rogers Criminal Responsibility Assessment Scales were developed to assist evaluators in considering the issues relevant to criminal responsibility by providing a means of quantifying clinical impairments as well as decision-tree models for the American Law Institute, M'Naghten, and GBMI standards.

Risk assessment. The assessment of risk for violence is perhaps the most well-developed area under clinical forensic assessment. The literature base on violence risk assessment is vast and continues to develop. More than any other area of forensic assessment, the risk assessment literature has developed to a point where it is nearly impossible to summarize the primary research without the use of meta-analyses and even meta-meta-analyses. Several impetuses exist for the expansion of this area of forensic assessment worldwide. In the United States, changes in the criteria for civil commitment or involuntary hospitalization from "need for treatment" to "dangerousness to others" (*Lessard v. Schmidt*, 1972), the imposition of tort liability on clinicians who negligently fail to protect potential victims (*Tarasoff v. Regents of University of California*, 1976), and the explicit mandate of risk assessments of violence by the Americans With Disabilities Act (1990) each served to increase both the frequency and importance of assessing risk for violence in various contexts (Guy, Douglas, & Hart, 2015). In addition, assessments of risk for violence are a required component of decision making in various correctional contexts such as sentencing (e.g., probation), release from correctional settings (e.g., parole), release from forensic settings (e.g., hospitalization as not guilty by reason of insanity [NGRI]), and civil commitment of special high-risk offender groups upon sentence completion (e.g., SVPs).

Various methods of violence risk assessment are represented in the literature, each of which falls under one of three primary approaches: unstructured clinical judgment, actuarial, or structured professional judgment (SPJ). The unstructured clinical judgment approach is characterized by clinicians having complete discretion in determining which risk factors to consider, as well as how to combine the various risk factors that were considered. The unstructured nature of this approach has been criticized as resulting in different clinicians considering different risk factors, which may or may not be supported by the risk assessment literature, both within and between cases, as well as a lack of transparency about the process followed. The lack of consistency and inability to lend itself to review by others render the unstructured clinical judgment approach both legally and ethically problematic.

The actuarial approach to violence risk assessment falls at the other end of the continuum from the unstructured clinical judgment approach. The actuarial approach is characterized as “a formal method (that uses) an equation, a formula, a graph, or an actuarial table to arrive at a probability, or expected value, of some outcome” (Grove & Meehl, 1996, p. 294). Risk factors are identified on the basis of the statistical strength of their association with violence within a particular sample. The defining feature of the actuarial approach is the derivation and use of reproducible, unvarying rules or formulas for combining risk factors. The strengths of the actuarial approach are its transparency and the high reliability that results from a routinized procedure for selecting and combining risk factors. The weaknesses of the approach include the limited generalizability to other samples beyond the construction sample, the reliance on group-based estimates for individual-level prediction, and the inability of the clinician to consider additional factors that may serve to increase or decrease a given individual’s propensity for violence.

Several actuarial risk assessment instruments have been developed to assist in the prediction of violence. These include the Violence Risk Appraisal Guide (Quinsey et al., 1998, 2006), the Sex Offender Risk Assessment Guide (Quinsey et al., 1998, 2006), Static-99 and its progeny (Hanson & Thornton, 1999; Phenix, Helmus, & Hanson, 2012), and the Classification of Violence Risk (COVR; Monahan et al., 2005).

The SPJ approach was developed as a means of remedying the limitations of the unstructured clinical judgment and actuarial approaches to risk assessment while retaining and building on the strengths of each. The SPJ model

> provides guidance concerning the types of information that should be gathered; the standard set of risk factors to be considered by all evaluators for any case for a given type of concern about a given form of violence (e.g., stalking, group based violence, sexual violence); operational definitions of risk factors; instructions for rating risk factors; guidance for making final judgments of low, moderate, or high risk based on the presence and relevance of factors and degree of intervention required; and facilitation of steps relevant to risk management activities. (Guy et al., 2015, p. 44)

Several risk assessment tools using the SPJ approach have been developed. The best known are the Spousal Assault Risk Assessment Guide (Kropp et al., 1995); Structured Assessment of Protective Factors for Violence Risk (de Vogel et al., 2012); Short-Term Assessment of Risk and Treatability (Webster et al., 2009); Risk for Sexual Violence Protocol (Hart et al., 2003); and the most commonly used violence risk assessment instrument worldwide, the Historical-Clinical-Risk Management—20 and its most recent revision, the HCR–20^{V3} (Douglas et al., 2013).

Jail mental health screening. According to the U.S. Bureau of Justice Statistics (2013), more than 2.2 million people were incarcerated in federal and state prisons and county jails at the end of 2011. This represents nearly 1% of the adults in the United States. The United States has the highest incarceration rate in the world, accounting for approximately 25% of all prison inmates worldwide. The incarceration rate in the United States is four times the world average. People of color are disproportionately represented in American prisons, as African Americans are more than six times as likely, and Hispanics twice as likely, to be incarcerated (Hartney, 2006). Together, although these two groups make up about 25% of the U.S. population, they accounted for 58% of all prisoners in 2008 (National Association for the Advancement of Colored People, 2014). Much of this disparity is due to differential incarceration rates for drug-related offenses, as African Americans are sent to prison for drug offenses at 10 times the rate of White Americans.

Mental health disorders are common in both prisons and jails and are increasingly the focus of research and practice in forensic psychology. Research has consistently shown that jail detainees have significantly higher rates of serious mental illness than found in the general population, with approximately 6% of men and 15% of women showing signs of severe mental illness and being in need of treatment (National Institute of Justice, 2007). In part, the increasing number of mentally ill in jails is due to the massive changes in civil commitment practices that have resulted from the deinstitutionalization of mental hospitals (Roesch & Golding, 1985). Jails and prisons have an obligation to provide mental health services to their inmates and to consider mental health needs in making determinations regarding how to classify and treat inmates.

Many jails have implemented screening procedures wherein inmates undergo brief evaluation regarding their mental health needs and risk for suicidal behavior as part of the intake process. These brief assessments assist correctional staff in making housing and placement decisions for the inmate within the facility—such as whether the inmate should be placed on suicide watch or in a special housing unit with closer supervision, be housed alone or with another inmate ("double-bunking"), or be placed in protective custody as opposed to housed with the general population.

Psychologists are often involved in these jail mental health screening assessments. Several instruments have been developed to assist in these brief intake evaluations, including the Jail Screening Assessment Tool (Nicholls et al., 2005), the Referral Decision Scale (Teplin & Swartz, 1989), and the Brief Jail Mental Health Screen (Steadman et al., 2005). Jail mental health screening will continue to be of primary importance in triaging for services and the security and placement of offenders within short- and long-term correctional facilities.

Juvenile waiver/transfer to criminal court. Not surprisingly, given the adult incarceration rates, the United States leads the world in incarceration of youths, although it appears that incarceration rates have been declining in recent years. Again, minority youths are overrepresented, as African American, Latino, and American Indian youths are much more likely to be confined compared to their White peers (Davis, Irvine, & Ziedenberg, 2014).

Although most youths are retained in the juvenile justice system, many youths are waived to adult court and receive prison sentences. All states allow for the transfer to adult court of youths charged with criminal offenses (Redding, 2010). These transfers are automatic in some states for 16- or 17-year-old youths charged with a violent offense, and youths of any age can be transferred to adult court following a hearing in which it is determined that the transfer satisfies the criteria established in *Kent v. United States* (1966). The *Kent v. United States* criteria relevant to a psychological assessment focus on the youth's sophistication and maturity, treatment amenability, and risk to the community. Youths waived to adult court are then processed as adults in the criminal courts and sentenced as adults, which until recently meant that they could receive the death penalty and be subject to an automatic LWOP sentence if convicted of certain offenses. As with adult and juvenile incarceration rates generally, youths of color are disproportionately represented in waiver cases, as minority youths appear to be more likely to be raised to adult court, even when type and severity of offense is controlled (Fagan & Zimring, 2000).

The U.S. Supreme Court ruled that the death penalty was unconstitutional for those under 18 years of age (*Roper v. Simmons*, 2005), as was the automatic sentence of LWOP (*Graham v. Florida*, 2010). Note, however, that a LWOP sentence is still possible for youths, but a hearing must be held. The *Roper v. Simmons* and *Graham v. Florida* decisions were influenced by the psychological research on adolescent judgment, decision making, and maturity. Compared to adults, adolescents are less able to act in an autonomous manner, to appreciate the long-term consequences of their decisions, and to resist influence by peers or authority figures (Scott, Reppucci, & Woolard, 1995; Steinberg & Cauffman, 1996). These characteristics are highly relevant to decisions about whether to retain a youth in juvenile court, and they provide some direction to evaluators involved in waiver cases.

Psychologists can be asked to assess relevant *Kent v. United States* (1966) criteria (Salekin, 2004). The *Kent v. United States* factor of sophistication and maturity is typically based on evaluations of autonomy, cognitive abilities, and emotional skills (Salekin & Grimes, 2008). Amenability to treatment is based on an assessment of psychological disorders and the degree to which they can be treated. Risk to the community can be assessed using risk instruments designed specifically for youths (e.g., the Structured Assessment of Violence Risk in Youth; Borum, Bartel, & Forth, 2002). One forensic assessment instrument has been developed specifically to assess youths in the context of a waiver hearing. The Risk-Sophistication-Treatment-Inventory (Salekin, 2004) is a semistructured interview and rating scale that provides an assessment of youths 9–18 years of age in three areas: (a) risk for dangerousness, (b) sophistication–maturity, and (c) treatment amenability as well as treatment needs. Each of the three scales contains 15 items scored based on an interview with the youth—sources include school, police, and detention records; previous treatment records; and family and other collateral interviews. Research supports the use of the Risk-Sophistication-Treatment-Inventory for contributing to an understanding of psychological factors relevant to waiver decisions (e.g., Spice et al., 2010).

Forensic Assessments in Civil Law

Forensic psychologists provide the expertise in civil cases such as those involving civil commitment, guardianship, parenting capacity, personal injury, harassment and discrimination claims, and workplace disability. To illustrate the application of forensic psychology in civil cases, we review civil commitment, parenting capacity, and personal injury claims.

Civil commitment. *Civil commitment* is a legal proceeding allowing the involuntary confinement and treatment of individuals with mental illness. Most state laws require that an individual have both a mental illness and be at risk for harm to self or others (Petrila, 2007). This may involve suicidal ideation or evidence of intent to commit violence toward others. Civil commitment is also possible when an individual is considered to be gravely disabled, such as when a person stops eating or caring for him- or herself and thus puts oneself at risk for harm (Mossman & Pinals, 2013). Psychologists involved in civil commitment assessments should be aware of the specific statutes in their jurisdiction, as the laws vary considerably. As Mrad and Nabors (2007) noted,

> Forensic psychologists will find themselves involved in assessing a patient's risk to self or others, finding or ruling out less restrictive alternatives to hospitalization, seeking or authorizing emergency commitment, assessing emergency-detained patients and testifying in extended commitment hearing, and assessing risk of committed patients to determine suitability for discharge or conditional release. (p. 243)

Evaluations for civil commitment can be conducted by psychiatrists or psychologists; both types of clinicians have a role in assessing both mental illness and risk within the context of civil commitment. The role of clinicians, and ultimately the courts, must determine whether all of the following are true:

- the respondent has a serious mental illness;
- the respondent already did something that was threatening, potentially harmful, or actually harmful because of the illness;
- the respondent still has the psychiatric problems that led to the threatening or actually harmful behavior; and

> - the problems would continue or worsen without intervening hospitalization and treatment.
>
> (Mossman & Pinals, 2013, pp. 165–166)

Assessment typically includes a diagnostic interview, a risk assessment, and a consideration of treatment needs. A major consideration is the setting in which treatment needs to take place, as the principal of the least restrictive alternative should be prominent in any assessment (*Lake v. Cameron*, 1966). This may involve the use of outpatient commitment in which the individual receives treatment while living in the community—an alternative that has been shown to have positive benefits (Swartz et al., 2009). In addition, voluntary admission should be encouraged.

Risk for self-harm or violence toward others may be evaluated with specific instruments, although it is essential that evaluators are cognizant of the limited risk timeframe for considering risk. Forensic assessment instruments used to assess risk for violence in the criminal justice system (e.g., the Violence Risk Assessment Guide; Quinsey et al., 2006) may not be relevant in the civil context. That is because they assess risk for violence at some distant point in the future, making them of less value for civil commitment evaluations because civil commitment requires the person be at imminent risk. This imminent risk must be based on clear evidence that the person has made threats, engaged in threatening behavior, attempted to physically harm another, or actually engaged in harmful acts (Mossman, Schwartz, & Lucas, 2011).

There is one instrument that may prove of value for psychologists involved in conducting civil commitment assessments. The COVR (Monahan et al., 2005) was designed to assist decisions about acute psychiatric inpatients being considered for discharge into the community (Monahan, 2010). COVR is a software program that can assess risk of violence during the first few months post discharge from a mental health facility. It was developed and normed using a large sample ($N = 1{,}136$) of patients in acute psychiatric facilities in three states. The patients were followed for 20 weeks after discharge to evaluate their actual violence from multiple sources, including police and hospital records, patient self-report, and collateral informants (usually a family member). COVR assesses up to 40 risk factors in a decision tree format. The software allows clinicians to consider only the number of risk factors necessary to make a decision about future risk, so not all 40 risk factors are typically used. The most frequently used factors are

> seriousness and frequency of prior arrests, young age, male gender, being unemployed, the seriousness and frequency of having been abused as a child, a diagnosis of antisocial personality disorder, the *lack* of a diagnosis of schizophrenia, whether the individual's father used drugs or left the home before the individual was 15 years old, substance abuse, impaired anger control, and violent fantasies. (Monahan, 2010, pp. 189–190)

The first studies using COVR have shown it to be a reliable and valid measure for assessing short-term risk for violence (Heilbrun, 2009; Monahan, 2010).

Several states allow for the civil commitment of individuals who have been convicted of sex offenses. SVP laws are applied when a criminal sentence ends and the offender would normally be released from prison. SVP commitment results in the individual's continued confinement, but in the civil system under an indefinite confinement treatment order. State laws vary, but a review of state and case law reveals that "an SVP civil commitment requires three interrelated elements (once an individual has committed any qualifying sex offense): Mental abnormality, Volitional impairment, and Risk of future sex offense" (Witt & Conroy, 2013, p. 63).

The evaluations for SVP commitments are different than other civil commitment evaluations in that whereas a recent overt act is typically required for civil commitment, an SVP commitment is based on the likelihood of future offenses. It is also the case that most SVP committees do not have a diagnosis of a major mental disorder, as would be the case for civil committees (Witt & Conroy, 2009). These differences have made the SVP laws an ongoing subject of controversy and scholarly debate (e.g., La Fond, 2008; McSherry & Keyzer, 2011). A survey of 41 sex offender commitment evaluators found that all used actuarial risk assessment measures, primarily the Static-99, to assess risk for future sexual violence (Jackson & Hess, 2007). The majority of evaluators believed that a history of sexual offending along with a personality disorder or a paraphilia established the necessary link of a mental disorder and the risk for future sexual violence.

Parenting capacity. Parenting capacity evaluations are psychological assessments of the suitability of parents to act as caregivers for children. Parenting capacity issues arise in cases involving child custody and child protection concerns. Accusations of domestic violence and sexual abuse may be a factor and make the evaluation more emotionally charged (Stahl, 2014). Although most custody conflicts are resolved by amicable agreement between parents, substantial numbers of cases are filed in civil courts (Emery, Otto, & O'Donohue, 2005). Cases that have to be resolved in court are usually due to the fact that the parents cannot agree about decisions affecting the living situation and care of the children. Because of the often contentious nature of the dispute, child custody represents a disproportionate percentage of ethics complaints against psychologists (Greenberg et al., 2004).

Practice guidelines for child custody evaluations have been developed by APA's Committee on Professional Practice and Standards. These guidelines were first published in 1994 and were subsequently updated and renamed the "Guidelines for Child Custody Evaluations in Family Law Proceedings" (APA, 2010). The overriding principle for approaching these evaluations is to ensure that the psychological best interests of the child are addressed. Parenting capacity evaluations are typically lengthy and involve review of records, clinical interviews of parents and children, collateral contacts, parent–child observation, personality testing, and the use of psychological tests and rating scales designed specifically for these evaluations. These include the Ackerman–Schoendorf Scales for Parent Evaluation of Custody (Ackerman & Schoendorf, 1992), the Bricklin Perceptual Scales (Bricklin, 1990), and the Uniform Child Custody Evaluation System (Munsinger & Karlson, 1994).

When a concern about the possible maltreatment of children is raised, psychologists may be requested to evaluate parents and children to determine risk for future maltreatment; need for interventions with parents, children, or both; and consideration of placement options. Termination of parental rights may also be a consideration (Condie & Condie, 2007). Personality tests and tests that tap functional characteristics related to childrearing are often used (Clark, Connell, & Budd, 2013). An example of a structured approach is the Child Abuse Potential Inventory (Milner, 1986), a self-report questionnaire designed to screen parents for risk of child abuse. One scale reflects risk for physical abuse, and other scales measure parent and family characteristics (e.g., distress, rigidity, unhappiness, problems with child and self). Many child protection matters can be addressed through interventions such as parenting-skill training, anger-management programs, employment counseling for parents, assistance with housing needs, and other services for the parents and child. In some cases, the evaluation may find that the child is at high risk for abuse or neglect, which may result in placement of the child outside the family home.

Personal injury claims. Forensic psychologists may be asked to conduct evaluations of litigants who bring a law suit claiming they have suffered a psychological injury such as emotional harm, cognitive impairment, or loss of behavioral control as a result of another party's action or failure to act (Kane et al., 2013). The party could be an individual or a company. A psychologist may be consulted in a range of cases, including "psychiatric or psychological malpractice; impaired professionals; boundary violations; harassment; wrongful termination; discrimination; negligent supervision and hiring; ADA claims; fitness for duty; civil rights violations; foreseeability of harm; and wrongful death" (Kane et al., 2013, pp. 148–149). Evaluations for personal injury claims are similar to other clinical evaluations and will typically include record review, diagnostic interview with the claimant, interviews of collateral informants, and psychological testing (e.g., intelligence, personality). The most common diagnosis in personal injury cases is posttraumatic stress disorder (Koch et al., 2006), so specific measures of traumatic emotional reactions are also frequently used. Because malingering is a possibility in suits of this nature, tests of malingering should be an essential part of the evaluation.

Personal injury evaluations are often difficult because they require evaluators to assess a person's current functioning in relation to his or her functioning at some point in the past when the alleged personal injury took place. The evaluator is attempting to retrospectively reconstruct the plaintiff's mental condition before, during, and after an event or series of events (Witt & Weitz, 2007). Attributing causality of current functioning to a specific past event is a difficult task for an evaluator, as it may be "impossible to say with certainty that a particular event was the sole cause of an individual's symptoms" (Piechowski, 2014, p. 190). Evaluators would need to consider other events or traumas in the plaintiff's life that may also have affected his or her current functioning, and then form an opinion about the likelihood that any changes in functioning of the plaintiff were related to the actions forming the basis of the lawsuit.

Forensic Treatment

As noted earlier in this chapter, the second major application of forensic psychology is forensic treatment. Various treatments of different forensic populations have been developed, with the type of treatment dependent on the population of interest and the specific needs to be targeted. Although the term *forensic* applies to both the criminal and civil sides of the legal system, this section focuses on psychological treatments for individuals who come into contact with the criminal justice system because the treatments used with individuals involved with civil litigation or civil commitment are no different than those offered to the general public.

With respect to treatment, the criminal forensic population can be broken down into three groups that differ in terms of the extent to which mental disorder is the focus of intervention: those for whom mental disorder is the most significant factor in their involvement with the criminal justice system and for whom treatment to target their mental disorder is primary (e.g., incompetent defendants, NGRI acquittees); those for whom mental disorder is not necessarily a primary target of treatment but is still considered to be a contributing factor to their involvement with the criminal justice system and thus should receive some focus in treatment (mentally disordered offenders [MDOs], violent offenders, sexual offenders); and those for whom mental disorder may play only a minor role in their involvement with the criminal justice system and may or may not be a focus of intervention. We provide an overview of treatment issues relevant to each of these three groups of offenders.

Treatment of offenders deemed incompetent or not criminally responsible. Defendants adjudicated incompetent to proceed are committed for competency restoration treatment. In most instances, competency restoration occurs on an inpatient basis; however, increasing numbers of jurisdictions permit outpatient commitment for this purpose, although this occurs less frequently than inpatient commitment. Offenders who are found incompetent to proceed are eight times more likely to be diagnosed with psychotic disorders than those found competent. Similarly, those who are found not criminally responsible are most typically diagnosed with psychotic disorders.

The most common form of competency restoration treatment involves the administration of psychotropic medication, typically antipsychotic medications. Some jurisdictions have also established educational treatment programs designed to increase a defendant's understanding of the legal process or individualized treatment programs that confront the problems that hinder a defendant's ability to participate in his or her defense (Bertman et al., 2003). In addition, some jurisdictions have implemented treatment programs for those defendants with an intellectual disability who are found incompetent to proceed.

Most incompetent defendants are restored to competency within 6 months, and the vast majority achieves competence within a 1-year period (Zapf & Roesch, 2011). An examination of those conditions associated with a greater inability to be restored to competence indicates that there are two groups for whom restoration is difficult. The first group comprises defendants whose incompetence stems from irremediable cognitive disorders, such as intellectual disability (formerly mental retardation [MR]), whereas the second group comprises defendants with chronic psychotic disorders and a history of lengthy inpatient hospitalizations (Mossman, 2007).

The success of treatment programs for the restoration of competence is variable and dependent on the type of treatment and the type of defendant. Anderson and Hewitt (2002) examined treatment programs designed to restore competency in defendants with MR and found that only about 18% were restored. Anderson and Hewitt concluded, "for the most part, competency training for defendants with MR might not be that effective" (p. 349). Other researchers and commentators have found similar results and have noted the difficulty in treating a chronic condition such as MR.

Treatment programs that target defendants with other types of mental disorders have met with more success in that larger proportions of the defendants are restored to competency. However, it is not clear that individualized treatment programs that target underlying deficits (such as the particular defendant's understanding and appreciation of his or her charges and their consequences) for each defendant are any more effective than educational programs that teach defendants about their legal rights (Bertman et al., 2003). The research findings suggest that successful restoration is related to how well the defendant responds to psychotropic medications administered to alleviate the symptoms of the mental disorder.

In comparison to the literature and research on other aspects of competency, such as the assessment of competence, there is a serious lack of research on restoration of competence. Researchers have called for more attention on competency restoration efforts and for the inclusion of promising treatment components, such as cognitive remediation, to be incorporated into restoration programs (Zapf & Roesch, 2011).

Offenders found not criminally responsible. Despite the prevailing public perception of the insanity defense, this defense is rarely used and is even more rarely successful. Upon acquittal (for those deemed NGRI) or being found GBMI, offenders are typically either (a) unconditionally released, (b) conditionally released, or (c) committed to a mental health facility for treatment. Most insanity acquittees are committed to public state mental health or forensic facilities for extensive evaluation and treatment for their mental illness; it is rare for offenders to be unconditionally released upon acquittal.

Presence of mental illness and dangerousness are the two criteria used to determine the detention or release of an insanity acquittee. That is, offenders with mental illness who are considered dangerous to themselves or others are detained and treated until they are no longer mentally ill or dangerous. These two criteria are evaluated periodically throughout detention for each insanity acquittee; once the offender is no longer considered to be mentally ill or dangerous, he or she is usually conditionally discharged and permitted to live in the community under certain conditions, such as taking prescribed medications, periodic evaluation by a mental health professional, and restrictions on possessing weapons.

Treatment for insanity acquittees varies by facility. The predominant diagnostic category for insanity acquittees is psychotic disorders, with personality disorders being second most frequent. Substance abuse disorders are a common co-occurrence for these offenders. A primary focus of inpatient treatment is the reduction of psychotic symptomatology, most commonly through the use of psychotropic medications. In addition, specialized treatments, such as dialectical behavior therapy, have demonstrated effectiveness in the management of symptoms associated with personality disorders (Vitacco & Van Rybroek, 2006).

Of some concern is the apparent focus on primary disorders to the neglect of secondary or co-occurring disorders, such as substance abuse. Many NGRI patients with substance abuse disorders would benefit from treatment programs that address both primary and substance use disorders concurrently (Salekin & Rogers, 2001). In addition, treatments that target symptoms of mental disorder, life skills training, social skills training, and the management of aggression each appear to have a place in the treatment of insanity acquittees (Salekin & Rogers, 2001).

Treatment of mentally disordered, sexual, and violent offenders. The second broad segment of the criminal forensic population is that group of offenders for whom mental illness is not a primary factor in their involvement with the criminal justice system but who should receive some treatment. This group includes MDOs as well as those for whom mental disorder is relevant to their offence behavior, such as sexual offenders or offenders who are at high risk for violence. Although the term MDO can also encompass those individuals who are found unfit to stand trial and those found not criminally responsible on account of a mental disorder, we have discussed these groups already and so eliminate them from our discussion here.

There is considerable variation in estimates of the proportion of inmates in jails and prisons with a diagnosed mental disorder. Depending on the type of institution; the definitions of mental disorder used (whether estimates include personality disorders and substance use disorders); whether the institution draws inmates from rural, urban, or suburban areas; and the sampling procedures used (how estimates of mental illness are calculated), rates of mental illness in the offender population can range from less than 5% to more than 60% (Mobley, 2006).

A number of conclusions can be drawn from studies investigating the prevalence of mental illness in jails and prisons. First, there are large numbers of persons in jails and prisons with significant mental disorders. Substantial numbers of inmates (perhaps as many as 10%) suffer from psychotic disorders, and even greater proportions of inmates (estimates indicate between 15% and 40%) suffer from depression, anxiety, or other moderate mental illnesses. Larger yet are the proportions of inmates who suffer from substance use disorders or personality disorders, which has been estimated at up to 90% of inmates (Ogloff, Roesch, & Hart, 1994). Second, jails have typically provided little in the way of mental health services. A national survey found that the areas of emphasis in jails were the identification of problems (screening and evaluating offenders for mental illness, suicide risk, or institutional adjustment problems) and the dispensing of medication; drug or alcohol services were available in the majority of jails, but psychological services were available in less than one half of the jails surveyed (Steadman, McCarty, & Morrissey, 1989).

Although the goals of treatment vary by facility or by offender, the two most common treatment goals entail the reduction of the symptoms of mental illness and the reduction of criminal recidivism. Various programs and multiple interventions have been developed in an attempt to accomplish these goals. Seven areas that are generally targeted in the treatment of MDOs are active psychotic symptoms, aggression and problems of institutional adjustment, criminal propensity, depression, life skills deficits, social withdrawal, and substance abuse (Rice & Harris, 1997).

In general, behavioral treatments (to change an offender's behavior), skills training (to improve an offender's social and life skills), and pharmacological treatments (to reduce an offender's symptoms) have been shown to be effective in this population (Rice & Harris, 1997). In addition, behavioral treatments (including cognitive–behavioral therapy) and skills training have been shown to be effective for reducing criminal propensity, substance abuse, social withdrawal, and life skills deficits (Rice & Harris, 1997).

Sexual offenders. Sexual offenders constitute only a small proportion of the total number of MDOs; however, various treatments have targeted the special needs of this group of offenders. Treatment programs for sexual offenders fall into three different categories: nonbehavioral psychotherapy (for which there is little empirical support), pharmacological, and behavioral or cognitive–behavioral therapy (Rice & Harris, 1997). Pharmacotherapy has proven effective for reducing sex drive in sexual offenders, but the link between reduced sex drive and reduced sexual recidivism is less clear. Some researchers have speculated that offenders who voluntarily accept drugs to reduce their sex drive are also those who are highly motivated for treatment and thus reduced recidivism in this group may be accounted for by either drug therapy, or motivation, or perhaps both (Rice & Harris, 1997).

By far, the most promising treatments for sexual offenders are behavioral or cognitive–behavioral in nature and have as their goal the normalization of deviant sexual preferences. In addition, it appears that training in social competence is a key component of effective treatment programs. A meta-analysis of 23 studies (Hanson et al., 2009) showed that programs based on the risk-needs-responsivity (RNR) model (discussed later) resulted in lower sexual and general recidivism rates for treated sexual offenders. Unfortunately, most sex offender treatment programs have not yet incorporated the principles of the RNR approach in a systematic way, and so these sound bases for treatment are not being offered to many offenders (Marshall, Boer, & Marshall, 2014).

One of the most important aspects in the treatment of sexual offenders is monitoring and case management after offenders leave the institution and become integrated back into the community. For many offenders, but especially for sexual offenders, case management and community follow-up is an important component of their continued success.

Violent offenders. Examination of the factors related to high risk for violence indicates that certain clinical characteristics are important and should be a focus in the treatment of these offenders. Presence of antisocial personality disorder and substance abuse are risk factors for violence in offender samples; thus, many programs for managing risk and treating violent offenders focus on these features. Current treatments for violent offenders are typically based on social information processing and social learning theories. The premise of these approaches is that violent behavior has been learned through interactions with one's environment (modeling, observation, reinforcement), and so interventions teach offenders the skills necessary to use nonviolent alternatives and to develop a prosocial lifestyle.

One program that has demonstrated promise for violent offenders is the Violence Reduction Program (Wong & Gordon, 2012). It is grounded in RNR principles and includes three phases: (a) learning about aggressive behaviors and readiness to change; (b) skill development to manage the thoughts, feelings, and behaviors associated with violence; and (c) overlearning skills and relapse prevention to provide offenders with new skills for managing their behavior in potentially violence-inducing situations.

Treatment of criminal recidivism. Treatment for the criminal forensic population is typically provided with the intention of reducing recidivism. Treatments that are behavioral in nature, that target the criminogenic (crime-causing) needs of the offender, and that target the most high-risk offenders are the most successful (Gendreau et al., 2006).

Behavioral treatment programs focus on the specific behaviors of the offender in an attempt to help offenders recognize the patterns that led up to their criminal behavior. Awareness of these patterns assists the offender in making changes to his or her typical behaviors, thus reducing the probability that this behavioral pattern will lead to criminal offending in the future. In addition to recognizing patterns, behavioral treatments encourage the offender to determine more appropriate actions that can be substituted for his or her typical pattern of responding.

Treatments targeting the criminogenic needs of the offender focus on changeable variables, such as antisocial attitudes and thought patterns, procriminal associates, and personality factors such as poor impulse control and poor self-control (Gendreau & Coggin, 2014). Treatment programs that help offenders learn to become more self-controlled, to change their thought patterns to become more prosocial, and to associate with noncriminal individuals are more effective in reducing the probability that the individual will commit crime in the future.

Finally, programs that target those offenders who are at the highest risk to reoffend are more effective. The treatment programs that match providers to offenders on the basis of such characteristics as ability to relate and communicate tend to prove most effective. For example, matching offenders with lower IQs to treatment professionals able to relate to the more concrete style of thinking will be more effective than having clinicians who are more abstract and who conduct insight-oriented work.

RNR approach. A promising approach to offender treatment is the RNR model (Andrews & Bonta, 2006). It is based on the belief that treatment should be commensurate with an offender's level of risk. Although initially focused on the identification of risk factors, the field has progressed to using these factors to identify promising targets for intervention. The RNR incorporates the use of risk assessments to identify interventions that could serve to reduce the level of risk. The *risk principle* dictates that the level of service should be matched to the offender's level of risk. Offenders considered to be high risk should receive more intensive assessment and management relative to those at lower risk. The *need principle* holds that intervention strategies should focus on criminogenic needs. The *responsivity principle* holds that interventions should be evidence-based practices tailored to an individual's learning style, motivation, abilities, and strengths. For example, if lack of involvement in prosocial activities is a risk factor, then the individual would be encouraged to participate in prosocial activities. If anger is a problem, then an anger-management program might be provided. Research on the RNR model has shown that it can result in significant reductions in recidivism rates (e.g., Andrews & Bonta, 2006; Bonta, Wallace-Capretta, & Rooney, 2000).

Treatment of juvenile offenders. Juvenile offenders are typically believed to be more malleable to behavior change than are adults, and there is a greater hope that intervening earlier in a juvenile's criminal career will result in a greater likelihood of that juvenile becoming a productive member of society (Morgan et al., 2014). The presence of mental health disorders, particularly anxiety and depression, in juvenile detention facilities has likely increased in recent years (Penner, Roesch, & Viljoen, 2011) and has made screening for these disorders an essential component of intake into these facilities. The Massachusetts Youth Screening Instrument—2 (Grisso & Barnum, 2003) provides such as assessment. Individuals who are identified in the screening are then referred for more comprehensive assessments. Juvenile offenders are a particularly complex population with multifaceted needs, and the interventions selected must take into consideration the various needs of the offender (DeMatteo et al., 2010).

One promising treatment for this population is multisystemic therapy, which incorporates the multiple interpersonal networks in which a juvenile is involved, such as school, community, family, and peers (Sheidow & Henggeler, 2005). Individualized treatment plans are created, which address the problems that an offender is having in each of the networks. Varieties of treatment methods are used, such as family therapy, behavior modification, problem solving, and psychopharmacology. Multisystemic therapy is typically delivered in outpatient settings where the juvenile has an opportunity to interact with the family and social contexts and so may not be suitable for juveniles in detention settings.

Community-based treatment for offenders. Forensic treatment extends beyond the detention setting and into the community, such as outpatient clinics, halfway houses, and crisis stabilization units. With the exception of those offenders who have been sentenced to serve life sentences without the possibility of parole, eventually every offender gets released back into the community. Successful community reintegration depends heavily on community-based treatment and monitoring. Three key features for the successful monitoring of individuals on parole or probation are (a) centralized responsibility, wherein one decision maker or body has primary authority over and responsibility for these individuals; (b) a uniform system of treatment and supervision; and (c) a network of community services (Heilbrun & Griffin, 1999).

Perhaps the most important component of any program is the follow-up or monitoring of program completers. Intensive follow-up and monitoring appear to be crucial for the maintenance of behavior change. Thus, supporting MDOs and non-MDOs in making the transition from institution to community becomes at key to success. Effective monitoring is important for improving treatment compliance and treatment outcomes. In addition, case management and communication between all parties involved in the mental health and criminal justice systems are important to the success of offenders and MDOs.

The treatment literature is clear that the most effective treatment is that which occurs in the least restrictive environment, preferably in the community (Andrews et al., 1990). Treating individuals in the least restrictive environment often calls into play a delicate balance among the rights of the individual, the need for treatment, and the safety of the community (Heilbrun & Griffin, 1999).

KEY ACHIEVEMENTS

The growth of forensic psychology has accelerated in the past few decades as graduate programs provide foundational training in psychology and law for a new generation of forensic psychologists. At present, there are 35 forensically oriented graduate programs, 22 of which provide clinical forensic training (DeMatteo et al., 2016). This is remarkable given that the first program was not established until the mid-1970s, and most of the current programs began in the last 20 years. The growing number of graduate programs has been an important development in the field, as these programs have provided psychologists with the knowledge and skills to apply psychology to legal issues. It is arguable, however, that the current programs are producing a sufficient number of graduates to meet the increasing demand for forensic researchers and practitioners. The future of forensic psychology will depend in part on the continued addition of new university training programs.

Forensic psychology is becoming widely recognized by the courts for both research and practice contributions. Research on such issues such as competency to stand trial, the insanity defense, adolescent decision making, and evidence-based treatments have been cited in a range of court decisions. Practice contributions include the increasing number of forensic psychologists who conduct forensic assessments and provide expert testimony in court on such issues as competency and insanity, child custody, violence risk, and transfer of juveniles to adult court.

Third has been the development of assessment instruments designed to address legal questions. These include instruments reviewed in this chapter, such as ones to assess competency to stand trial or criminal responsibility. Deserving of particular mention is the contribution to risk assessment. It was only 40 years ago that Ennis and Litwack (1974) commented that predictions of violence were no better than “flipping coins in the courtroom,” and as such opinions based on assessments of violence should be barred from evidence that could be offered in court. The field has responded by developing assessment instruments that have substantially improved the reliability and validity of risk assessments for use with both adults and juveniles (Otto & Douglas, 2010). Although far from perfect (Fazel et al., 2012), these instruments have provided a basis for forensic psychologists to provide expert testimony in the courtroom and to assist in a range of decisions about individuals in the juvenile and adult criminal justice systems. Specialized instruments can assess specific types of violence (e.g., domestic violence, sexual offending, workplace violence).

Fourth has been the formal establishment of the specialty of forensic psychology. As reviewed earlier, forensic psychology has come of age with board certification, multiple practice guidelines, and a profusion of research studies and publication outlets.

A fifth contribution is the provision of guidance about prevention and intervention programs that reduce the likelihood that an individual will engage in future violent behavior. We elaborate on this point in the next section.

FUTURE DIRECTIONS

Forensic psychology has a relatively short history in which it grew from a small number of psychologists who recognized the need to apply psychological theory and practice to the legal system. A new generation of forensic psychologists is now contributing to research and practice in both criminal and civil law. In this concluding section, we highlight future directions for the specialty.

A paramount issue that needs increased attention is the distinct gap between forensic psychologists as service providers and the populations who are assessed and treated (Heilbrun & Brooks, 2010). The 2012 AP-LS database reveals that about 10% of members are from minority groups. This is in stark contrast to the prominent representation of racial minorities in the criminal justice system, in which they account for the majority of defendants and prison inmates in the United States. The existing professional gap must be narrowed in the coming decades. The delivery of services, and the research on their effectiveness, is likely to be promoted by increasing the number of forensically trained psychologists of African American, Asian American, Latina/Latino, American Indian, and multiracial backgrounds. One promising initiative was the creation by the AP-LS of a Minority Affairs Committee that is committed to creating recruitment and retention activities.

Relatedly, in the future, research will focus increasingly on the causes of minority overrepresentation in the juvenile and criminal justice systems. Although incarceration rates are declining, particularly for juveniles, it seems that minorities continue to be incarcerated at rates far higher than White offenders. African Americans are particularly affected. Although they compose 13% of the general U.S. population, they account for 28% of all arrests, 40% of all inmates held in prisons and jails, and 42% of the population on death row. The "get tough on crime" and the war against drugs policies have contributed to this disparity, as they have differentially affected minorities (Cook & Roesch, 2012). Research on these factors and how they can be addressed will be a probable contribution for forensic psychology.

The prevention of violence is another future direction in which forensic psychologists have already made substantial contributions. Now that we have identified the relevant risk factors, it is time to shift emphasis to ways in which a given level of risk can be managed. The time has come to develop and validate interventions to reduce future risk. A focus on dynamic risk factors (factors that can be changed, such as poor social skills, unemployment, drug use) will probably prove the primary direction for future research. Much has been learned about early risk factors, such as bullying in elementary schools, poor school performance, and early aggressive behavior. This research informs us about the need for early intervention, long before more serious violent behavior occurs. This shift to primary and secondary prevention will move the field away from risk assessments and interventions to a more proactive approach favoring violence prevention (Hart, 1998; Heilbrun, 1997).

These violence reduction approaches can take two primary forms. One approach is to use individual risk assessments to identify key risk factors for that individual and then to suggest specific interventions that might manage or reduce risk for that individual. The RNR model is ideally suited to this individual risk management approach. Risk management plans could target high-risk offenders while placing little or no emphasis on lower risk offenders, thus maximizing the use of limited resources and funds. Such programs can be effective in reducing recidivism by as much as 35% (Andrews & Bonta, 2010).

The second approach is to use the research on risk factors to suggest early intervention and prevention programs that might affect the likelihood of later violence. This approach focused on populations or groups that might be affected by that risk factor. For example, we know that bullying is associated with an increased risk for later violence and mental health problems, both for the bully and the victim of bullying (Sourander et al., 2007). A prevention program might apply the intervention developed by Olweus (2003) in Norway and since applied in schools in many other countries, including the United States. The program focuses on changes in the school, the classroom, and individuals that would create an atmosphere that does not condone bullying behavior. Head Start programs also use this early intervention approach, by targeting high-risk preschool children and providing them with educational and behavioral enhancements that may prevent later school problems and possibly delinquent and criminal behavior. This approach can lead forensic psychology in the direction of examining situational factors that may affect individual behavior (Haney, 2002).

Finally, forensic psychology will contribute to changes in laws and legal practice. As noted in this chapter, the U.S. Supreme Court has cited and probably been influenced by briefs submitted by the APA in cases such as *Roper v. Simmons* (2005) and *Graham v. Florida* (2010). The need to translate and apply psychological research to law will become increasingly important. There is also a need for greater dialog between forensic psychologists and the legal community. Although lawyers commonly request forensic evaluations of their clients, many do not appreciate what to expect from an evaluation of a legal matter, such as competence to stand trial, child custody, or jury selection (Roesch & Zapf, 2013). In the future, lawyers and judges will benefit from knowledge about the best practices expected of forensic practitioners conducting evaluations of their clients.

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CHAPTER 15

PRESCRIBING PSYCHOLOGY AND PHARMACOTHERAPY

Morgan T. Sammons

We live in an era of tumultuous change in the delivery of health services. For decades, large numbers of American citizens have not been able to afford health care insurance. The exclusion of mental health and addiction services from most insurance plans has limited the ability of the estimated 26% of the American population who experience mental health disorders in any single year to receive adequate care. The cost of medical care continues to escalate, to the point that an anticipated 20% of the American gross domestic product will be spent on health care by the year 2020. Fragmentation in medical and mental health delivery systems makes access and continuity of care difficult and has led to a movement to integrate behavioral health care services firmly within primary care. Numerous nonphysician health care provider groups have sought to expand their scopes of practice to accommodate foreseen expansion in behavioral health care. It has been conclusively demonstrated that effective treatments for common mental health disorders exist (Rosenberg, 2012). At the same time, national and local governments continue to restrict funding for mental health treatment.

In this context, clinical psychologists can play vital roles in the delivery of health care services, including prescriptive authority for appropriately trained psychologists. In this chapter, I consider the specialty of prescribing psychology: its recent history, knowledge base, major activities, and future directions.

DEFINITIONS

What is a *prescribing psychologist*? In broad terms, a prescribing psychologist is one who independently incorporates the prescription of psychopharmacological agents into a psychological treatment regimen. For the purposes of this chapter, I presume that prescribing psychologists are those who are authorized by law or regulation (e.g., legislation in the states of New Mexico, Louisiana, and Illinois that enable licensed psychologists with defined additional training to prescribe; regulations in the Department of Defense (DoD) or Public Health Service that authorize such activities by psychologists credentialed to do so). Such prescribers are considered by the Drug Enforcement Administration to be "midlevel" practitioners and are labeled *medical psychologists* (U.S. Department of Justice, Drug Enforcement Administration, 2000). Depending on individual laws or regulations, medical psychologists are variably authorized to prescribe a range of psychotropic agents, including controlled substances such as benzodiazepines and psychostimulants.

It has long been recognized that many psychologists address the use of psychotropic medications with their patients without having the ability to directly prescribe such agents. Because the majority of all patients seeking mental health treatment have been exposed to pharmacological treatment, and because the majority of these patients receive only

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pharmacotherapy (U.S. Substance Abuse and Mental Health Services Administration, 2013), it is logical to presume that most psychologists have addressed medication issues with their patients. In the early years after the American Psychological Association (APA) began to wrestle with the definition of prescribing psychologists, a three-level definition was proposed (Smyer et al., 1993). This schema defined prescribing psychologists by both level of training and anticipated professional activities, and it is described in full detail later in this chapter. In spite of the numerous criticisms of this schema (e.g., that the knowledge base for various levels of practice did not substantially differ, that psychologists who consult with primary care physicians and others generally do so without the benefit of this extensive training portfolio), the profession continues to refer to the three-level model when delineating the scope of practice of prescribing psychologists.

APA's Commission for the Recognition of Specialties and Proficiencies in Professional Psychology has designated psychopharmacology as a proficiency in the field. Per their definition,

> Psychopharmacology . . . involves the application of psychopharmacological principles, scientific data and clinical practices to individual psychopathology and problems across a range of populations. It uniquely blends the scientific study of behavior, its biological basis and the interaction of medication with the latter to produce acute and long term therapeutic changes in normal and abnormal functioning. (Commission for the Recognition of Specialties and Proficiencies in Professional Psychology, 2014, para. 1)

CONDENSED HISTORY

Prescriptive authority has been a goal, albeit often controversial, for the psychological profession in the United States since the mid-1980s. Efforts to obtain prescriptive authority have been influenced by a number of factors, including the rapid expansion in the scope of practice of other nonphysician health care professionals, changes in mental health services, a shift from specialty mental health care settings to primary care settings, and changes in the nature of mental health service delivery, which has seen an increasing focus on pharmacological interventions, almost always at the expense of psychological interventions. As with other professionals who have sought to expand their practice into areas previously considered the exclusive purview of physicians, the prescriptive authority movement has been hindered by strong opposition from medical guilds and, somewhat uniquely to the profession of psychology, strong opposition from within the profession (e.g., Hayes & Heiby, 1998).

The following outlines the rationale underlying the movement to acquire prescriptive authority:

- The needs of patients with mental health problems continue to be unmet, particularly in rural areas, in impoverished areas, or among traditionally disadvantaged or underserved groups.
- The number of psychiatrists (both adult and child/adolescent) needed to treat these patients has not risen to meet demand.
- Most mental health services are now provided in primary care settings by nonmental health specialists whose sole intervention is generally pharmacological. Patients are thus deprived of treatments that are superior to medication treatment for specific disorders, or of combined drug and nondrug treatments that are more efficacious than pharmacotherapy alone for most mental disorders.
- Data are clear that treatment of mental disorders with medication alone yields poorer symptomatic relief and suboptimal long-term outcomes.
- Psychologists with appropriate training can provide a range of drug and nondrug treatments, including pharmacological services, to patients who need such combined interventions.
- The skills of psychologists in assessment, diagnosis, and behavioral interventions will result in improved utilization of, and often reduced reliance on, psychotropics, as medicines are more likely to be administered in conjunction with a comprehensive behavioral health intervention.

These points are discussed in detail in subsequent sections. It is first important to outline the origins of the prescriptive authority movement, inasmuch as it emanated from a surprising source: psychiatry. The history of prescriptive authority for the profession has been described elsewhere (e.g., Fox et al., 2009; Sammons, Paige, & Levant, 2003), and no attempt to repeat this history is made in this chapter.

Early History

The notion that professionals other than psychiatrists should enjoy a full treatment armamentarium when dealing with mentally ill patients is now more than 60 years old. In 1954, a psychoanalyst named Lawrence Kubie published a manifesto in an obscure medical journal in which he argued for the creation of a new mental health profession—the doctorate in medical psychology. Kubie (1954) framed his article by citing the shortages of appropriately trained mental health professionals existing even in that era and by delineating what he considered to be the central flaws in the training of both psychiatrists and psychologists. Kubie observed that psychiatrists were extensively trained in medical skills, many of which they would not utilize in practice, and that psychologists' training was absolutely devoid of any subject matter in clinical medicine. Kubie argued that a different profession that balanced education both in medicine and psychology would be better suited to the provision of comprehensive mental health services.

Kubie's (1954) notion lay fallow for some years, but later it was utilized to form the basis of a training program at the University of California in San Francisco's Langley Porter Psychiatric Institute—the Doctorate in Mental Health. This was a hybrid degree encompassing both medicine and psychology. The Doctorate in Mental Health program produced approximately 75 graduates in 9 years of existence (1975–1986), but difficulty in licensing its graduates in either psychology or medicine and opposition from organized psychiatry led to its demise (Wallerstein, 1991). By 1986, however, the notion of prescriptive authority had gained some traction within the profession of psychology. The inception of the prescriptive authority movement within psychology is frequently dated to 1984, when the late Senator Daniel K. Inouye addressed the Hawai'i Psychological Association and, pointing to the unmet needs of a large indigenous Hawai'ian population, charged psychologists with expanding their scope of practice to include prescriptive authority. Senator Inouye's Chief of Staff at the time was a psychologist, Patrick DeLeon, who worked with the Senator to urge the DoD to establish a pilot project training psychologists to prescribe.

In 1989, a working group of military and nonmilitary psychologists at what was then the Walter Reed Army Medical Center in Washington, DC, proposed a draft curriculum. For several reasons, this group modeled their curriculum on that of physician assistants—a profession that had its origins in military medicine (medics serving in Vietnam returned home with extensive experience, but their skills were not recognized in civilian care systems). First, such a curriculum was felt more appropriate for psychologists, as they were already independent practitioners in their own right and therefore did not need to acquire the entire corpus of knowledge or professional identity of medical or nursing education to prescribe. The curriculum for physician assistants was more circumscribed and could be accomplished in approximately 18 months, and well-established training protocols existed within the DoD. The central drawback of the physician assistant model, however, was that it presumed that physician assistants would not practice independently but under the direction of physicians.

In a simultaneous but unrelated move, a psychologist, Floyd Jennings, who was employed by the Indian Health Service, had completed a protocol outlined by the hospital in which he worked and had begun to provide pharmacological services in response to unmet pharmacological needs in the Santa Fe Indian Hospital. Jennings did so successfully and without adverse incident until opposition from the psychiatric profession succeeded in revoking this privilege (DeLeon et al., 1991; Fox, 2003).

In the meantime, the U.S. Senate appropriations bill for 1989 included a requirement that the military services move forward with a training protocol for prescribing psychologists, but the proposed training program at Walter Reed moved forward slowly. The curriculum was studied and hotly debated. A proposal to send active-duty psychologists to Wright State University's school of professional psychology was advanced and abandoned. Several high-level task forces, including chiefs of psychiatry and psychology at Walter Reed and representatives of the Surgeon Generals of the other services, were convened. The notion of using the physician assistant training model was abandoned, in part due to opposition by psychologists who argued that because physician assistants were only credentialed to work under physician supervision such training would connote a status not in keeping with psychologists' independent licensure. Not surprisingly, military psychiatry insisted that the only appropriate model required completion of the majority of the medical school curriculum as well as a psychiatric residency.

Frustrated by delays and pressed by several letters from Senator Inouye to the Assistant Secretary of Defense for Health Affairs, in 1991 four active duty military psychologists were recruited into what became known as the DoD Psychopharmacology Demonstration Project (PDP), and in July of that year the first year of medical school began (DeLeon, 2003; Laskow & Grill, 2003; Newman et al., 2000; Sammons, 2010; Sammons & Brown, 1997). The program was to continue in various iterations until 1997. It was abandoned after the American Psychiatric Association succeeded in placing language in the congressional appropriations bill for that year mandating that no further funds be expended on the PDP.

Throughout its existence, the PDP had been monitored by an external agency contracted to provide oversight of the curriculum and training experiences in the PDP. This group—the American College of Neuropsychopharmacology—produced a number of reports on the project, the most important of which was their final analysis (American College of Neuropsychopharmacology, 1998). Although the American College of Neuropsychopharmacology took issue with various components of the training program over the years, they ultimately concluded that the program had succeeded in its aim of training a cadre of appropriately trained psychologists who could prescribe independently and safely. The PDP trained 10 psychologists, all of whom went on to successful careers in the military, and all of whom prescribed independently and without incident. After the PDP was defunded, a fellowship program at Tripler Army Medical Center was established that operated until the mid-2000s. By that time, several civilian training programs aimed at producing psychologist prescribers were established, and various branches of the military sent psychologists to such programs for training (see Sammons, 2010, for a synopsis).

APA Actions

Also in 1989, the Board of Professional Affairs, which is responsible for implementing APA policy, held what was likely the first formal association meeting on the subject of prescriptive authority. Included at this meeting were representatives from the DoD project. The meeting culminated with the passage of a resolution endorsing prescriptive authority and development of a curriculum for same (Board of Professional Affairs, unpublished minutes, April 1, 1990; Paige & Robinson, 2003).

As noted earlier, an ad hoc task force convened by APA published a report in 1993 in the journal *Professional Psychology: Research and Practice* that suggested psychologists should consider three separate levels of training leading to various practice competencies in psychopharmacology (Smyer et al., 1993). This group recommended three specific levels of training. Level 1 training would be general knowledge presumed to be requisite for all practicing psychologists. Such knowledge could be acquired via a graduate level course in psychopharmacology. Level 2 training was more advanced and presumed that the psychologist acquired supervised experience in the use of psychotropics in addition to didactic material; this level was presumed to lead to consultative, but not independent, practice in psychopharmacology. Level 3 training was more intense and required extended didactic and training experience designed to lead to independent practice in prescribing (Smyer et al., 1993).

This document formed the basis for further elaboration of training in psychopharmacology, but it communicated two fundamental errors that became impediments in curricular development. The first of these was the assumption that psychologists had either an interest or desire to engage in an extensive curriculum that would not lead to independent prescribing but to consultative practice (i.e., Level 2 training). This intermediate step proved impossible to implement, and as of this date, no training protocol meeting the expectations of Level 2 training has been implemented. The second erroneous assumption promulgated by the Task Force was that education in psychopharmacology required both extensive prerequisite education, akin to premedical education, and extensive, full-time postdoctoral training. Because most psychologists do not have a premedical background, and because most licensed psychologists lack the means to abandon careers and return to full-time postdoctoral education, these assumptions—however meritorious in principle—proved unworkable. Much of the work of subsequent APA psychopharmacology task forces was spent in dealing with the unforeseen consequences of these recommendations.

In 1992, the APA Board of Educational Affairs, with partial funding support from the Centers for Mental Health Services, convened working groups to devise ideal curricula for Level 1 and Level 2 training. The Level 1 curriculum was envisioned as a graduate course addressing nine principal content areas (Kilbey et al., 1995). These content areas are presented in Exhibit 15.1.

EXHIBIT 15.1
Board of Educational Affairs Level 1 Task Force Recommendations (Kilbey et al., 1995)

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 use 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

In the meantime, the APA Commission for the Advancement of Professional Practice had taken up the matter of appropriate training for those engaged in independent practice (Level 3) of prescriptive authority. A Commission for the Advancement of Professional Practice working group produced a series of recommendations, which are substantially the same as those currently promulgated. The product of this working group was then addressed by the Council of Representatives Prescription Privileges Working Committee and, by vote of Council in August 1996, was enacted as APA policy (APA, 1996). The chief recommendations of the APA Council of Representatives appear in Exhibit 15.2.

In 1995, the APA Council of Representatives adopted prescriptive authority as a goal for the association (Sammons & Olmedo, 1997). In 1997, the APA Council of Representatives again took up the matter of prescriptive authority, this time to support the development by the College of Professional Psychology of a national examination in psychopharmacology—the Examination for the Professional Practice of Psychopharmacology—which remains in place today (Bricklin & Ciuccio, 2003). Its primary purpose was to provide a tool for state licensing boards to assess competencies associated with prescribing psychologists. The examination has now been administered to more than 200 applicants, all of whom have completed the didactic portion of an established training program. It assesses knowledge in ten content domains: integration of psychopharmacology and psychological practice (15%); neurosciences (8%); nervous system pathology (9%); physiology and pathophysiology (9%); biopsychosocial and pharmacologic assessment and monitoring (10%); differential diagnosis (13%); pharmacology (12%); clinical psychopharmacology (13%); research (4%); and professional, ethical, legal, and interprofessional issues (7%; APA, 2006).

In 2009, the APA Council of Representatives enacted criteria by which programs offering postdoctoral education in psychopharmacology could receive designation by APA. The criteria were subsequently updated and published (APA, 2012). Key criteria are listed in Exhibit 15.3. At the time of this

EXHIBIT 15.2
The 1996 Key Recommendations of the American Psychological Association's Council of Representatives Regarding the Suggested Postdoctoral Training in Psychopharmacology for Prescription Privileges

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1. Licensure as a health service provider in psychology
2. Demonstrated prerequisite knowledge in anatomy, physiology, biochemistry, neuroanatomy, and psychopharmacology
3. 300 contact hours in the following domains and subjects:
    a. Neurosciences
        i. Neuroanatomy (25 hr)
        ii. Neurophysiology (25 hr)
        iii. Neurochemistry (25 hr)
    b. Clinical and research pharmacology and psychopharmacology
        i. Pharmacology (30 hr)
        ii. Clinical pharmacology (30 hr)
        iii. Psychopharmacology (45 hr)
        iv. Developmental psychopharmacology (10 hr)
        v. Chemical dependency and chronic pain management (15 hr)
    c. Pathophysiology (60 hr)
    d. Introduction to physical assessment and laboratory examinations (45 hr)
    e. Pharmacotherapeutics
        i. Professional, ethical, and legal issues (15 hr)
        ii. Psychotherapy/pharmacotherapy interactions (10 hr)
        iii. Computer-based aids to practice (5 hr)
        iv. Pharmacoepidemiology (10 hr)
4. Clinical practicum
    a. Minimum 100 patients seen for medication
    b. Inpatient and outpatient settings
    c. Appropriate didactic instruction
    d. 2 hr weekly individual supervision

writing, three programs have achieved designated status; all offer a postdoctoral master's in psychopharmacology. The programs are housed in the California School of Professional Psychology in San Francisco; New Mexico State University in Las Cruces, New Mexico; and Fairleigh Dickinson University in Teaneck, New Jersey.

EXHIBIT 15.3
Designation Criteria for American Psychological Association-Accredited Postdoctoral Education in Psychopharmacology (APA, 2012)

I. Participants:
    1. Graduates of doctoral programs in psychology
    2. Holding a current license to practice as a psychologist
    3. Practice as a "health service provider" as defined by the APA
II. Curriculum: 400 contact hours in the following domains:
    1. Basic science (anatomy, physiology, biochemistry)
    2. Neurosciences (neuroanatomy, neurophysiology, neurochemistry)
    3. Physical assessment and laboratory examinations (physical assessment, laboratory and radiological assessment, medical terminology and documentation)
    4. Clinical medicine and pathophysiology:
        a. Emphasis on cardiac, renal, hepatic, neurologic, gastrointestinal, hematologic, dermatologic, and endocrine systems
        b. Clinical medicine (emphasis on signs, symptoms, and treatment of disease states with behavioral, cognitive, and emotional manifestations or comorbidities)
        c. Differential diagnosis
        d. Clinical correlations
        e. Substance abuse and co-occurring disorders
        f. Chronic pain management
    5. Clinical and research pharmacology and psychopharmacology (pharmacology, clinical pharmacology, pharmacogenetics, psychopharmacology, developmental psychopharmacology, diversity in pharmacological practice)
    6. Clinical pharmacotherapeutics (combined therapies, computer-based practice aids, pharmacoepidemiology)
    7. Research (method and design of psychopharmacologic research, research interpretation and evaluation, Food and Drug Administration drug development and other processes)
    8. Professional, ethical, and legal issues (applications of existing law and standards, relationships with pharmaceutical industry, conflict of interest, evaluation, marketing practices, critical consumer)

One final APA initiative deserves mention: the formulation of practice guidelines in psychopharmacology. The guidelines were developed by a working group of Division 55 members in collaboration with other APA divisions; they were presented to APA's Council of Representatives in 2009 and, after several rounds of comment, were approved in

2011. In addition to covering general considerations regarding the use of psychotropics in psychological practice, the guidelines address educational requirements for the practice of psychopharmacology, elements of assessment, intervention, and consultation that are unique to the field and relationships with other providers. As not all psychologists so trained are legislatively enabled to prescribe, the guidelines address practice at the collaborative as well as independent practice levels (APA, 2011).

American Society for the Advancement of Pharmacotherapy

In 1997, a group of psychologists interested in prescriptive authority met to discuss the initiation of a formal advocacy group within APA. Representatives from several divisions, notably Clinical Psychology (Division 12) and Independent Practice (Division 42), with representation of psychologists involved in rural health and psychopharmacology decided to house the interest group inside of Division 31: the Division of State, Provincial, and Territorial Affairs. In 2001, the interest group achieved provisional status as a new division, and the next year the APA's Council of Representatives voted full division status in the association under the name of the American Society for the Advancement of Pharmacotherapy (Division 55; Paige & Robinson, 2003).

Legislative Actions

Legislative activity on prescriptive authority for psychologists has occurred in more than 25 states. In two of those, Hawai'i and Oregon, bills were approved by the legislature but ultimately suffered a gubernatorial veto. The state of Indiana has approved legislation allowing psychologists in federal demonstration projects to prescribe, but psychologists there, like their colleagues in Guam, have yet to take advantage of this legislation. As of the time of this writing, three states and the territory of Guam have approved prescriptive authority for psychologists. Exhibit 15.4 lists the states and U.S. territories introducing prescriptive authority legislation.

EXHIBIT 15.4

States and U.S. Territories Introducing Prescriptive Authority Legislation (APA Practice Organization, 2013; Updated by the Author in 2015)

Alaska
Arizona
California
Connecticut
Florida
Georgia
Guam[a]
Hawai'i[b]
Idaho
Illinois[c]
Indiana[d]
Iowa
Louisiana[e]
Maine
Mississippi
Missouri
Montana
New Hampshire
New Mexico[f]
New York
North Dakota
Ohio[g]
Oklahoma
Oregon[b]
Tennessee
Texas
Utah
Virgin Islands
Wisconsin
Wyoming

[a] Enacted but not implemented.
[b] Passed by legislature, Governor's veto.
[c] Enacted in 2014.
[d] Demonstration language passed in 1994, not implemented.
[e] Enacted in 2006.
[f] Enacted in 2003.
[g] Demonstration project language introduced in 2013.

Approximately 75 psychologists are prescribing in New Mexico, an equivalent number do so in Louisiana, and psychologists continue to prescribe within the DoD and Indian Health Service. In June 2014, the state of Illinois became the third state enabling appropriately trained psychologists to prescribe. At the time of this writing, implementing regulations to the legislation are still being written, so no psychologists prescribe there currently. All have done so without any evidence of patient harm or that they have in any way deviated from accepted standards of care regarding use of psychotropics.

This condensed history traces the evolution of prescription privileges for psychologists over the past six decades. It has materialized into a specialty of health care psychology with legislative approval in several jurisdictions, formal training guidelines, professional examination, and an APA division. Nevertheless, concerns continue to be raised about the safety and efficacy of prescribing psychologists from both within and outside the profession.

ARGUMENTS AGAINST AND FOR PRESCRIBING PSYCHOLOGISTS

Prescribing psychology is the most contentious specialty within health care psychology; forces both external and internal to the profession have converged to limit progress toward achieving widespread prescriptive authority. Internally, concerns that this new specialty area would ineluctably change practice for all psychologists, not just those prescribing, were combined with more practical fears (e.g., that malpractice premiums would rise for all psychologists, that a separate group of prescribing psychologists would complicate licensing and interpretation of ethical standards). More fundamentally, however, prescriptive authority in many respects represents the culmination of a gradual shift in the profession away from a mental health profession to a broader health care profession (Puente, 2011). As this in many respects represents an essential transformation in the definition of the discipline, it makes internally based arguments against expansion of scope of practice perhaps more understandable.

The "Undermining Science and Psychotherapy" Argument

Perhaps the argument against prescriptive authority that is most closely associated with academic psychology is that it would threaten traditional models of training in psychological science (Heiby, 1998). In brief, this argument holds that major additions to the core curriculum for psychology would substantively change the psychology curriculum at the undergraduate, graduate, and postgraduate levels and squeeze out essential psychological knowledge in favor of a more medicalized curriculum. In point of fact, however, training for prescribing psychologists has always occurred at the postdoctoral level. It encompasses biological and medical material deemed essential not only for prescriptive authority but also for the ability to practice in an integrated health care delivery setting. This postdoctoral training, then, is admittedly medical in orientation, but it is offered in conjunction with a "psychological model of prescribing" that ensures learners do not acquire only a medical perspective on prescribing. The training of prescribing psychologists remains predominantly postdoctoral and has had little effect on the graduate curriculum. Changes at the graduate level have been recommended, particularly the inclusion of a required course in psychopharmacology. These changes perhaps have less to do with the prescriptive authority movement than with the nature of modern mental health training and practice. Although psychopharmacology remains an elective course in most graduate psychology programs, a survey or familiarization course in psychopharmacology is commonly required for many master's level mental health providers, such as marriage and family therapists and clinical counselors. It can effectively be argued that inclusion of this requirement reflects the current pharmacologically based nature of much mental health practice.

The Argument Against Psychotropic Medications

Prescribing psychologists argue that because they are trained in psychological and not medical sciences, their treatment approach is fundamentally different from those trained in a more biologically oriented heuristic (e.g., medical and osteopathic physicians, nurses). This premise underlies the assertion that psychologists, because they conceptualize mental disorders differently than physicians, are less likely to rely exclusively on medication and more likely to incorporate nonmedical interventions into the treatment plan (Sammons, 2001). It has also been argued that because psychologists are skilled in the provision of a therapeutic modality that is essentially nonspecific (psychotherapy), they are both more likely to recognize the benefits of other nonspecific therapies (most psychopharmacology) and appreciate and utilize the potency of the placebo response (Sammons, 2001).

However, several arguments have been made against the use of psychotropics. Some psychologists argue that because the placebo effect associated with psychotropic medications is so robust, psychologists should eschew using such agents (Greenberg, 2010). Others argue that because investigation into the efficacy of psychiatric drugs—and by extension most published psychiatric outcome data—has been heavily influenced by pharmaceutical companies' marketing initiatives, psychologists should be enjoined from using such agents. This line of opposition holds that misreporting of the efficacy of psychotropics is endemic in the psychiatric literature and that poor study design and overt manipulation of results has led to a situation where it simply cannot be determined whether, or under what circumstances, psychotropic drugs might benefit patients (e.g., Pigott et al., 2010). Accordingly, these opponents recommend that psychologists not involve themselves in the use of psychotropic drugs.

Reflecting these concerns, in 2002 the APA Task Force on External Funding was established. In their report, the APA Task Force on External Funding (2005) found significant links between pharmaceutical marketing and prescribing patterns and, although not directly proscribing such activities, cautioned against the risks associated with involvement with pharmaceutical firms in both practice and association affairs.

The Patient Safety Argument

Since the inception of the prescriptive authority movement, opponents both within and outside the profession have raised concerns that, due to a lack of medical education and training, patient safety will be compromised should psychologists prescribe. In spite of more than 20 years of psychologist prescribing without a single recorded instance of adverse patient outcome due to practice outside acceptable standards, this argument has become a tolling bell for those opposed to prescriptive authority. From the beginning of the debate about psychologist prescribing, a recurrent theme has been that one must follow the medical (and often postgraduate psychiatric residency) curriculum exactly to safely prescribe. This argument, of course, is undone by the observation that the vast majority of psychotropics are already prescribed by nonpsychiatric physicians who have never been exposed to a psychiatric internship or residency. The patient safety argument has commonly been used by the medical profession whenever other health care professions have sought to expand their scope of practice (Levant & Sammons, 2002). Negating this argument is the fact that prescribing psychologists have now accumulated more than 20 years of practice, with no evidence that psychologists endanger patient safety by prescribing in an unsafe manner or outside the bounds of accepted standards of care.

The Overabundance of Prescribers Argument

Another of the common arguments made by opponents to prescriptive authority centers on the irrefutably true observation that psychotropic agents are generally overused, especially in the United States, where the influence of pharmaceutical marketing efforts is pernicious. Antidepressant, antipsychotic, mood stabilizer, and psychostimulant prescribing has been widely criticized, with particular concern raised about disproportionate prescribing in primary care (Middleton & Moncrieff, 2011) and in vulnerable populations such as children and adolescents (Harrison, Cluxton-Keller, & Gross, 2012) as well as older adults (Mitka, 2012). Opponents of psychologist prescribing, fearful that psychologists will add to the burden of overprescription, cite this as a principal reason to stand in opposition (e.g., McFall, 1998).

However, those in favor of psychologist prescribing believe that psychologists will use medications more abstemiously. Because they are not trained in a medical model, psychologists have the advantage of a wide range of nonmedical treatments, and they conceptualize patient problems from a psychosocial rather than a medical model (McGrath, 2010). For these same reasons, in certain settings, such as primary care where the vast majority of psychotropics are prescribed by nonpsychiatric providers with relatively limited training in mental health diagnosis and treatment, it is argued that psychologists can have a disproportionate influence on reducing overprescription (McGrath & Sammons, 2011).

The concerns of those psychologists opposed to prescriptive authority are perhaps more understandable if placed in the context of changes in the health care delivery system in general, and changes in how the profession of psychology views itself in particular. Such changes clearly indicate that what was once represented as state of the art training in clinical psychology may no longer reflect the practice skills needed to work in the health care arena. Because changes in practice often are the driver of changes in education, not the reverse, it is not difficult to imagine that resistance might exist among academic psychologists.

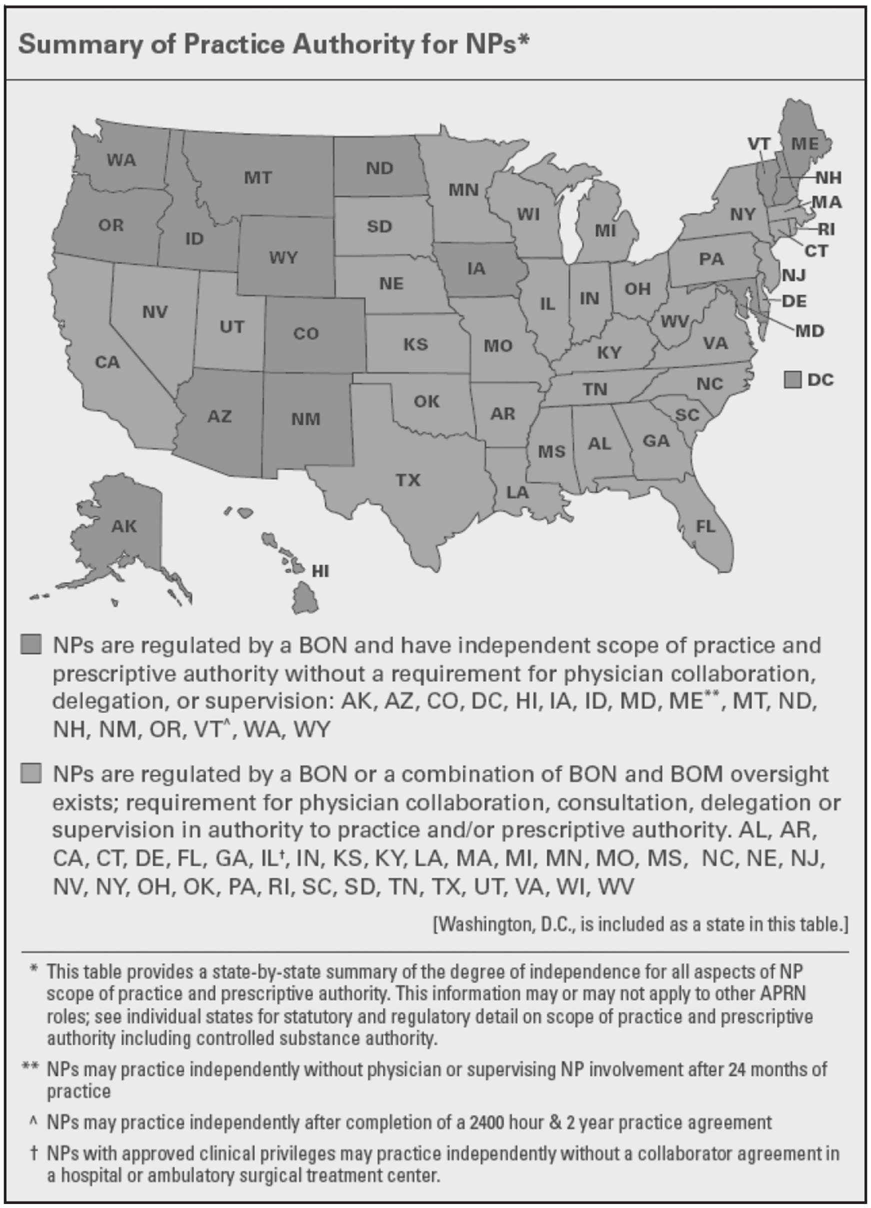
Over time, psychology has gradually redefined itself as a health care profession, both by activities of the APA Council of Representatives and the will of leaders of the profession (Health Service Psychology Education Collaborative, 2013). Given this context, we can track developments in other professions engaged in delivery of health care services. In 2009, Fox and colleagues surveyed changes in scope of practice of other health care professionals having the ability to prescribe psychotropics. Of these professions, advanced practice nurses have achieved the greatest success in expanding their scope of practice over the past several decades. There are now more nurse practitioners and physician assistants providing primary care services than there are physicians (Fox et al., 2009). Nevertheless, opposition from organized medicine to the expanding scope of practice of nonphysician practitioners remains fierce (Kuntz, 2011).

Figure 15.1 demonstrates the expanding scope of practice for advance nurse practitioners. In 17 states, advance practice nurses now have authority to prescribe without physician oversight; in the remaining states and territories, they do so with only limited physician oversight. The number of states granting unlimited prescriptive authority to nurse practitioners has slowed somewhat, largely in response to calls from organized medicine to limit the scopes of practice of nonphysician providers. However, advances in scope of practice continue to be made among nurse practitioners, physician assistants, podiatrists, and other so called Drug-Enforcement-Administration-labeled “midlevel practitioners.”

Presumptions of need for more psychologists can be based on a number of factors. Perhaps the simplest is a demographic calculation: How many prescribing mental health providers are there, and for what proportion of the U.S. population do they provide services? In 2010, the U.S. Department of Labor estimated that were approximately 154,000 clinical, counseling, and school psychologists (U.S. Bureau of Labor Statistics, 2013). Per 2010 data, there were approximately 38,000 practicing psychiatrists in the United States, of whom approximately 32,000 were engaged in patient care (Association of American Medical Colleges [AAMC], 2012a). Psychiatry is the third “oldest” of all medical specialties, with 57% being more than 55 years of age. Of the psychiatric workforce, 30% is made up of physicians who are graduates of foreign medical programs. The number of physicians entering residency training for psychiatrists continues to decline, with a –0.7% overall 5-year enrollment rate between the years 2005–2010 (AAMC, 2012a). Citing an aging workforce, the AAMC (2012b) concluded that it is unclear whether the workforce for psychiatry will keep up with the demand.

In certain sectors of the population, shortages are much more acute, and psychiatric services become extraordinarily costly. In the state of California, for example, psychiatrists are among the 10 most highly paid professionals in the state, with salaries far outstripping those of the executive branch of the state government (Freeman, Yap, & Dopp, 2012). In California’s Department of Corrections and Rehabilitation, where approximately 50% of all psychiatry positions are unfilled, the salary range for full-time psychiatrists ranges from $400,000 to $800,000 annually (Freeman et al., 2012).

The Health Resources and Services Administration (HRSA)—an agency in the U.S. Department of Health and Human Services—estimates that there are, as of November 2013, approximately 3,700 mental health provider shortage areas unequally distributed across the United States, mostly in rural, less affluent counties. A mental health provider shortage area is based on a ratio of one psychiatrist per 30,000 individuals in the population; HRSA does not include numbers of psychologists or other mental health providers in such areas. Using HRSA’s own calculations, an additional 2,400 psychiatrists would be required to resolve these shortages (HRSA, 2013). Thus, even



Summary of Practice Authority for NPs*

■ NPs are regulated by a BON and have independent scope of practice and prescriptive authority without a requirement for physician collaboration, delegation, or supervision: AK, AZ, CO, DC, HI, IA, ID, MD, ME**, MT, ND, NH, NM, OR, VT^, WA, WY

▨ NPs are regulated by a BON or a combination of BON and BOM oversight exists; requirement for physician collaboration, consultation, delegation or supervision in authority to practice and/or prescriptive authority. AL, AR, CA, CT, DE, FL, GA, IL†, IN, KS, KY, LA, MA, MI, MN, MO, MS, NC, NE, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, UT, VA, WI, WV

[Washington, D.C., is included as a state in this table.]

* This table provides a state-by-state summary of the degree of independence for all aspects of NP scope of practice and prescriptive authority. This information may or may not apply to other APRN roles; see individual states for statutory and regulatory detail on scope of practice and prescriptive authority including controlled substance authority.

** NPs may practice independently without physician or supervising NP involvement after 24 months of practice

^ NPs may practice independently after completion of a 2400 hour & 2 year practice agreement

† NPs with approved clinical privileges may practice independently without a collaborator agreement in a hospital or ambulatory surgical treatment center.

FIGURE 15.1. Summary of nurse practitioner (NP) legislative advances. BON = Board of Nursing; BOM = Board of Medical Examiners; APRN = advanced practice registered nurse. From "25th Annual Legislative Update: Evidence-Based Practice Reforms Improve Access to APRN Care," by S. J. Phillips, 2013, *Nurse Practitioner*, *38*, p. 20. Copyright 2013 by Lippincott, Williams & Wilkins. Reprinted with permission.

if a small percentage of clinical psychologists in the United States were trained to provide psychotropics, it is likely that treatment gaps, especially in rural or underserved areas, could be improved.

HRSA data do not address a growing change in the delivery of mental health care services that is increasingly concentrated in the primary care environment. Seventy-seven percent of U.S. counties are judged to have severe shortages of psychiatrists, and more than 20% have a severe shortage of nonprescribing mental health workers, such as psychologists, marriage and family therapists, professional counselors, and advanced practice nurses (Hoge et al., 2013).

An estimated 25% of the American population, or roughly 45 million people, can be annually classified as experiencing a behavioral or substance abuse disorder or diagnosis; one in 17 Americans will experience a severe mental disorder such as major depression or psychosis (Centers for Disease Control and Prevention, 2011). Of these 45 million people, however, less than 40% with a mental disorder received treatment; only 10% with a substance abuse disorder received treatment. Shortage of behavioral workforce providers is a key factor in limiting treatment accessibility (Hoge et al., 2013).

Of course, factors other than provider supply will affect demand for mental health services. Institutional and individual stigma remains a formidable barrier, particularly in certain high-risk populations such as first responders and the military. Care is complicated by confusing payment schemes, the lack of parity for payment for mental health disorders that existed until an Executive Order was signed by President Obama in November 2013, and compartmentalization of treatments for substance abuse and other mental disorders. Although the Patient Protection and Affordable Care Act (ACA) of 2010 has provisions to address these disparities and to improve the availability of evidence-based treatments (Mechanic, 2012), results await full implementation. Most scenarios predict a significant increase in coverage and therefore demand for mental health services under the ACA. Less than 50% of currently issued policies cover large categories of services that will be available under the ACA, including mental health care. Others predict that more than 62 million relatively high need Americans previously ineligible for mental health services will be covered under the ACA for such services (Pearlman, 2013). Unfortunately, it appears that many mental health providers have been overlooked in formulating key provisions of the ACA. In current schemes of provider inclusion into Accountable Care Organizations, a key concept in the ACA, only psychiatrists are included.

Numerous studies exist demonstrating that as factors, such as the ACA, concentrate the delivery of health care into the primary care environment, large scale shortages of primary care physicians can be confidently predicted within the next decade. The ACA is predicted to result in not only shortages of health care providers but also, as covered treatments for substance abuse expand, an increase in the use of pharmacological agents and in physician-directed care in this area (Buck, 2011). Estimates range from shortages of 40,000 to more than 50,000, exacerbated by the slow pace of training physicians, the unattractiveness of family or general internal medicine to most medical graduates, and shifts from full- to part-time work philosophies among primary care physicians (Bodenheimer & Smith, 2013). These authors noted that expanding the scope of practice of registered nurses, pharmacists, and other professionals and creating “standing orders” for nonlicensed health care personnel would both expand capacity and move the discussion away from a calculation of the number of physicians needed to one that focuses on the range of licensed and unlicensed personnel required to provide a full range of preventive and interventional health services. Such services would include the expert provision of psychopharmacology from a model that emphasized not only medications but their integration into a comprehensive behavioral protocol.

In addition to looking at the type, number, and skills of providers working in primary care, it is also important to look at the type of services that patients with mental health needs receive in primary care and then make a determination whether such services are sufficient. No better evidence on this point comes from an epidemiological analysis of changes in demand for mental health services over the past decade. To accomplish this, Olfson and Marcus (2009) examined epidemiological data from the Medical Expenditure Panel Surveys for the years 1995–2006. Although these data generally pertain to the use of antidepressants, they speak to utilization of other psychotropics and type of service provided. Key findings of Olfson and Marcus’s survey are found in Exhibit 15.5.

Several other trends in prescription of psychotropics pertain to the specialty of prescribing psychology. For example, while more and more mental health services are being provided in primary care by nonpsychiatric providers, primary care physicians are more likely to write a prescription for an antidepressant without an accompanying mental health diagnosis than are other nonpsychiatric physicians (Mojtabai & Olfson, 2011). The number of

EXHIBIT 15.5
Key Findings of Olfson and Marcus's (2009) Survey

- The percentage of Americans receiving antidepressants increased from 13.3 million persons in 1996 to 27 million persons. More people receiving antidepressants also were given prescriptions for antipsychotics (5.5%–8.9%).
- The percentage of persons receiving psychotherapy while being prescribed antidepressants declined from 31.5% to 19.9%.
- The percentage of persons receiving services from psychologists declined from 10.6% to 8.7%.

such prescriptions visits in which an antidepressant was prescribed without a corresponding diagnosis increased substantially in the decade studied by Mojtabai and Olfson (2011) from 59.5% to 72.7%. This suggests, albeit not definitively, that utilization of antidepressants may be less evidence-based in primary care than in other specialty medical settings. Primary care providers may be using antidepressants for subclinical variants of depression or other disorders, or they may be increasingly used for off-label indications. Compounding the problem is the earlier finding by Olfson and Marcus (2009) indicating a substantial decline in the provision of psychotherapy for patients treated for depression in primary care (see Exhibit 15.5).

When taken together, it is difficult to refute that (a) more patients are being treated for depression and other mental disorders in the primary care environment than in the past; (b) these patients are being increasingly prescribed antidepressants and antipsychotics, generally without a corresponding diagnosis; and (c) fewer and fewer patients treated in primary care receive psychotherapy services. To this author, this is the principal paradox in modern use of psychotropic agents: In spite of the recognition that in almost all cases, the prescription of an antidepressant alone without any other form of intervention does not improve long-term patient outcome, stand-alone pharmacological interventions are increasingly the only treatment offered to patients with depression or other mental health conditions.

Let us combine these observations with several other disturbing trends in American pharmacotherapy. First, American mental health providers use psychotropics in rates that far exceed those in other industrialized nations. This trend is particularly apparent in American youths who are disproportionately more likely to receive a prescription for an antipsychotic or psychostimulant. U.S. youths are twice as likely to receive such prescriptions as similarly aged cohorts in the United Kingdom (Parkin, Hagberg, & Jick, 2011). Antidepressants and other mental health drugs represent the second most prescribed class of agent in the United States, with 472,000,000 prescriptions written in 2012, up from 439,000,000 in 2008 (IMS Health, 2012).

Costs of services will likely drive more mental health provision into the primary care arena. Although it is estimated that care integration by the addition of specialty mental health care in the primary care environment will increase, the amount by which it does so is uncertain. A recent British study found that treatment by a mental health professional costs approximately $400 for each 1-point reduction in scores on the Beck Depression Inventory—Second Edition (Beck, Steer, & Brown, 1996) in a geriatric population (Holman et al., 2011).

Therefore, it is clear that the issue is not how many providers capable of prescribing mental health drugs exist but whether such providers can utilize such agents effectively and in the best interests of patients. The significant increase in the prescription of antidepressants and other psychotropics in primary care is not without risk (Middleton & Moncrieff, 2011), and it would behoove American health care providers to utilize such agents both more conservatively and in the context of a comprehensive behavioral regimen.

Although organized medicine continues to criticize the training of prescribing psychologists and other nonphysician health care providers, no evidence has emerged that any nonphysician health care group that provides psychotropics has done so in an unsafe or unprofessional manner. Indeed, evidence indicates that patients are both well served and satisfied with treatment by nonphysicians (e.g., Martínez-González et al., 2014).

MAJOR ACTIVITIES AND ACHIEVEMENTS OF PRESCRIBING PSYCHOLOGISTS

Within this context, the major achievements of the specialty of prescribing psychology can be summarized as follows:

- a recognized specialty of health care psychology;
- establishment of an APA division;
- promulgation of formal training guidelines;
- legislative approval for psychologists to prescribe in several jurisdictions with several more likely to ensue;
- development of professional examination for prescribing psychologists;
- promotion of a complementary, evidence-based biopsychosocial model of prescribing (and not prescribing); and, most importantly,
- a valuable resource of prescribing to vast numbers of untreated and undertreated patients suffering from mental and addictive disorders.

The latter achievement is secured as a result of the daily activities of prescribing psychologists in the United States and other countries. Although in most respects prescribing psychologists function as do their counterparts without prescriptive authority, the ability to manage medications while providing other interventional services is, of course, the key distinction separating prescribers from other psychology clinicians. This imposes some additional burden on prescribers that must be addressed in education and clinical training, including an understanding of common laboratory examinations and their interpretation, the ability to discern clinical interactions between psychotropic drugs and other drugs that the patient may be prescribed, and the ability to understand and predict the effect of prescription of a psychotropic agent on various disease conditions. Many psychotropics, for example, can affect basic metabolic processes or cardiac functioning, so an understanding of the risks involved in prescribing for patients with cardiac compromise or systemic metabolic issues is essential for safe practice.

The prescribing psychologist will, then, not only conduct a comprehensive psychological assessment but will simultaneously examine physical functioning and address this in the treatment plan. This requires not only knowledge of common physical disease states and their assessment but also the ability to recognize, refer, and collaborate with medical colleagues regarding the treatment of such conditions. Prescribing psychologists are taught the elements of the physical examination, but importantly they are not expected to perform such examinations. Just as in psychiatry, the physical examination is left to medical providers who have greater expertise. Psychiatrists are taught the physical examination as a component of their medical education, but it is estimated that fewer than 5% of psychiatrists perform a physical examination after the second year of the psychiatric residency (Kick, Morrison, & Kathol, 1997; Krummel & Kathol, 1987). It goes without saying, however, that an appreciation of such procedures is essential to safe prescribing.

As discussed earlier in this chapter, a long-held tenet of the advantages of prescribing psychologists is that they will optimize treatment by combining drug and nondrug interventions or that they will use psychotropic agents more sparingly than prescribers trained in an allopathic or medical model. In this author’s experience as a prescriber, this is largely true. There may be instances where some form of psychological or behavioral intervention is simply not called for (e.g., in the situation where a patient is on a maintenance regimen of medication and has already benefited from psychotherapy). How often a psychologist will prescribe is more dependent on the practice setting. If, for example, the psychologist is the only prescribing mental health professional in a remote practice setting, it is likely that she or he will prescribe to a larger percentage of patients than one who practices in an integrated care setting where other mental health resources are available.

It is also likely that, because use of psychotropics is culturally as well as professionally mediated, psychologists in other countries would use fewer psychotropics than their American counterparts, given that the interest in prescriptive authority for psychologists is not limited to the United States. In the Netherlands, for example, several psychologists have completed formal training and have pursued prescriptive authority legislation (Levine, 2012). In 2012, a branch of the New Zealand Ministry of Health—Health Workforce

New Zealand—contacted the New Zealand College of Clinical Psychologists with a request to investigate prescriptive authority (New Zealand College of Clinical Psychologists, 2012), and similar requests have been made by counterpart agencies in Australia. The Republic of South Africa introduced legislation enabling psychologists there to prescribe, and the issue is under active discussion in Great Britain and several Canadian provinces. Psychologists have used the ability to prescribe psychotropic medications for more than 20 years around the globe.

FUTURE DIRECTIONS

As the ACA is implemented, large numbers of Americans previously ineligible for comprehensive mental health services will now benefit from such treatment. Currently, insufficient numbers of psychologists and other mental health providers exist to meet this anticipated demand. It is estimated that less than 20% of all Accountable Care Organizations have the capability to provide for comprehensive mental health services (Lewis et al., 2014). Although not all patients seeking mental health services will require pharmacological intervention, the need for integrated medication treatment will undoubtedly increase. Properly trained prescribing psychologists can assist in not only meeting demonstrated shortages in mental health services but can, via the utilization of psychological therapies, contribute to a more rational use of psychotropic agents.

To achieve these goals, the profession must integrate the training required to become a prescriber more closely with the graduate curriculum. In 2013, the APA's Council of Representatives adopted a new definition of psychology as a health service profession and outlined a competency based model that, if implemented, will significantly alter the complexion of graduate psychology education (Health Service Psychology Education Collaborative, 2013). Such a competency based model presumes not only closer collaboration with other health care providers but also a knowledge base that allows practitioners to integrate other domains of knowledge, including biological sciences (Health Service Psychology Education Collaborative, 2013). A shorter training cycle is envisioned such that psychologists can enter into practice within 5 years of beginning their studies. A targeted, competency-based curriculum that integrates practical biological sciences in the context of collaborative practice in health delivery settings is ideally suited to imparting clinical psychopharmacological skills. There is, then, cause for optimism that suitable modifications may be made to approved educational and training models for professional psychologists to allow greater numbers to acquire prescriptive authority training.

Of course, other obstacles remain. Currently, too much of the psychopharmacological curriculum is sequestered in the postdoctoral realm. According to the APA's standards for designating training programs in psychopharmacology, a maximum of 20% of the curriculum can be taken at the doctorate level (APA, 2012). This introduces an element of inefficiency that, unless reassessed, will continue to limit the number of trainees in psychopharmacology. Additionally, there are only three designated postdoctoral training programs in psychopharmacology. If sufficient numbers of psychopharmacologically trained psychologists needed to address unmet mental health needs are to be trained, educators will need to take steps to expand such programs and make their training more efficient.

Guild-related issues remain an impediment as well, particularly legislative efforts by organized psychiatry to limit the number of prescribing psychologists. Organized psychology will need to strengthen collaborative ties with other professions who share the vision of expanding high-quality mental health interventions to patients in need. The decision as to whether psychopharmacology constitutes a part of the treatment plan should be dictated by evidence, not guild biases, if we are to succeed in reaching this goal.

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CHAPTER 16

OCCUPATIONAL CLINICAL PSYCHOLOGY

James Campbell Quick and Cary L. Cooper

Clinical psychology is the branch of psychology that specializes in the research, assessment, diagnosis, evaluation, prevention, and treatment of emotional and behavioral disorders. By extension, *occupational clinical psychology* (OCP) may be understood as the emergent specialty in psychology concerned with emotional and behavioral disorders in occupational settings and organizations. “Occupational clinical psychology” is a term coined by James S. J. Manuso in 1975; Manuso (1983) then elaborated on this term in his edited volume *Occupational Clinical Psychology*. He gave primary credit for the early development of the field to Harry Levinson (1983), who wrote the first chapter in the 1983 book entitled *Clinical Psychology in Organizational Practice*. There is now extensive application of clinical psychology to occupational settings and organizational practice.

CONDENSED HISTORY

We use 1975 as the inception point for OCP, recognizing that its roots predate that year. What is significant about the 1970s within the United States was the dominance of occupational, professional, and working populations primarily by men of European origin and descent. Research and practice from that mid-20th century period drew from this majority population. Simultaneously there was a vibrant Black community of business owners, doctors, lawyers, psychologists, nurses, school teachers, and nurses along with other important minority populations (e.g., those of Asian descent, especially on the West Coast of the United States, and those of Hispanic descent, especially in the Southwest and Florida) during this period. Although White men may have shaped the early intellectual contributions of OCP, this does not accurately represent the demographics of those who were (and are) affected by OCP science and practice.

A demographic shift occurred circa 1990 accompanied by globalization. Occupational and professional populations are markedly more ethnically diverse, and this has important implications for OCP. Notably, the recognition that psychological, emotional, and behavioral health risks are not equally or evenly distributed across a population has important implications for occupational clinical psychologists. Understanding the health risks of specific age groups, genders, ethnic groups, and religious orders is key to effective screening, assessment, and treatment. Leaders in occupational health psychology (OHP) began to realize that a broader public health perspective was needed because workers’ lives outside of work have significant effects on their health and well-being. Therefore, although workplace issues were of concern for OHP, so were work–home boundary issues, family, and community. These latter issues have spillover effects into the workplace, impacting the work setting, productivity, and behavioral functioning.

For example, American women are at 4 times the risk of being a victim of physical violence, not just in the workplace, compared to American men (de Becker, 2004). From an OCP perspective, both victim data (who is injured and at risk) as well as perpetrator data (who are high-risk employees most

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likely to cause damage, harm, distress, and trauma) should be examined (Quick, McFadyen, & Nelson, 2014). Moreover, violence exists on a continuum, and milder forms exist within the work setting in simply forms of disrespect or mistreatment.

Mistreatment in the workplace is a complex and dimensional phenomenon. Occupational clinical psychologists have made important contributions to understanding subtle forms of violence, such as bullying and incivility, in organizational settings (Nelson & Quick, 2013; Pandey et al., 2011). Selective incivility is a contemporary form of discrimination in organizations, and the psychological costs that can accrue from discriminatory attitudes and behaviors are known (Cortina et al., 2013). Therefore, OCP must draw on science and practice in public health and safety.

Occupational behavioral concerns have evolved over the years. Beginning in the 1980s (Manuso, 1983), the major concerns included the following: alcoholism, assertiveness training, performance coaching, psychological treatment, affirmative action, job loss, burnout, suicide, and midlife transition. In the 2010s, substance abuse, burnout, suicide, and psychological treatment continue to be concerns, whereas elder care for working adults, job uncertainty, health care, and work–life balance are emergent issues.

There are several ways to think about these behavioral concerns in OCP. First, who is most likely to experience the problem or disorder (e.g., substance abuse, suicide)? Second, who is most likely to cause a problem or become a perpetrator (e.g., workplace violence, incivility or abusive behavior)? Third, who is most likely to benefit from treatment (e.g., psychological therapy, affirmative action)?

KNOWLEDGE BASE

The knowledge base in OCP extends along three lines to address three broad missions of psychology: (a) enhance and develop individual strengths, (b) prevent the occurrence of mental disorders, and (c) repair psychological damage. The advancement of knowledge along these lines affords the occupational clinical psychologist the information necessary to fulfill these three missions. The knowledge base concerning occupational risk factors, the incidence of psychological problems in organizations, and interventions in occupational settings is actively expanding. Much of this knowledge base has developed under the rubric of OHP.

Occupational Risks

The identification of major occupational risks is central to the preventing, or at least reducing, the occurrence of mental disorders. Occupational risk factors of concern to OCP include both the physical environment, which can include safety and security threats to individuals, and the psychosocial environment, which has become better understood over the past half century as a psychological risk for individuals (Quick et al., 2013).

Occupational clinical psychologists play two roles in health and safety standards. First is to understand the occupational health standards articulated by the Occupational Safety and Health Administration, World Health Organization, and other occupational health safeguards. Second is to advocate for improving the standards to afford employees increasingly safe and secure workplaces. There is sufficient research evidence to serve as a basis for both the understanding role and for the advocacy role (Smith & Carayon, 2011; Zohar, 2011).

Occupational health risks exist in the interpersonal, psychosocial environment too. In the 10 years from 1997 to 2007, the scientific evidence suggested an emergence of bullying behaviors in the workplace as significant risks for employees (Pandey et al., 2011). This problem extends to race and gender discrimination, which are more extreme forms of incivility in occupational settings (Bell, 2012). Sexual harassment, sexual assault, and other discriminatory actions by workplace actors can result in emotional and behavioral disorders among targeted individuals and, at the same time, can be manifestations of mental disorders within the perpetrator. Occupational clinical psychologists in these cases have an opportunity for intervention with both perpetrator and with the target.

Organizational injustice and unfair treatment have emerged in the same period as occupational risks for employees (Cropanzano & Wright, 2011).

Although the adverse impacts of procedural injustice caused by unfair processes or procedures and distributive injustice caused by unfair allocation of rewards and benefits are better understood and have deeper scientific support, a third form of injustice has come to the fore. Interactional injustice, often manifest in interpersonal incivility and bullying behaviors, is concerned with the perceived fairness of the interpersonal treatment one receives. Injustice and unfair treatment may arise from emotional or behavioral problems on the part of the perpetrator yet, regardless of cause or intention, lead to real psychological harm to the victim of these behaviors in organizations.

Psychological Problems in Organizations

An important knowledge base of OCP is the specification of manifest psychological problems in the workplace. Descriptive epidemiology of commonly occurring *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; American Psychiatric Association, 1994) mental disorders in the United States suggests that these disorders are highly prevalent (Kessler & Wang, 2008). Roughly half of the population meets criteria for one or more disorder in their lifetime, and roughly one fourth of the population meets criteria in a given year. There are compelling reasons to screen for mental disorders in organizations, where depression and anxiety disorders are among the most common g complaints (Quick & Cooper, 2003).

There is plentiful research on the financial costs of occupational behavior and organizational distress (Cascio, 2000; Cascio & Boudreau, 2011). Among the most significant direct costs are turnover, absenteeism, strikes and work stoppages, accidents, and grievances. The indirect costs include poor morale, communication breakdowns, faulty decision making, and incivility in the workplace.

The burden of occupational suffering does not necessarily mirror the burden of suffering in the larger population. OCP focuses attention on the psychological problems that are the major contributors to the occupational burden of suffering. The most significant occupational symptoms and disorders are cardiovascular disease, job-related burnout, pain and musculoskeletal injuries, and alcohol and illicit drug use in the workforce (Quick & Tetrick, 2011). As the leading cause of death in the industrial worlds and developed countries, hypertension and cardiovascular disease constitute global epidemics that are interwoven with occupational settings (Landsbergis et al., 2011).

Burnout is a precursor of depressive symptoms and job-related burnout, whose key components are felt fatigue and low levels of physical energy (Shirom, 2011). The two broad consequences of burnout are employee health decrements and performance problems in organizations. The performance problems include medically certified sickness absences independent of mental disorders, organizational deviance, and quantity or quality output problems.

Occupational musculoskeletal disorders are the leading causes of work disability in the United States (Mayer, Gatchel, & Polatin, 2000). Although musculoskeletal injuries and their associated pain are rooted in the individual's physiology, OCP can play an instrumental role in primary, secondary, and tertiary care along with chronic pain management (Gatchel & Kishino, 2011).

OCP and OHP have devoted relatively less attention to employee substance use, such as alcohol and illicit drug use, and yet these dysfunctional behaviors can have both adverse individual effects as well as broad effects in the workplace (Frone, 2011). Although there is certainly an adequate theoretical basis for advancing research on substance use in occupational settings, the actual evidence related to prevalence of use, frequency of use, and quantity used lags. OCP can play an instrumental role in advancing the current science as well as practice where impairment from intoxication and/or withdrawal harms the individual as well as the broader occupational environment.

Interventions in Occupational Settings

There has been a marked extension and development of interventions in the workplace across the full spectrum of risk prevention, early warning identification, and effective treatment and tertiary prevention. Most of the science and practice of OCP have emerged within the economically advanced societies of the United States, Europe, and Japan.

The rapidly advancing societies of China, India, and Brazil are drawing on these models as well as their own traditions such as traditional Chinese medicine and Ayurveda or ayurvedic medicine as practiced in India. Traditional Chinese treatments such as acupuncture and acupressure are being integrated in the West with anecdotal evidence of successes and limitations. The same is true of the yoga wellness interventions that have grown out of Ayurveda.

OHP and OCP

OHP has a significant overlap with OCP and is a defined specialty within psychology. OHP has a more preventive focus and emphasis on psychological well-being (Quick & Tetrick, 2011). OHP is an interdisciplinary specialty developing from clinical psychology, industrial/organizational psychology, counseling psychology, organizational science, and industrial engineering. OCP can operate in concert with OHP at the crossroads of mental health and well-being in occupational settings.

Occupational populations are composed of diverse groups that are differentially exposed to risk factors for behavioral disorders. These diverse groups include men, women, Black Americans, veterans, as well as other populations within any occupational setting. More visible diversity issues concern discriminatory targeting of older workers and people with disabilities. The less visible diversity issues anchored in personality differences and mental disorders are critical to OCP because these forms of individual differences maybe be overlooked. OCP can help organizational leaders and peers understand these important, less visible, diversity concerns.

OCP does not materially exist outside the United States and developed nations of Europe. In Europe, clinical psychology is highly regulated and does not tend to partner with other disciplines; therefore, the concept of OCP is anathema in the international context. Clinical psychology in Europe is very much therapeutically oriented, engaging in talk and psychological therapies (Christie & Barling, 2011).

Hence, in Europe, OHP tends to dominate. The European Academy of Occupational Health Psychology works in the space of OHP in the United States, and the overlapping space that falls under Mancuso's (1983) concept of OCP. Europe does have a well-developed domain of occupational psychology as distinct from health psychology, so OHP bridges these two distinct disciplines within psychology. OHP's scope in Europe is stress, well-being, workplace interventions, resilience training, and organizational change interventions for health and increasingly for performance as well (Burke, 2014).

MAJOR ACTIVITIES

The major activities of occupational clinical psychologists can be classified as (a) screening and surveillance, (b) psychological assessment, and (c) preventive intervention and treatment. There are evidence-based practices available as well as opportunities for advancing the science and practice of OCP.

Screening and Surveillance

Screening and surveillance of individuals or groups of individuals in organizations for psychological problems are essential. Identifying high-risk employees who are especially at risk of causing or experiencing problems is a key activity of occupational clinical psychologists (Quick et al., 2014). This is a critical function to the assurance of health and well-being in occupational settings (Macik-Frey, Quick, & Nelson, 2007; Wallace & Doebbeling, 1998). Leaders, managers, and peers in occupational settings are an invaluable source of information in suggesting who may be having difficulty or who may be a possible problem at work. From a public health perspective, this activity becomes surveillance and triage to ensure that those in need are identified early (Wallace & Doebbeling, 1998).

Occupational clinical psychologists should engage the full spectrum of those concerned with the human side of the organization in conducting effective workplace surveillance. This includes those in occupational medicine, security and police forces, human resource personnel, industrial chaplains, and safety experts. Each of these professions is concerned with one aspect of human behavior in the organization. Because mental disorders and psychological problems may manifest in a range of ways, it is essential that the OCP practitioner has a full view of the entire occupational population (cf. Quick & Tetrick, 2011; Wallace & Doebbeling, 1998).

Psychological Assessment

Screening and surveillance are crucial to identify those at risk in an organization. However, treatment is not warranted for everyone so identified. OCP plays a central role in the psychological assessment of individuals against healthy norms and standards. The assessment process includes a range of psychological and behavioral assessments that afford the occupational clinical psychologist a fully rounded 360-degree view of the individual. Examples of self-report assessments would include the Myers–Briggs Type Indicator to assess psychological preferences and the Fundamental Interpersonal Relations Orientation—Behavioral to assess interpersonal needs (cf. Quick et al., 2013). Examples of 360-degree assessments include the Emotional Competence Inventory (cf. Boyatzis, Goleman, & Rhee, 2000). The same diagnostic principles, if not the same diagnostic instruments, that apply to individuals also apply to organizations.

One of the key concerns in screening and surveillance is the identification of high-risk employees before bad outcomes transpire, such as workplace violence; sexual assault; or other high-intensity, dangerous behaviors (Kessler et al., 2014; Quick et al., 2014). Early identification of high-risk employees sets the stage for outreach and treatment programs that can resolve problems and find healthy solutions before harm is done in the workplace.

Preventive Intervention and Treatment

The third major activity of occupational clinical psychologists includes preventive intervention and treatment, which play critical roles in helping employees build on strengths, preventing problems, and treating those who are wounded or injured in the workplace. This is done through organizational intervention and protection as well as through primary, secondary, and tertiary (i.e., treatment) prevention for individuals. Taken together, these individual and organizational interventions offer an array of tools for the skilled occupational clinical psychologist.

Organizational intervention and protection. Three evidence-based practices for organizational intervention and protection are the use of organizational health centers (OHCs), family supportive supervisor behaviors (FSSBs), and senior management coaching. Diversity training that aims to create inclusive, open, and engaged work environments that are emotionally healthy is important, although this type of training is currently not fully matured and evidence-based (Bell, 2012).

Adkins (1999), a pioneering U.S. Air Force clinical psychologist, conceived OHCs within the U.S. Air Force. The OHC represents a comprehensive, integrated, cross-functional organizational health approach that addresses the full scope of protection, prevention, and treatment. The OHC's mission is to keep people happy, healthy, and on the job while also advancing the mission of the organization to achieve high levels of efficiency and productivity. A key to the success of OHCs is the early identification of employees who are at risk and employees with symptomatic psychological disorders. Klunder (2008) used a 1%–3% at-high-risk guideline in the closure process of the U.S. Air Force's largest air logistics center over a 6-year period (1995–2001). This approach identified a pool of several hundred high-risk employees who needed outreach and treatment (cf. Kessler et al., 2014; Quick et al., 2014). The success of this approach revealed the power of prevention; no lives were lost, and the approach resulted in more than $33 million in cost savings (Klunder, 2008).

Another evidence-based practice for occupational clinical intervention is FSSBs. These are behaviors exhibited by supervisors that support employees' family roles in relation to health, well-being, and organizational outcomes (cf. Hammer et al., 2011, 2013). FSSBs include four dimensions:

- emotional/social support for family (i.e., inquires and assists with employees' work and nonwork concerns or issues),
- model behaviors for work–family balance (i.e., is a good role model for work and nonwork balance),
- tangible support for scheduling conflicts (i.e., helps in resolving scheduling conflicts), and

- balancing the company and employees (i.e., works effectively with employees in creatively solving conflicts that arise between work and nonwork).

The evidence shows that the Family Supportive Supervisor Behavior—Short Form (Hammer et al., 2013) is significantly related to work–family conflict, job satisfaction, turnover intentions, control over work hours, obligation to work when sick, perceived stress, and reports of family time adequacy. Occupational clinical psychologists can use this parsimonious measure of work–family support to ensure that supervisor support for work and family is mainstreamed into research and practice.

In a companion concept to FSSBs, Day et al. (2014) presented evidence in the form of two case studies for their Achieving Balance in Life and Employment (ABLE) concept. The concept is built on theory and research in six overlapping domains of stress, goal setting, health, time management, and work–life balance. Study 1 was a workshop intervention over a 6-month period involving 63 employees who met once a month (hence, a six-session workshop intervention) in one of several group settings. The workshops aimed to provide information and solutions for stressed workers and for those experiencing some sort of conflict, within or between life domains. In between workshop sessions, the 63 employees received weekly e-mails that reviewed past sessions while offering tips for putting the information learned in the workshop into practice (i.e., implementation of concepts). Study 1 used a pre–post research design, and statistical tests assessed the significance of any change.

The results of study indicated the following:

- a significant increase in positive mood;
- significant decreases in five indicators, which include stress, strain, negative mood, negative physical symptoms, and emotional exhaustion;
- no change in work–life conflict;
- 25% improvement in absenteeism (over a 12-month period); and
- 18% reduction in worker compensation claims (over a 12-month period).

Study 2 was designed to address some of the limitations of Study 1, such as (a) inability to reach employees regardless of their proximity to the research center, (b) participant time demands and scheduling conflicts, (c) inability to tailor to participant needs, and (d) confidentiality concerns. Study 2 was designed on the basis of a phone-based coaching model that provided flexibility via individual coaching sessions in a longitudinal design over a 12-week period. The focus of the phone-based coaching was employee health and well-being using goal setting techniques and tools to increase personal resources (cf. Fredrickson, 2001, 2013). Individuals learned coping and strain reeducation methods along with skills to identify coping strategies applicable to their individual needs. A total of 169 participants from 15 organizations in Nova Scotia, Canada, were included in Study 2. Each individual participant was assigned a coach whom he or she met with weekly by phone. Similar to Study 1, Study 2 used a pre–post research design to examine efficacy of the ABLE intervention.

The results of study indicated that the ABLE treatment group experienced the following:

- significant increase in life satisfaction;
- decreases in negative mood, perceived stress, and hassles;
- no difference in positive mood and job satisfaction; and
- improvement in well-being due to the ABLE intervention.

Although the aim of ABLE is to achieve better life–employment balance, an embedded aspect of ABLE as noted earlier is the increase in personal resources. We see in the next subsection that Fredrickson's (2001) broaden-and-build theory of positive emotions is one primary preventive intervention for individuals. Therefore, ABLE may be viewed as bridging the gap between organizational intervention/protection and primary prevention for individuals.

Although evidence-based coaching is not only targeted at senior management (Stober & Grant, 2006), the emphasis on *senior management coaching* is beneficial because intervention at the very senior levels in an organization can have salutary effects on tens, hundreds, and even thousands of employees throughout an organization. Moss (1981) was one of the early psychoanalysts to focus his practice on senior management at Mobil Oil Corporation. Occupational clinical psychologists who focus their individual-oriented practices on senior management are engaging in organizational intervention and protection work that serves many (cf. Kilburg, 2000). There is not one single or even small subset of theoretical models for senior management coaching (Stober & Grant, 2006).

Primary prevention for individuals. There is evidence to use primary prevention for individuals to protect them from the psychological pressures of occupational settings (cf. Quick et al., 2013). These interventions are intended to shape and alter the demands without denying the realities of the workplace circumstances. The growing science of positive psychology and the established practice of learned optimism have much to offer OCP.

Fredrickson's (2001) broaden-and-build theory of positive emotions offers OCP practitioners a new way of expanding a person's thought–action repertoire. Using this positive approach in psychology can serve to build on human strengths and capabilities, engendering upward spirals in occupational setting in contrast to dealing with negative or downward spirals (Fredrickson, 2003). This positive approach does not deny the negative, and, in fact, too much positivity can have less than salutary effects (Fredrickson, 2013). Positivity ratios that aim to examine the ratio of positive thoughts and emotions to negative thoughts and emotions can have real value, within bounds. Higher positivity ratios are predictive of flourishing mental health and other beneficial outcomes (Fredrickson, 2013). Primary prevention and positive psychology aim to develop individual strength, capacity, and protection against the inevitable challenges that every occupational setting offers.

Another primary prevention intervention is building psychological capital. Luthans (2002) extended positive psychology into occupational and organizational settings under the rubric of positive organizational behavior. At the heart of positive organizational behavior is *PsyCap*, or positive psychological capital that rests on the individual characteristics of high self-efficacy, hope, optimism, and resiliency. The evidence points to such capital having an impact on employee well-being over time (Avey et al., 2010). Developmental coaching with individuals can service the primary purpose of developing the shield that positive psychological capital can afford a person in the face of adversity in the workplace. The purpose is to achieve protection without engaging in denial of reality truths.

Learned optimism can be used as a cognitive psychological intervention for reframing the experience of good and bad events (Seligman, 1990). The intervention of changing an individual's explanatory style of thinking becomes primary prevention because of its effects on emotions and physiology. Clinical intervention in thinking styles aims to identify and then intervene to alter the way in which the individual interprets good and bad events. Nonnegative thinking, or optimism, can be learned, and styles of thinking can be changed. The consequences of these changes in interpretative styles lead to lower levels of depressive symptoms and to enhanced levels of performance.

Secondary prevention for individuals. Although primary prevention is the preferred point of intervention from a public health and epidemiological perspective, there will always be a need for secondary and tertiary prevention. Secondary prevention for individuals aims to enable individuals to regulate their response to what is inevitable and/or unavoidable. In OCP, there are at least two evidence-based practices in secondary prevention: relaxation training and expressive writing. Each has been adapted to or tested in occupational studies.

The discovery of the relaxation response and the benefits of relaxation training date well into the past century, with roots running much further in ancient practices. Herbert Benson is the principal individual identified with the relaxation response (Quick et al., 2013). His research and practice teams have applied relaxation techniques for the management of stress in occupational populations (Carrington et al., 1980) as well as with patients suffering from psychosomatic complaints (Hellman et al., 1990). The disciplined practice of relaxation once or twice each day for 15–20 min leads to a change in the setpoint in psychophysiological reactivity. The benefits of relaxation training are achieved over a period of time, measured in weeks and months, as opposed to hours or days.

Whereas relaxation training is aimed at alternative psychophysiological responsiveness, expressive writing and the interpersonal process of confiding in others are aimed at catharsis (Pennebaker, 1990). There is much value in coaching employees to develop personal self-regulatory skills. Teaching people to engage in expressive writing about their thoughts and feelings appears to have accelerated the coping process for freshmen students transitioning into the college environment (Pennebaker, Colder, & Sharp, 1990). Newcomer socialization into any organizational or occupational context is a stressful process that can be facilitated through a similar process (Quick et al., 2013).

Tertiary prevention and treatment. Tertiary prevention is a final alternative to help those who are suffering. Tertiary prevention may be considered akin to therapeutic intervention. All three levels of prevention are intended to be used in concert and a complementary fashion. Occupational clinical psychologists see tertiary prevention as ensuring emotional health in occupational settings, engaging psychological interventions, and being sensitive to symptom-specific treatments.

Finally, the occupational health psychologist can apply symptom-specific treatments rooted in psychology and other disciplines (Quick et al., 2013). Alcoholism, drug abuse, obesity, and lower back problems are among the most common occupational symptoms causing problems in the workplace. Clinical treatments aimed specifically at these symptomatic problems frequently fall under the purview of OCP. Some of the interventions may be with OCP serving in a triage function for the workplace to ensure effective care for those individuals who are suffering.

KEY ACHIEVEMENTS

Probably the key achievement of OCP is bringing psychological knowledge and practice from the clinic into occupational settings. There have been many studies linking mental health and occupational psychology over the years, and the dividing line between the two is increasingly blurred (Contrada & Baum, 2011; Cooper, Quick, & Schabracq, 2009).

Mental disorders, such as depression and anxiety, are now the leading cause of sickness absence in most developed countries (Cooper, Field, et al., 2009), and the need to draw on clinical psychology for help and support has been growing. One area of growth has been in workplace counseling and employee assistance programs. Most large private and public organizations have employee assistance programs, which are usually composed of counseling and clinical psychologists, with an increasing number of occupational health psychologists as well. The treatment knowledge and expertise have come from clinical psychologists, whereas the understanding of organizational behavior and culture has come from the organizational psychologists. These two streams have merged in OCP to provide a comprehensive program of screening, assessment, prevention, treatment, and workplace training.

An allied area of growth is workplace trauma (Kinder, Hughes, & Cooper, 2012), where brief treatment following traumatic incidents at work is accompanied by improvements in health and safety policies in the workplace. As noted earlier, OCP must draw on science and practice in public health and safety. Public health interventions emphasize the prevention of disease and the promotion of health rather than treatment of the sick; in addition, public health emphasizes that this should be achieved through the collective efforts of all elements of society (Greiner, 2012). This means drawing on the disciplines of organizational psychology, clinical psychology, and public health under the umbrella of OCP.

Another variant is the development of mental health treatment-seeking in high-stress occupations (Britt & McFadden, 2012). For example, in psychological screening of military personnel about to enter a high-risk conflict (e.g., Afghanistan), OCPs bring together the selection and assessment skills of occupational psychology, the mental health expertise of clinical psychologists, and the trauma expertise of occupational stress experts (Hoge, Auchterlonie, & Milliken, 2006). Other examples include the psychological screening of atomic power personnel, police officers, and security personnel before entering the job as well as after traumatic events in the line of duty. Preventive OCP is now on the radar of many human resources and occupational medical professionals, and OCP is at the forefront of this development.

Another achievement of OCP is in preventing known workplace stressors from damaging the health and well-being of employees. This means controlling factors such as a long-hours culture, encouraging more engaging management styles, helping to identify potential role conflicts and ambiguities in jobs, managing organizational change better, and creating more livable and healthy work environments.

Although there are many more achievements of innovative OCP, there is a growing synergy between occupational health physicians and occupational clinical psychologists. Many occupational medical officers are now working in mental health in the workplace, as stress-related absenteeism figures rise throughout the developed world (Cartwright & Cooper, 2011). In the United Kingdom alone, it cost the U.K. economy £25.9m per annum (Cooper, Field, et al., 2009). The psychological and medical sciences are coming together, and OCP is providing the metaphorical roof for this development.

One area that has received a great deal of attention in this arena is the concept of psychological resilience (Cooper, Flint-Taylor, & Pearn, 2013). Whereas physicians are emphasizing the creation of healthier and more resilient individuals, organizational psychologists are concentrating on more stress-resilient individuals and more resilient organizations to cope with the massive changes in society. This is all part of the positive psychology movement, which has gained prominence in recent years and has become part of OCP's foundation.

FUTURE DIRECTIONS

The bedrock of any emerging integrative discipline such as OCP lies in graduate training. The British Psychological Society has set up working groups to explore how different psychological disciplines can work closer together in this space. The European Academy of Occupational Health Psychology has begun the process, where occupational psychologists, clinical psychologists, and occupational physicians are exploring issues in the workplace not only from their discipline perspective but also from a broader point of view. In the United States, the future is likely to see master's and doctoral programs in psychology and perhaps in interdisciplinary programs, widening the scientific base of this integrative discipline.

The developed and emerging countries are entering a new era, where the workplace will change out of proportion to the past. We will see in the future a more mobile workforce, more short-term contracts, advanced technology that enables more flexible working, individual management of career development and training, and (in a sense) the changing of the *psychological contract* between employer and employee. These changes will produce enormous strains in the short-to-medium term, and it will be this new emerging field of OCP that will support individuals and organizations during the change process.

Another future direction will be in the new research topics. What are the impacts of short-term contracts on individuals and organizations? Can we create more resilient workers and organizations to withstand the pressures of constant change? What kind of leadership will be needed to meet the health needs of individuals and the business objectives of the organization? What impact will new technology, social media, and other information technologies have on individuals and work itself? What will be the consequences of the changing nature of work on individuals' work–life balance? How will managers cope with remote workers as technology enables greater mobility? These and many more important areas for individuals, workplace, and the families of employees will likely be explored.

Another future development will be the influence of emerging countries on the West's approach to business and management. Their influence is likely to be more profound than at any time in the past. This will mean that we need to work with our psychological colleagues in countries such as China, India, and Brazil to understand the cross-cultural psychological implications for countries in the

United States and Europe. Given the global nature of the private sector, we may find that environmental and cross-cultural psychologists may play a key role in unwrapping this new reality.

Finally, we foresee that OCP will move further away from a disease model to an ever increasingly preventive one. Incentive-based pulls and policies can make life in all organizations healthier. Positive organizational behavior is a growing part of most business schools in the United States and Europe, and it is likely to develop even further as business school academics, psychologists, and others join the race to improve the health of our workforce. As John Ruskin, the British social reformer, said at the beginning of the industrial revolution in 1851, "In order that people may be happy in their work, these three things are needed: they must be fit for it, they must not do too much of it, and they must have a sense of success in it."

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CHAPTER 17

CLINICAL SPORT PSYCHOLOGY

Kate F. Hays and Amy Baltzell

Sport psychology is, at once, a subcategory of psychology and an interdisciplinary specialty. Therein lies its beauty—and its challenge. The academic discipline of sport science is allied with that of psychology, addressing the biopsychosocial elements necessary to develop or enhance optimal physical performance. The further modifier, *clinical*, directs one toward (a) those psychological elements of physical performance that may in one way or another prevent, limit, or interfere with that optimal performance and (b) athletes' clinical problems that extend beyond specific sport-related experiences.

A BRIEF HISTORY OF CLINICAL SPORT PSYCHOLOGY

Sport psychology has its roots in the late 19th century. William James, for example, taught a course to students in the physical training program at Harvard University; at about the same time, James Naismith, interested in the psychology of exercise, developed a new "game" (now known as basketball) to help engage the minds of physical training students (Kornspan, 2012). Because of the specificity of sport, researchers became engaged, early on, in various aspects of the psychology of motor performance in different settings and with athletes of varying levels of expertise. Important to the development of the field, much of the curiosity and research in relation to the psychology of sport developed in academic departments of physical education, currently described more generically as kinesiology.

The first half of the 20th century saw sporadic applications of psychology to collegiate and professional sports teams. A turning point occurred in the 1960s, both in North America and internationally: Intersecting interests in hypnosis, self-actualization, and personology were applied in relation to athletes and sport (Kornspan, 2012). Consultants were generally university-based, drawn from both psychology counseling centers and departments of physical education. A book written by two psychologists, *Problem Athletes and How to Handle Them* (Ogilvie & Tutko, 1966), made use of extensive psychological testing to assist collegiate and elite athletes in "removing performance blocks" that created inconsistent performance. Bruce Ogilvie, the first author and a clinical psychologist with a passion for sports, concluded that "the stresses of competing at the elite level were introducing negative human reactions that were unique to sport participation" (Ogilvie, 2012, p. 152).

Academic sport psychology programs in the 1970s focused on research regarding the social psychology of sport. During this period, increased interest in peak and optimal performance began being applied to work with athletes. A concordance developed between many of the methods of psychological skills training (PST), such as goal setting and cognitive reframing, and cognitive–behavioral methods in treatment. This resulted in a standardization of PST techniques, one that has been nearly reified into a "canon" (Andersen, 2009, p. 12). These methods of optimizing physical performance from a mental perspective have been adopted internationally and have

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been widely used by applied practitioners working with athletes, whether their background is in kinesiology or psychology.

In 1982, the U.S. Olympic Committee created guidelines for sport psychology services for Olympic athletes. A workshop comprising 12 U.S. Olympic Committee consultants divided sport psychology services into three major activities: clinical sport psychologist, educational sport psychologist, and research sport psychologist. Applicants could qualify for one or more of these positions. Those described as clinical sport psychologists needed to have an American Psychological Association (APA)-accredited degree in clinical/counseling psychology (or psychiatry); meet standards for full membership in APA; maintain a current license to practice; and indicate demonstrated experience as an athlete, coach, or practitioner in the application of psychological principles to sports. Although similar in some respects, educational sport psychologists did not need to be licensed, and emphasis was placed on their capacity to teach "educational facilitation skills" (U.S. Olympic Committee, 1983, p. 6).

This distinction between clinical and educational sport psychology appeared to be a tidy solution to the dilemma: Clinical sport psychologists would deal with clinical crises, whereas educational sport psychologists would teach mental skills. Human beings, however, whether practitioners or athletes, do not necessarily live this bifurcated existence. Those with clinical training and knowledge enjoyed the opportunity to teach psychological skills, whereas some of those without felt demoted by this separation. Although these guidelines were created "to show the range of activities deemed necessary for the provision of comprehensive sport psychology services to Olympic athletes, they inadvertently spawned a turf war between professionals trained in psychology and those trained in the sport sciences" (Petitpas & Tinsley, 2014, p. 241).

In the United States, 1986 was the pivotal year for the creation of two organizations, each of which addresses the practice of applied sport psychology: the Division of Exercise and Sport Psychology of APA (Division 47) and the Association for the Advancement of Applied Sport Psychology (subsequently known as the Association for Applied Sport Psychology [AASP]). Of comparable size and with overlapping membership, each has served somewhat different functions with regard to sport psychology. As a subset of a much larger organization, Division 47 has included among its members a large proportion of psychologists with general interest in sport or exercise, although not necessarily identified primarily with the field of sport psychology. In AASP, approximately equal numbers identify with or have a background in sport sciences as in psychology, a fairly large proportion are master's- rather than doctorally-trained professionals, and a large proportion are graduate students. Despite structures designed to emphasize various aspects of sport psychology, each organization tends in actuality to be dominated by practitioners whose primary focus is on performance enhancement.

In 2003, Division 47 obtained recognition for the practice of sport psychology as a distinct proficiency within the larger field of professional psychology (APA Division 47, n.d.). The proficiency suggests that competent psychologists practicing sport psychology should have specialized knowledge and skill above and beyond that obtained through graduate study in clinical or counseling psychology. Such specialized competence includes knowledge of theory and research in the social, historical, cultural, and developmental foundations of sport psychology; knowledge of the biobehavioral bases of sport and exercise; knowledge of the developmental and social issues that are related to sport participation; as well as knowledge of various persons and groups associated with sport and athletes, ranging from youth participants to injured athletes to sports organizations. Relevant skills address a wide variety of athlete-related concerns, whether through PST, clinical interventions, or a mix of the two.

The Division 47 Proficiency in Sport Psychology addresses competencies in a broad framework. It does not, however, offer specific guidance to individuals or ways of measuring or indicating individual competence. In 1989, AASP developed a method for designating individuals as AASP-certified consultants. Professionals so certified are considered to be competent to offer services designed to improve people's sport and exercise performance or experience. Assessed at present through a combination of portfolio review and indication of specific supervised practice, the relevant criteria are broad enough that they can be met not only by licensed psychologists but also by those, for example, with master's degrees and those whose doctoral degrees were obtained through departments of kinesiology.

DEFINING CLINICAL SPORT PSYCHOLOGY

Athletes encounter performance demands that can exacerbate underlying psychological conflicts and foster new ones. Individuals' experience of sport can be heavily influenced by the dynamics of family, coach–player relationships, team cohesiveness, sport culture expectations and values, cross-cultural conflicts, or organizational structures. Sport participants may be especially vulnerable to eating disorders (EDs) and substance-related disorders. Physical conditions (e.g., susceptibility to sport injury) may be affected by psychological factors (Brewer & Petrie, 2014). Further, the culture of sports is itself in some ways archaic and a-psychological, if not actively hostile, to mental or emotional vulnerability.

This ambivalence is also reflected in psychology practitioners' lack of formal knowledge of sport psychology. A survey of members of the Society of Clinical Psychology (APA's Division 12) found that nearly one quarter had consulted with, and 50% had provided individual therapy to, athletes or sport teams (Petrie & Diehl, 1995). Very few, however, had received any training (4%) or supervision (1%) in sport psychology. Although that research was conducted two decades ago, there is little reason to believe that much has changed.

Given the various psychological elements that can affect sport performance, it is important to consider a number of questions: What is a sport psychologist? What does a sport psychologist do? The hybrid character of the specialty and practice of sport psychology has in itself created misunderstanding and dissension as to its very nature, as discussed earlier.

Further, where is the "clinical" in clinical sport psychology? Its roots are in psychology. The pull toward performance enhancement, however, and the reluctance of a body-focused (vs. mind-focused) and conservative field (sports) to embrace things psychological have meant that the clinical aspect has been both acknowledged and avoided.

Recognizing that large number of psychologists and graduate students in psychology do not have training in athlete counseling and/or sport psychology, investigators conducted research to delineate essential counseling competencies for psychologists working with athletes (Ward et al., 2005). Participants were selected on the basis of (a) their licensure as a U.S. psychologist and (b) AASP certification as a sport psychology consultant. Participants were labeled clinical sport psychologists "as an indication of their doctoral training and licensure in psychology with a professional credential and interest in applied sport psychology" (Ward et al., 2005, p. 322). Strong consensus among the experts emerged on 17 "idiosyncratic counseling needs of [collegiate] athletes" (Ward et al., 2005, p. 319) and included specific competencies with regard to attitudes/beliefs, knowledge, and skills.

Clinical sport psychology can be viewed along a continuum in which a skilled clinician may work with an athlete regarding optimal sport performance or focus on the resolution of various intrapsychic or interpersonal problems related to the athlete's performance (Herzog & Hays, 2012). The psychosocial reality of the athlete needs to be understood, whether the practitioner is treating a clinical disorder, counseling the athlete regarding career transitions, or instructing the athlete in performance enhancement skills (Gardner & Moore, 2006). Practitioners who have training both in clinical or counseling psychology and in sport psychology are "ambidextrous" (Mitchell Greene, personal communication, June 24, 2014), and they are able to understand and work with the totality of the client situation.

In short, a clinical sport psychologist is a licensed psychologist who has knowledge regarding systemic, interpersonal, and intrapersonal issues in the competitive sport context and has developed particular competence to offer performance enhancement as well as clinical interventions. In practice, clinical sport psychologists work with competitive athletes across a wide spectrum of age and competence levels. Clinical sport psychologists use their clinical and mental skills to help athletes optimize sport performance, health, and well-being.

KNOWLEDGE BASE AND MAJOR ACTIVITIES

Clinical sport psychologists work with sport participants both at an individual and team level; they may consult with family members, athletic staff, and related personnel. Clients are typically competitive athletes who range in age and skill from a youth, secondary-school, collegiate, or elite/professional level to a master's level. Clinical sport psychologists may also work with permanently disabled competitive athletes and recreational athletes.

Clinical sport psychology practice provides an opportunity to work with a generally healthy population engaged in future-focused, inspiring pursuits. For psychologists, the development of such a specialty "niche" can add visibility and marketability while offsetting the current practice complexities of declining fees and intensified practice flux (Hays, 2012). Sport psychology techniques and clinical work with athletes can accommodate a variety of theoretical perspectives.

Evidence-based practice suggests that optimal practice occurs through "the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences" (APA Presidential Task Force on Evidence-Based Practice, 2006, p. 273). This three-pronged approach is especially applicable to the practice of clinical sport psychology: the strong research base in sport psychology, the complex expertise needed by the practitioner, and clients who can be considered as residing within a particular culture, that is, the world of sport. A majority of theory and applied sport psychology research is based in North America and Europe. Aligned with APA's multicultural guidelines, competent sport psychology practitioners explore cultural validity when applying such theories to other cultures (Ryba et al., 2013). Athlete clients' unique characteristics and preferences offer the practitioner the opportunity to apply techniques derived and adapted from various theoretical frames. Cognitive–behavioral therapy (CBT) and solution-focused methods have been adapted, have been researched, and are most typically those used especially with regard to PST. Athletes tend to find this perspective and these techniques useful: They are directive and action-oriented, change is rapid, and effectiveness is noted quickly.

Clinical sport psychologists need to have three overlapping and interacting types of knowledge when working with athletes. Along a continuum from health to pathology, these types of knowledge comprise (a) PST and performance optimization or enhancement, (b) sport culture and context, and (c) clinical disorders (APA Division 47, n.d.; Gardner & Moore, 2006).

To illustrate these three levels, consider a 17-year-old soccer player who performs well during practice but shows a decrement in performance during competition. In part because she knows how to "read" bodily signals and is accustomed to instruction and practice, she responds quickly to brief PST interventions that target arousal management and cognitive restructuring. Her performance in competition improves.

However, what if this same 17-year-old is dealing with a highly critical "old school" coach? What if, at this stage in her development, innate skill is less relevant, and now she has to come to terms with the importance of intentional practice? Perhaps she feels a sense of pressure because she is hoping for a collegiate sports scholarship. She may be acutely aware of the social and developmental costs of her single-minded sports focus. Any of these or other factors may mean that the clinical sport psychologist working with her will need to have a full understanding of the sport environment and pressures with which the client is dealing.

This same 17-year-old, in either scenario, may have a long-standing history of anxiety. Perhaps her parents have recently separated. She has become distraught by the simmering tension in the household and assigns blame to herself for adding a financial burden to her family's life. Her decrement in sport performance is only the (most visible) tip of the iceberg of her general and cumulative clinical distress. A clinical sport psychologist is prepared with knowledge of the sports culture and context, and he or she has the knowledge and flexibility, depending on the situation, to offer training for performance enhancement or specific treatment for psychological distress.

PST

PST refers to the primary mental skills offered in sport psychology. The use of PST is most typically focused on enhancing the performance of the athlete or team. Derived from cognitive–behavioral interventions, these skills include arousal control (often referred to as arousal regulation), cognitive regulation (often referred to as self-talk), goal setting, concentration management, and imagery (e.g., executing a play or imagining feeling an optimal way in competition). In performance enhancement, these skills are used independently or in combination to help the athlete improve performance in practice and competition or to help address psychological or interpersonal challenges that appear to directly thwart sport performance (Gardner & Moore, 2006; Hays & Lesyk, 2014).

A core approach to performance enhancement is to learn, from the athlete's perspective, which psycho-emotional and attentional points of focus are related to best and worst performance. This is often done through exploration of reported affect and cognitions prior to and during a best, and then worst, performance. Interventions then address a particular aspect of preparation (e.g., pre-shot routine) or the athlete's competition plan (e.g., planning to bring an image or word to mind in a critical moment, thus enabling the athlete to minimize distraction and to focus on the task at hand). These types of intervention are not limited to athletes striving for peak performance. They may also be used when addressing clinical problems.

Sport Culture and Context

The culture of sport in the 21st century includes a number of themes with which nearly all athletes contend at some point. These include aggression, a striving for perfection, sport losses, and the use of substances. Any of these can range from normative to pathological.

Aggression in sport. Aggression in sport is driven by a number of interacting factors. These include the competitive nature of sports, a sports culture focused on winning, a larger culture that positively sanctions acts of aggression within sport, the heterosexism of sport, and the inclusion of aggressive acts within certain sports. Aggressive acts can also be dichotomized: Sanctioned aggression "is physical aggression within the written rules or laws of sports and any unwritten rules or informal player norms," whereas unsanctioned aggression "is considered to be acts of aggression outside the written and unwritten rules or laws and player norms" (Kerr & Males, 2011, p. 26). Athletes are more likely to engage in unsanctioned aggression if they have high trait aggression, high trait anger, or have been taught how to execute aggressive illegal plays (Maxwell & Visek, 2009).

Aggression in sport can help or hinder performance. Acts of aggression may facilitate athletes' success on the field, whether via physical harm or psychological intimidation of one's opponent. However, aggression can diffuse focus and dissipate energy. Further, it can distract athletes from using their energy and attention most effectively to optimize performance. For example, an ice hockey player could retaliate from a cheap shot by "roughing." This can result in time in the penalty box, putting the team at a temporary disadvantage.

Aggression also increases the risk for injury and has been linked with off-field criminal behaviors (Pedersen, 2007). The interaction of aggressive traits within sport culture with the use of alcohol, ergogenic aids, or other drugs can be especially problematic (Pappas, McKenry, & Catlett, 2004).

Clinical sport psychologists can offer strategies to help athletes cope with ineffective aggression. Athletes tend to be willing to change their habitual aggressive reactions when they understand the negative relationship between certain acts of aggression and performance. If the behavior contributes to performance, however, coaches and athletes may not be interested in changing aggressive behavior. For example, athletes and coaches sometimes value the use of unsanctioned power aggression to intimidate or gain an advantage (Kerr & Males, 2011).

Perfectionism. Perfectionism has been described as a multidimensional characteristic that involves setting extreme performance standards, striving for flawlessness, and focusing on both self- and other-evaluation. Perfectionism has historically been considered a sign of psychological maladjustment and closely aligned with psychopathology (Stoeber, 2012).

Within the performance realm, the concept of perfectionism has been described in terms of functionality. Both adaptive and maladaptive perfectionists hold high standards; they differ in the ways in which they respond when they do not meet such standards. "Maladaptive perfectionists exhibit an excessive concern about mistakes, strong self-doubts, and perceive parents as being critical and expecting much of them" (Gould, Dieffenbach, & Moffett, 2002, p. 174). Patterns of adaptive perfectionism among Olympic athletes (e.g., high standards and lower focus on mistakes), however, are positively associated with achievement (Gould et al., 2002; Stoeber, 2012).

The maladaptive aspect of perfectionism can be described as a habit of mind. Clinical sport psychologists are well-suited to recognize the necessary elements of perfectionism for optimal sport performance; they can address maladaptive perfectionism that can result in fear, shame, and negative affect among athletes, especially following perceived or actual failure.

Sport loss. Athletes train to improve their performance. Without adequate rest, however, athletes are at risk for performance decrements. Strenuous exercise without adequate recovery, known as overtraining, is increasingly a threat for athletes at all levels of sport (Kreher & Schwartz, 2012). As athletes improve, physical demands increase, involving more hours per week of training and more intense training. Current cultural expectations have added to that intensity, for example, through increased competition, player selection at younger ages, and expanded performance seasons for athletes, from youth to professional. Ironically, given the mental benefits of physical activity, when overtrained, athletes are at risk for mood changes, fatigue, and underperformance (Kreher & Schwartz, 2012).

Often burnout, a "syndrome of physical/emotional exhaustion, sport devaluation, and reduced athletic accomplishment" (Raedeke, 1997, p. 398), results from overtraining paired with chronic sport stress (i.e., precompetitive anxiety and unrealistic expectations) and can also result in sport termination. When athletes feel obligated or entrapped, compared to attracted, to a sport, they are more likely to experience burnout (Raedeke, 1997).

To be involved in sport is to court injury. Most of the attention regarding sport injury has been concerned with the physical injury itself. However, in the past two decades, considerable research has addressed the psychosocial aspects of injury. Studies have focused on the interaction of sport anxiety, other life stressors, coping resources, and injury (Andersen & Williams, 1988; Johnson & Ivarsson, 2011).

Injury may be perceived as a form of weakness, a source of embarrassment, and a form of body betrayal. Injury may trigger such aversive emotions as anger, sadness, and guilt. Along with the management of physical restriction and pain, common psychological responses to sport injury include mood disturbance and anxiety about reinjury and return to play (Brewer et al., 2010). Not only must athletes deal with physical damage and emotional reactivity, they also need to contend with social consequences, such as separation and/or changed relationship with the team and teammates, and threat to their athletic identity.

Coping with sport injury is a common challenge for competitive athletes. Social support has been demonstrated to offer a buffering effect regarding sport injury, whereas competitive anxiety has been related to sport injury reoccurrence (Junge, 2000). In addition to assisting athletes to cope with the psychological sequelae of injury, clinical sport psychologists may also need to contend with an outcome-oriented value system on the part of athletes, parents, and coaches: Any or all of these people are likely to expect return to play at the earliest possible moment.

One particular sports injury is currently receiving prominent attention in the media and generating increased referrals to clinical sport psychologists: sport-related mild traumatic brain injury (mTBI). The number of reported cases of cerebral concussion or mTBI appears to be increasing, although this may in part be artifactual and due to increased public awareness. Among high school and collegiate athletes, the highest rates of reported concussions among men occur in football, ice hockey, lacrosse, wrestling, and soccer; for female athletes, the highest rates are in soccer, lacrosse, basketball, and ice hockey (Institute of Medicine, 2013).

After a cerebral concussion, athletes report a cluster of somatic, cognitive, and psychological symptoms. These may include headaches and fatigue; problems with memory, concentration, planning, and organization; as well as anxiety, irritability, and depression (Chen et al., 2008). Although the vast majority of athletes recover fully within 3 months, lingering symptoms may continue.

Psychosocial stressors related to mTBI include losing a position on the team, lack of support from teammates, unclear timelines for return to play, and the invisible nature of concussions. With no obvious physical injury, it is hard for athletes to justify opting out of sport engagement (Chen et al., 2008). Further, athletes, teammates, coaches, and parents may not fully appreciate the health threats posed by concussions. Various internal and external pressures often make athletes reticent to report concussions. As a result, healthy decisions about continuing to compete may be compromised.

Empirical information is changing rapidly regarding optimal treatment for concussions or the best approach to returning to full sport participation (Institute of Medicine, 2013). Clinical sport psychologists with training in neuropsychology may be involved in diagnosing and monitoring recovery from mTBI. Those clinical sport psychologists who work with the small percentage experiencing longer term consequences can assist in a variety of ways: helping support athletes in making decisions that take into account the short- and long-term value of full recovery prior to reengaging in sport, symptom management and treatment, and paced recovery efforts. Working in alliance with medical concussion experts is critical.

Concussion is one of myriad reasons for early sport termination. In most sports, athletes need to come to terms with the end of competitive participation at a relatively young age. Particularly when that career ends through a nonnormative event, such as unanticipated dismissal from a team or injury, the termination can be a source of significant distress for the athlete (Wippert & Wippert, 2010). The experience of forced failure and social evaluative threat, together, can challenge the athlete's sense of well-being: Forced termination is predictive of significantly higher levels of pathopsychological symptoms, including depression, distress, and negative mood states (Wippert & Wippert, 2010).

The role of substances. Within sport culture, use/abuse of alcohol is and has long been endemic. The link between physical activity and alcohol consumption is, among other aspects, economic, interpersonal, behavioral, and intrapersonal (Pate et al., 1996). Compared to nonathletes, athletes binge drink more frequently and have higher reported rates of negative consequences due to alcohol-related behaviors (Lisha & Sussman, 2010).

The findings suggest that sport itself may serve as an additional risk factor for alcohol abuse. Personalized drinking feedback has offered initial promising results in reducing collegiate athletes' heavy drinking. Personalized drinking feedback offers individualized information based on self-report drinking habits, comparative national norms of collegiate drinking, and negative consequences that can co-occur with heavy drinking. In one study, inclusion of information specific to athlete drinking norms was most effective (Martens et al., 2010).

In contrast to alcohol use, participation in sport has been demonstrated to be a protective factor against illicit drug use (Pate et al., 1996)—with the marked exception of performance-enhancing substances (Barceloux & Palmer, 2013; Lisha & Sussman, 2010). Ergogenic drug use in sport is primarily driven by performance and aesthetic values. Athletes learn to objectify their bodies: Legal, illegal, or banned substances may be used to help optimize performance. A review of more than 130 international articles noted that the most common banned substances in sport include human growth hormones, ephedrine, steroid precursors, and anabolic steroids (AASs; Juhn, 2003). The World Anti-Doping Agency produces an ever-changing list, representing the international standard for both in- and out-of-competition prohibited substances.

Beginning in the 1960s, AASs—a synthetic derivative of testosterone—have been used for sport improvement. Despite reporting limitations, it has been estimated that in the United States, illicit use of AASs ranges from 2.7% to 6.1% for youths in general, and is 2.2% for female youths (Eaton et al., 2010). The worldwide estimate is 2.3% of all high school athletes (Sagoe et al., 2014). On the basis of a global meta-analysis, worldwide overall estimates of AAS use is 18.5% for people engaging in recreational sports and 13.4% for athletes. Athletes' use of AASs by country is unknown but is expected to vary widely, given the range of general AAS use, from a low of 0.02% (Asia) through a midrange of 3.0% (North America) to a high of 21.7% (the Middle East; Sagoe et al., 2014).

Unfortunately, those athletes who do choose to use AASs are much more likely to be polydrug users, including both recreational and prescription drugs (Barceloux & Palmer, 2013) as well as cigarettes, marijuana, amphetamines, narcotics, and dietary supplements, at least among American male college athletes (Buckman, Farris, & Yusko, 2013).

Psycho-emotional responses from heavy AAS use tend to be idiosyncratic in nature. They may include mania, aggression, and agitation. After cessation of use, "depression, decreased libido, insomnia, anorexia, and headaches" may occur (Barceloux & Palmer, 2013, p. 238). Typically, clinical sport psychologists become involved in working with athletes regarding drug use at the point at which athletes are facing adverse behavioral consequences of such use. Interventions for other drug use disorders, such as alcohol or cocaine, also tend to occur as a consequence of problems with or related to substance use, rather than as a result of self-report and help-seeking.

Clinical Disorders in the Sport Context

Athletes with diagnosable mental disorders may be able to function well in their sport in spite of the disorder; they may have chosen athletics as a way to cope with their disorder, or the disorder may have been precipitated or exacerbated by sport (Reardon & Factor, 2010). Psychologists working with athletes need to appreciate the powerful interplay between the clinical and sport situations.

CBT has traditionally been the theoretical orientation of most sport psychologists (Murphy, 2012). Although several other approaches have also been used, the recent rise of mindfulness training and adaptation of acceptance and commitment therapy to performance work with athletes (e.g., Gardner & Moore, 2006) may prove a direct challenge to CBT. Some rapprochement and reconciliation has also emerged (e.g., Haberl, 2012).

Depression. As with the general population, athletes with symptoms of depression are among those most commonly referred to clinical sport psychologists (Gardner & Moore, 2006). In addition to general daily functioning, depressive mood states can have an adverse effect on athletes' motivation and behaviors during both sport practice and competition.

Two facets related to depression in athletes are worth noting: (a) the relationship between physical activity and depression and (b) the paradoxical effect of overtraining. Physical activity is known to serve both a preventive and therapeutic function with regard to depression. Compared to nonathletes, athletes suffer less from depression (Armstrong & Oomen-Early, 2009). They may experience some degree of protection from depression due to sport engagement and physical activity (Taliaferro et al., 2008) and/or social support (Armstrong & Oomen-Early, 2009).

However, when athletes present with such typical depressive features as diminished interest in activities, fatigue, irritability, and difficulties with sleep and concentration, it is critically important for clinical sport psychologists to consider making a differential diagnosis between overtraining and depression. Particularly if athletes have recently undergone intensive training efforts, psychological symptoms that "mimic" depression may be the most accurate markers of overtraining (O'Connor et al., 1989). Etiological considerations and accurate diagnosis will make a critical difference to treatment decisions that follow.

Anxiety. By definition, performance and the anticipation of performance increase levels of physiological and cognitive arousal. To that end, PST typically addresses this normative experience, assisting athletes in making constructive use of these shifts in state experience. However, at times athletes experience competitive sport anxiety: Challenges are appraised as threatening and beyond the athlete's control (Nicholls, Polman, & Levy, 2012). Such anxiety is the key debilitating emotion experienced by athletes and is one of the most researched areas within sport psychology. Athletes may present a range of physical (e.g., fatigue, increased heart rate), emotional (e.g., irritability, narrow focus), and cognitive (e.g., lack of concentration, negative self-statements) signs of stress.

The impact of this type of performance anxiety on performance functioning is described, colloquially, as "choking." Choking is attributed to factors related to competitive anxiety, including distraction, debilitative anxiety, and low perceived control. PST coping interventions to alter appraisals and enhance the athlete's sense of control over sport stressors—such as imagery, thought control, and appraisal training—are recommended (Nicholls et al., 2012). Mindfulness-based interventions may also be efficacious (e.g., Gardner & Moore, 2007).

Anxiety that appears to be connected only to performance may in fact mask elements of trait anxiety or more complex aspects of anxiety, whether phobia, obsessive compulsive disorder, or social anxiety. Appreciating the athlete in context can assist the clinical sport psychologist in neither over- nor underpathologizing.

Eating disorders. Clinical psychologists are accustomed to diagnosing and treating EDs, especially among women. The prevalence of EDs for athletes is slightly higher than among the nonathlete population, with elite athletes at the highest risk for EDs. In a study of more than 200 college female athletes, 2% were classified as having an ED, and 25% were symptomatic. Most of the athletes reported using exercise for both purging and weight control purposes, as opposed to the use of vomiting, dieting, laxatives, or diuretics (Greenleaf et al., 2009). This suggests that the sport environment may be a specific risk factor for triggering EDs.

Athletes tend to have a stronger commitment than nonathletes to being lean (Petrie et al., 2009). For many sports, disordered eating behaviors are perceived as requisite to maintain extremely low levels of body fat; such behaviors are rewarded (e.g., judges' scores and speed in running). In addition to societal values, the pressure toward thinness is a reflection of a common belief within the sport community that being leaner will in and of itself create enhanced performance. Performance pressures to achieve extreme lean bodies are endemic to sports with weight restrictions (e.g., wrestling, light weight rowing), aesthetic sports with judged scoring (e.g., figure skating), and endurance sports (e.g., marathon running). For most athletes, however, being hyper-lean is not sustainable and can trigger subclinical or clinical EDs, with a concomitant negative impact on sport performance, physical health, and risk of injury. Mood disturbances have been an associated challenge for athletes suffering from EDs (Petrie et al., 2009). Subclinical EDs are also notable in sport, given that such behaviors are associated with significantly higher levels of psychosocial risk factors (e.g., anxiety, depression) and injury, such as stress fractures (Rauh, Nichols, & Barrack, 2010).

Female athletes with an ED, particularly anorexia, are at risk for the female athlete triad: an interrelationship of menstrual dysfunction, low energy availability, and osteoporosis. Current prevalence of the female athlete triad is low (1%–16%). In sports that value leanness, though, female athletes are at high risk for at least one triad component (50%–60%). Athletes with all triad components are more susceptible to stress fractures and musculoskeletal injuries in addition to other ED concerns (Barrack, Ackerman, & Gibbs, 2013).

Posttraumatic stress disorder. Sport injury is the most typically discussed source of trauma in the sport psychology research literature. Sport injury is emotionally disruptive (Tamminen, Holt, & Neely, 2013); for some athletes, it can be experienced as traumatic. Recent attention has also been drawn to the potential for psychological disturbances of concussed athletes (e.g., depression, anger, overall mood disturbance; Mainwaring et al., 2010).

Because sport injury often occurs in a social setting, there is potential for vicarious trauma. Teammates witnessing a serious injury may experience an increased fear of personal sport injury. A case study, for example, described a situation in which the participant became severely anxious and depressed, withdrew from sport, could not work, and contemplated suicide after witnessing the death of a fellow sky diver (Kerr, 2007).

MAJOR ACHIEVEMENTS

Practitioners interested in clinical sport psychology can experience several benefits and opportunities, including those discussed next.

Relevant Research

A wealth of research guides the practice of sport psychology, particularly in relation to PST and with regard to athlete development and culture. Along with myriad books, psychologists will find such journals as *Clinical Sport Psychology*; *Journal of Applied Sport Psychology*; *Sport, Exercise, and Performance Psychology*; and *The Sport Psychologist* to be of theoretical and practical use. For internationally focused information, the *International Journal of Sport and Exercise Psychology* and the *International Journal of Sport Psychology* are of particular value. Psychologists with limited background in sport psychology can find myriad avenues to further learning, whether via reading, coursework, workshops, or mentored experience (Hays, 2012).

Interdisciplinary Integration

An interdisciplinary field serves clients best when practice is coordinated with other specialties. For clinical sport psychology, that includes the disciplines, minimally, of kinesiology and sports medicine. At an organizational level, there are formal and informal links among sport psychology organizations both within North America and internationally. APA has created recognition of sport psychology as a proficiency of psychology. The requirements for AASP certification have guided graduate training related to sport psychology. At an institutional or individual level, sports governing bodies, athletic departments, and sports medicine programs recognize and include sport psychologists as members of their staff.

Practitioner Applications

Destigmatization. Sport psychology practice is becoming more rapidly destigmatized than other aspects of mental health practice. Increased media information concerning professional athletes' use of sport psychologists has increased the acceptability, and has even created a certain cachet, for such services. Adolescent athletes, in particular, are increasingly intrigued by the potential of working with a sport psychologist (Hays & Lesyk, 2014). Further, at times this can be a useful "gateway" to deeper clinical issues.

Practice development. The practice of sport psychology offers psychologists a number of professional opportunities and benefits. Among these are niche development—a growth or improvement-directed focus that aligns well with positive psychology and mindfulness—and goal-directed clients interested in change (Hays, 2012).

Applications to other populations. Psychological skills techniques developed initially for athlete populations can be applied, with due knowledge of contextual variables, to other performance populations, including performing artists, business executives, and professionals in high-risk occupations (Hays, 2009, 2012; Murphy, 2012).

Ethics of Practice

In a subdiscipline of psychology recently recognized by APA as a psychology proficiency and an interdisciplinary field where the development of expertise for practitioner psychologists may well occur after doctoral training, the most significant ethical challenge in sport psychology practice is that of competence. The APA Ethics Code stipulates the following: "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, 2010, §2.01(a)). One can choose to seek certification within AASP (AASP, n.d.)—the one nationally recognized method of designating expertise in the practice of sport psychology. For psychology-trained professionals, additional knowledge may need to be gained in such areas as exercise physiology, biomechanics, motor learning, sport nutrition, and sport philosophy. Mentored experience, specifically in working with athletes regarding performance enhancement, is also part of the certification process. “Practitioners learn to perfect the ski-lift consult, the bus-ride consult, the 10-minute breakfast team-building session, the confidential session in public places such as hotel lobbies, parking lots and trainers’ tables” (McCann, 2000, p. 211).

Other important areas of ethics include aspects of confidentiality, boundaries, and potential multiple role relationships within a culture that has different norms from those of clinical practice (Gardner & Moore, 2006; Stapleton et al., 2010). The clinical sport psychologist working with collegiate athletes, for example, needs to understand, appreciate, and anticipate the most effective ways to communicate with other relevant personnel. Contractual agreements are critical; at the same time, the enactment of such agreements in actual practice requires continuous awareness and vigilance.

The question of the title of “clinical sport psychologist” is relevant from a variety of perspectives: legal, ethical, and practical. Each licensing jurisdiction determines what modifiers, if any, psychologists can use in describing their services. Psychologists who refer to themselves as a “clinical sport psychologist” should take into account the relevant combination of their training, credentials, and professional experience. From a pragmatic perspective, it is important to recognize that within the culture of sport, athletes may be reluctant to initiate contact with a practitioner who adds “clinical” to the term *sport psychology*.

FUTURE DIRECTIONS

The term *clinical sport psychology* or *clinical sport psychologist* is of recent origin. It may be that this will be a useful demarcation. Alternatively, the terminology may serve to carve off a niche that is too small to be viable; it may further fan the turf war flames that have kept the field of sport psychology at some level of impasse. That said, we anticipate the future developments discussed next.

Training in clinical sport psychology is, at best, in its infancy. As of this writing, in the United States only a small number of doctoral programs offer training in both clinical psychology and sport psychology. Much of practitioners’ learning currently occurs through postdoctoral experience, whether such training is formal or informal. The potential for expanded opportunities, within psychology programs, to encompass sport and performance will be an important direction, both for the viability of the field and the needs and interests of graduate students. It is unclear whether such academic training programs will emerge, given the extensive requirements to become proficient and credentialed as both a psychologist and an applied sport psychology practitioner.

The interdisciplinary nature of sport psychology speaks to the need for clarification of markers of competence in this field. AASP is moving toward an examination-based, rather than a portfolio-review-based, method for designating practitioner sport psychologists. With the Proficiency in Sport Psychology in place, Division 47 is in the process of developing guidelines for individuals with regard to competent practice.

Research regarding the clinical aspects of sport psychology has been lacking. Little is known or understood about athletes with serious forms of psychopathology and the ways in which clinical issues interact with sport performance. Research regarding prevalence and treatment needs to become much more systematic, particularly with regard to professional sports, female athletes, and the effective use of psychotropic medication (Reardon & Factor, 2010).

Technological advances and the implications for the provision of tele-health services are and will continue to be important to the full development of clinical sport psychology services. More than most clients with whom a practitioner might work, athletes train and compete with some frequency outside of their home residence; they are often young and fully comfortable with electronic communication. Sport psychology practitioners can join with other psychologists, such as industrial–organizational or consulting psychologists, to develop the most effective, ethical, and legal methods for communicating with clients at a distance.

Significant issues regarding diversity in sport (e.g., racism, sexism, and homophobia, to name only the most obvious) need to be addressed in regard both to research and practice related to sport psychology (Gonzalez, Smith Machin, & Cogan, 2014).

Developed mainly in North America and Europe, sport psychology research and evidence-based practice have taken a universalist approach (Ryba et al., 2013). Opportunities for the healthy development of clinical sport psychology are likely, given the increasing globalization of sport and more attention to sociocultural influences on the experience of athletes, teammates, teams, coaches, and the greater world of sport.

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CHAPTER 18

CLINICAL BEHAVIOR ANALYSIS

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This chapter provides an overview of the specialty of behavior analysis and the functional approach to influencing behavior of importance to individuals (e.g., depression), families (e.g., autism), and society (e.g., substance use). In each of these areas, clinical behavior analysis is based on operant and/or Pavlovian principles of behavior, discovered and thoroughly explored in controlled laboratory settings. This bottom-up approach to clinical practice has necessitated that discovery set the pace for advances in this practice; sometimes this has been slow and, like in recent years, sometimes rapid.

The chapter begins by defining the specialty and providing a brief history of behavioral analysis. We then provide an incomplete list of the major activities of behavior analysis and the settings, populations, and problem behaviors with which behavior analytic principles have proven effective. The chapter concludes with an examination of major achievements and future directions.

DEFINITION

Clinical behavior analysis may be defined broadly as the practice of applying empirically established behavior-analytic principles to improve substantively the behavior of individuals. As this definition implies, clinical behavior analysis has first and foremost been a bottom-up affair—laboratory investigations have established a set of foundational behavior-analytic principles that have shaped clinical practice. Where clinical practice has been informed in a more top-down fashion by theory, those theories have been built in a bottom-up empirical way. In other places (e.g., Dougher, 1993; Dougher & Hayes, 2000), clinical behavior analysis has been defined as a subfield of applied behavior analysis, characterized by its focus on clinical interventions with verbally competent clients in primarily outpatient settings. Here, however, we use a more inclusive definition to encompass the activities of applied behavior analysts (ABAs).

Also implied by this definition is that the behaviors influenced by behavior analysts are many and varied, as are the settings in which these behaviors occur. Behavior analysts may be found helping children diagnosed with autism to acquire social skills (Reichow & Volkmar, 2010), reducing cigarette smoking among pregnant women (Heil et al., 2008), increasing healthy eating in elementary schools (Lowe et al., 2004), or helping individuals diagnosed with depression to live a valued life (Kanter, Busch, & Rusch, 2009). Because applications of behavioral principles have long occurred in institutional settings and/or with individuals with intellectual and developmental disabilities, one might assume these as the boundaries of clinical behavior analysis; however, that would be an outdated stereotype. The present chapter seeks to address the cutting edges of clinical behavior analysis, some of which are scarcely recognizable from their origins.

BRIEF HISTORY

The origins of clinical behavior analysis are found in the laboratories of early animal researchers studying

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simple forms of learning. These researchers discovered processes by which an organism's behavior changed in the face of phylogenically important regularities of the environment. The earliest of these was Edward L. Thorndike (1874–1949), who provided objective evidence that the *effect* of behavior (its consequence) influenced the future probability of the behavior (i.e., Thorndike's, 1898, law of effect). In B. F. Skinner's (1904–1990) laboratory, this operant conditioning process was explored in greater detail, and its implications for human behavior were more thoroughly considered at a conceptual, if not an empirical, level.

Similarly, Ivan Pavlov (1849–1936) discovered a stimulus–stimulus temporal-relations learning process instantiated by the canine salivary reflex (Pavlov, 1906). Pavlov's discovery was translated to an early understanding of human emotions (Watson & Rayner, 1920) and an extinction-based approach to treating emotional problems (M. C. Jones, 1924). This early work led readily and directly to the development of Pavlovian-based therapies for the treatment of simple phobias and other anxiety disorders—such as systematic desensitization (Wolpe, 1958), flooding (Baum, 1970), and exposure techniques (Feske & Chambless, 1995)—and fed the development of the behavior therapy movement.

As these behavioral principles were being discovered in laboratories around the world, behaviorists began to tackle an epistemological question that would prove critical in clinical practice—what is the role of "private events" (thoughts and feelings) in behavior? Two theoretical camps emerged within behaviorism, each with unique approaches to theory construction, research strategies, data collection and analyses, and even therapeutic interventions and goals.

The first of these camps is methodological behaviorism (Moore, 2013). Although Watson's (1924) methodological behaviorism rejected appeals to private events in a science of behavior, later neobehavioral versions (e.g., Tolman, 1951) allowed for their inclusion, provided such events could be operationalized. The latter approach influenced the development of cognitive–behavior therapy (CBT), as it allowed the therapist to measure private events and evaluate their relation to overt behavior.

The second theoretical camp was the radical behaviorist approach of Skinner (1945). While acknowledging the advantages of operationism over introspection, Skinner argued that operationism created a scientific dualism in which private events, existing in a mental or nonphysical dimension, were regarded as causal agents outside the domain of science. By contrast, Skinner held that private events fell within the domain of a science of behavior because they were naturally occurring acts of an organism and, as such, should be subject to the same principles of behavior that applied to publically observable behaviors. Importantly, the radical behaviorist position rejected cognition as causal because explaining one behavior with a second begged the following question: What caused the second, supposedly causal, behavior (i.e., the private event)? Needless to say, this did not mesh well with the cognitive-causation hypothesis shared by most members of Western cultures, and it did not address clients' desire to reduce problematic thoughts and feelings as a route to long-term behavior change. As such, radical-behavioral approaches to psychotherapy did not take off, leaving most behavior therapists to pursue CBT. A renaissance of radical-behavioral clinical therapy would have to await new discoveries in the laboratories of behavioral scientists. Before we turn to that topic, we discuss the rather impressive, socially significant behavior-analytic interventions that were built upon the first wave of basic behavioral principles.

KNOWLEDGE BASE

Thorndike's (1898) law of effect provided a foundational principle that shaped the direction of the field of behavioral science for more than 100 years. The law of effect held that when a response led immediately to a beneficial consequence (e.g., a cat steps on a treadle that allows escape from a puzzle box), the association between situation and response was strengthened by the consequence—that is, when returned to the situation, the similarly motivated organism was more likely to emit the successful response.

Skinner (1932) embraced Thorndike's nonpurposive approach to the study of learning and developed a standard apparatus, the “Skinner box,” to study simple responding in a way that promoted across-laboratory and across-species replication. Several first-wave principles of behavior were discovered or clarified using this apparatus. These include (a) positive and negative reinforcement, (b) operant extinction, (c) differential reinforcement and shaping, (d) schedules of reinforcement, (e) conditioned reinforcement, (f) positive and negative punishment, and (g) generalization and discriminative stimulus control. These principles are well known and are covered in most introductory psychology texts.

Equipped with these principles, early radical behaviorists began to explore their applicability to human behavior (see Rutherford, 2003, for a review). The earliest comprehensive application of operant principles occurred in an institutional setting in which ward nurses were taught to objectively record desirable and undesirable behaviors of residents classified as schizophrenic or “mentally defective” (Ayllon & Michael, 1959). Nurses were then instructed to provide reinforcers (candy, cigarettes, and attention) following residents’ desirable behavior and to extinguish undesirable behavior by acting “deaf and blind” when the latter occurred. This differential-reinforcement procedure reduced undesirable behaviors (e.g., psychotic speech and violent behavior) while increasing adaptive functioning (e.g., appropriate work and social behaviors). Subsequent research established that tokens could be used to reinforce appropriate behavior when exchangeable for goods and privileges (e.g., Phillips et al., 1971). These *token economy* programs proved successful in improving the behavior of predelinquent and delinquent adolescents (e.g., the family achievement model; Fixsen et al., 2001) and today serve as the basis for many foster care and adolescent programs (e.g., Boys Town; http://www.boystown.org).

A similarly groundbreaking application of first-wave behavioral principles used differential reinforcement to teach prosocial behavior to children with autism (Wolf, Risley, & Mees, 1963). This was the first application of *discrimination training* (i.e., reinforcing a desired behavior in one setting and extinguishing the same behavior elsewhere) and *time out from positive reinforcement*; the latter a technique now widely used as a replacement for corporal punishment. Countless studies followed in which the behavior of individuals diagnosed with autism proved amenable to operant-conditioning principles (e.g., Lovaas et al., 1973). Primary and conditioned reinforcers were provided for appropriate behavior (e.g., social nonverbal behaviors, speech, and play), and either existing reinforcers were withdrawn or punishing consequences were scheduled for problem behaviors. The treatment strongly affected behavior, and children’s IQs and social quotients improved. Subsequent studies showed that the intervention improved the developmental trajectories of those who received this *early intensive behavioral intervention* (EIBI; e.g., Cohen, Amerine-Dickens, & Smith, 2006; Eldevik et al., 2010). Indeed, EIBI is now recognized as the standard of care for children diagnosed with autism (National Institute of Mental Health, 2007; U.S. Department of Health and Human Services, 1999). We return to the growth of EIBI in the Major Activities section of this chapter.

By the late 1960s, advances in applied behavior analysis warranted the creation of a new journal, and the inaugural issue of the *Journal of Applied Behavior Analysis* outlined seven dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968). These dimensions held that research and practice in applied behavior analysis would (1) target socially significant behavior, (2) objectively measure this behavior, (3) employ basic principles of behavior in the design of the intervention, (4) describe the intervention in adequate detail so that it could be replicated by others, (5) demonstrate a causal relation between the intervention and behavior change, (6) produce a lasting behavior change that generalizes to new contexts, and (7) change behavior in a way that is meaningful to participants. Synthesizing all seven dimensions in behavior analytic applications facilitated a qualitative improvement in applied behavior analytic research and practice that continues to this day.

The focus on causal relations between behavior and environmental events reached a summit in the early 1980s when the procedure known as *functional analysis of problem behavior* was developed (Iwata, Dorsey, et al., 1994). An earlier study in which causal relations were explored revealed that the self-injurious behaviors of a young boy diagnosed as schizophrenic were instances of operant behavior maintained by the attention provided by others—that is, contingent attention reinforced self-injurious behavior (Lovaas et al., 1965). Withholding attention for some time produced a reliable increase in self-injury—an extinction burst—followed by a decrease in this behavior. The behavioral *function* of self-injury was that it was an effective way to acquire attention.

Subsequent research demonstrated that self-injury and other forms of problem behavior (e.g., aggression) were often maintained by reinforcing consequences. For example, the function of some problem behaviors was that, when emitted, they allowed the individual to escape or avoid difficult tasks (e.g., Carr, Newsom, & Binkoff, 1976), whereas other problem behaviors such as stereotypy and self-injury functioned to produce reinforcing sensory stimulation (Rincover et al., 1979). Importantly, researchers could not determine the behavioral function just by looking at the topography of the behavior.

The functional analysis approach became a vibrant research area in the late 1980s through 1990s (Beavers, Iwata, & Lerman, 2013). In general, functional analyses are designed to model the conditions under which problem behavior occurs. The reinforcing contingencies hypothesized to influence problem behavior are emulated in different test conditions to determine which, if any, result in a temporary worsening of problem behavior compared to a control condition in which the putative contingencies are absent. For example, if parental attention is hypothesized to maintain self-injury, the rate of self-injurious behaviors would be measured in several test sessions in which the parent is present and instructed to attend to instances of self-injury. If the rate of self-injury in these sessions clearly exceeds that observed in control sessions in which the child receives the same type of attention consistently and independent of his or her self-injury, then one may conclude that at least one function of self-injury is to acquire social reinforcers.

When reinforcing contingencies are identified in a functional analysis, they can be altered during treatment to reduce problem behavior. In the prior case of self-injury, parental attention could be withheld (*extinction*; Iwata, Pace, et al., 1994) while the child is taught a more appropriate means of obtaining attention. For example, *functional communication training* involves teaching the individual to ask for the reinforcer (either vocally or by the use of a verbal aid such as a card with the words “attention please” printed on it) while problem behavior is concurrently extinguished (Carr & Durand, 1985).

Determining the function of the behavior improved intervention outcomes because the treatment was designed with empirical knowledge of the environmental determinants of the problem behavior. The methods described by Iwata, Dorsey, et al. (1994) have become the standard model for conducting a functional analysis of severe problem behavior (Beavers et al., 2013); however, functional analysis procedures have retained their inherent flexibility allowing for adaptation to the unique exigencies of individual clinical and educational contexts (e.g., Hanley et al., 2014).

To summarize, at least three important implications resulted from the development of functional analyses of problem behavior. First, because the form or topography of the problem behavior was not predictive of its function, treatments ceased to be catalogued by diagnosis. Instead it was the function of behavior that guided treatment design; a practice that stands in contrast to the more traditional psychological approach to diagnosis using, for example, the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (American Psychiatric Association, 2013). Second, because the functional analysis is individualized to each person and the setting in which he or she lives, it is well suited to the treatment of ethnic and culturally diverse individuals. The behavior analyst makes no assumptions about the reinforcer that maintains the problem behavior of each new client. Instead, following semistructured interviews and brief observations, the behavior analyst tests the hypotheses of those affected by the problem behavior of the client and will evaluate behavioral functions that have frequently been reported in the scientific literature. Third, the development of the functional analysis of problem behavior decreased ABAs’ reliance on using one-size-fits-all arbitrary reinforcers and punishers. Discovering the function of problem behavior proved to be a more precise, effective, and humane form of treating problem behavior (Hanley, 2012). The many refinements to the functional analysis of problem behavior have led to its near-universal use in clinical settings by ABAs (see the Association for Professional Behavior Analysts; http://www.apba-home.net).

As behavior analysts were successfully improving human behavior in settings in which tight control of contingencies could be achieved, an unexpected finding in basic-science laboratories was being added to the knowledge base of behavior analysis—researchers were reporting that humans were far less sensitive to changing contingencies of reinforcement than were their nonhuman-subject counterparts (e.g., Baron & Galizio, 1983). Instead, experimenter-provided instructions greatly influenced human behavior even when the instructed actions were at odds with the prevailing contingencies of positive reinforcement (e.g., Kaufman, Baron, & Kopp, 1966). This maladaptive rule following bore a formal resemblance to the behavior of the clinical client who often generated an elaborate set of rules about how to behave in daily life.

In general, following rules is adaptive (e.g., following rules facilitates skill acquisition, cooperation, public safety); therefore, rule following is taught in many contexts (e.g., home, school, church). However, rigidly following rules constrains behavioral variability, making it unlikely that the individual will contact reinforcement contingencies that could maintain more adaptive functioning (Hayes, Brownstein, Zettle, et al., 1986). This appeared to be what was happening in the human operant laboratories—experimenters instructed participants to, for example, press the button quickly, and participants followed the rule even when it was no longer adaptive to do so.

Given these findings, human operant researchers—many of which were trained as clinical psychologists (e.g., Hayes, Brownstein, Haas, & Greenway, 1986)—began to study the role of language and rule following in adaptive responding. These researchers delineated three functional classes of rule-governed behavior: tracking, pliance, and augmenting. *Tracking* occurs when rules are followed because the rule accurately describes an operative contingency of reinforcement (Hayes, Zettle, & Rosenfarb, 1989). For example, a written set of assembly instructions, when followed correctly, yields a properly assembled toy or Swedish shelving unit. *Pliance* occurs because of social consequences designed to maintain rule following. Parents and teachers, for example, praise the following of rules and punish the breaking of rules, and these consequences influence the future probability of compliance. *Augmenting* describes behavior influenced by rules that either establishes something as an important consequence (e.g., telling a child that "Good grades are important because they help you to get into a good college") or increases the value of a consequence (e.g., telling a psychology major that "Good grades are critical if you plan to attend graduate school"). Thus, augmenting describes a means of verbally influencing motivation.

Although tracking, pliance, and augmenting usually increase human functionality, some clinical clients' rule following appears to be self-destructively weighted toward one type of rule following over another. *Maladaptive tracking* may arise when the rule specifies a negative reinforcement contingency (e.g., "If I engage in compulsive behavior, then I will avoid a catastrophic event") or when the rules are self-fulfilling ("I know that others praise me out of pity").

In the case of *maladaptive pliance*, the client's behavioral repertoire is predominated by rule following because it pleases others or, in the case of the rebellious, it infuriates others (Hayes et al., 1989). The people-pleasing client may go to great lengths to ensure that others view him or her in a positive light (including the therapist) and may never feel that this outcome is achieved. Similarly, rebels may take extreme measures to ensure that others condemn their actions (itself a socially mediated reinforcer) or that others who are within their social circle approve their actions.

Finally, *maladaptive augmenting* occurs when clients operate under the rule "If I experience unwanted thoughts/feelings, it means that I will not achieve my ultimate goal of contentment." Such rules, when followed, render unwanted thoughts and feelings as important signposts of failure, which motivate avoidance of situations in which these experiences are likely to occur. Indeed, the augmented negative value of unwanted thoughts and feelings motivates many clients to pursue therapy with the goal of ceasing these unacceptable experiences (see Hayes, Strosahl, & Wilson, 1999).

The recognition that maladaptive rule following is involved in the client's problem is not unique to clinical behavior analysis, but the therapeutic strategy pursued is unique. Rather than trying to replace dysfunctional rules with new rational ones, the clinical behavior analyst focuses on experiential (contingency shaped) learning. The analyst attempts to bring the client into experiential contact with the consequences of his or her maladaptive pliance, tracking, and augmenting. As more adaptive ways of behaving are explored, care is taken that the behavior is not occurring because the therapist is reinforcing pliance (i.e., following a new set of rules simply to please the therapist). Instead, the focus is on contact with the consequences of new behavior—without naturally occurring reinforcing consequences, any adaptive actions occurring in the therapist's office are unlikely to generalize to new settings or to be maintained over time.

The research on maladaptive rule following provided insights into client's dysfunctional self-talk and suggested an experiential, contingency-shaped approach to change. However, a deeper understanding of dysfunctional self-talk, one that would inspire new approaches to clinical behavior analysis, would require yet another expansion to the behavior-analytic knowledge base—a behavioral analysis of language, cognition, and meaning. This expansion originated in basic behavioral-science laboratories in which researchers such as Murray Sidman were teaching individuals with severe developmental disabilities to read.

In Sidman's (1971) studies, participants were taught to pick the written name of an object from an array of words when the name was spoken (e.g., when the therapist said "cake," the participant received a reinforcer if he or she selected the written word CAKE). Next the participant was taught the relation between the spoken word and the picture. To Sidman's surprise, participants spontaneously picked the written word when shown the picture and the picture when shown the written word (Sidman, 1971). Said another way, Sidman discovered that these individuals, when taught *if A then B* (i.e., if "cake" then CAKE) and *if A then C* (i.e., if "cake" then picture of a cake), spontaneously derived *if B then C* and *if C then B*. Sidman labeled this phenomena *stimulus equivalence* (for details about training and testing procedures used in the stimulus equivalence literature, see McIlvane, 2013).

Decades of subsequent research suggested that stimulus equivalence was unique to humans (Dube et al., 1993; Hayes, 1989)—a finding supporting the hypothesis that relating stimuli as equivalent to one another is a critical skill in understanding symbolic meaning and in human language (e.g., Barnes-Holmes, Hayes, & Roche, 2001). Said another way, relating stimuli as equivalent to each other is *operant behavior* learned through countless instances in which verbally competent humans naturalistically teach children to relate stimuli (Berens & Hayes, 2007). For example, a parent asks a toddler "Where is your ball?" and reinforces looking at, pointing to, or crawling toward the ball (e.g., with smiles, hugs, tickling, kisses, the ball). This *if "ball" then ball* relating behavior is explicitly taught, as is the symmetric relation *if ball then "ball."* Through multiple examples of this training in multiple situations, children learn that words are in many ways equivalent to the things, events, and activities that they stand for or symbolize. Thus, the word "ball" acquires many of the functions (i.e., evokes many of the same behaviors) as a real ball.

According to relational frame theory (RFT; Hayes, Barnes-Holmes, & Roche, 2001), *equivalence* is just one way of relating arbitrary stimuli; other ways include opposition and comparison. Within RFT, categories of different types of relating behaviors are referred to as *relational frames*. These operant relating behaviors have three properties. First, *mutual entailment* specifies that if we learn that A = B, then we will relate B = A without further training. A second property is *combinatorial entailment*; that is, if A is related in some way to B (e.g., less than), and B is related in the same way to C, then it is entailed that A and C should be related as well (e.g., if A < B, and B < C, then A < C, and C > A). The third property is *transformation of function*; if A is an aversive stimulus and the individual learns that B = A, then the function of B will be transformed from a neutral stimulus to an aversive stimulus. The important clinical implications of transformation of function are explored later.

With all of these different ways in which to relate stimuli, individuals need guidance on which relational frame is appropriate to the situation. The situation, or *relational context*, provides this guidance. Obvious examples of a relational context are verbal stimuli that specifically indicate which relational frame is adaptive. For example, when a teacher asks a student to "point to the coin that has less value," a comparative relational frame is called for by the contextual stimulus "less." When the student selects the nickel over the dime, the choice is reinforced with teacher approval. Less obvious examples of relational contexts are the larger settings in which verbal discourse occurs. As an example, the meaning of the words "bat" and "pitcher" in the statement "The bat landed by the pitcher" depends on the setting in which that statement occurs. When it is made at a baseball game, the words are related as equivalent to a baseball bat and the person pitching the ball, respectively; whereas when made while picnicking near a cave, the potentiated equivalence relations are a small flying mammal and a container used to pour liquids, respectively. In sum, RFT holds that through extensive multiple exemplar training, humans acquire a rich repertoire of relational frames, the application of which is controlled by contextual stimuli.

Applied to clinical behavior analysis, relating behavior, like all other behavior, once acquired can be reduced (e.g., by withdrawing the reinforcer) but cannot be unlearned (Okouchi et al., 2014). Thus, if the client relates "I" (as in "self") as equivalent to "worthless," this relating behavior can be reduced but cannot be unlearned. The CBT approach might be construed as an attempt to alter the stimuli that the client relates as equivalent—the client is encouraged to abandon the relation I = worthless in favor of I = worthwhile, with logical supports for this position. However, the unwanted self-appraisal of worthlessness is likely to recur periodically, and a side effect of augmenting the value of the I = worthwhile relation (and suppressing the old one) may be, paradoxically, to increase the probability of unwanted thoughts and feelings—an instance of the so called "white bear effect" (Wegner, 1994).

RFT research conducted in controlled laboratory settings suggested an alternative approach—clinical behavior analysts could influence client behavior by altering the *relational context*. Again, the relational context is composed of stimuli that signal what relational frame is appropriate and when it should be applied. Therapeutically altering the relational context provides the client with new information about what is the appropriate relational frame. For most clients, problematic thoughts are relationally framed as equivalent with the actual events. Thoughts of failure, for example, are related as equivalent to past or imagined experiences of failure, and these thoughts occasion unwanted feelings that motivate escape and avoidance. The therapist can alter the relational context by signaling that the appropriate relational frame is one of nonliterality. For example, the node "I am having the thought that . . ." might be added to the intact relation I = failure with the outcome that the content of thoughts may be observed as the product of relating behavior rather than as events that must be escaped from or avoided.

The third property of relational frames, *transformation of function*, has proven to be an important piece of the knowledge base used in clinical behavior analysis. In a foundational study, participants were taught that A = B and A = C (note that the A–C stimuli were meaningless stimuli such as three-letter nonsense syllables). After training, participants demonstrated the entailed relations: B = A, C = A, B = C, and C = B. With the ABC equivalence class established, the behavioral function of B was altered by presenting that stimulus a few seconds before the delivery of a mild electric shock. This Pavlovian procedure caused the B stimulus, when presented alone, to elicit a skin conductance fear response. On probe trials, when the A and C stimuli where presented in the absence of shock, these stimuli also elicited a fear response (Dougher et al., 1994). That is, altering the behavioral function of one member of the equivalence class altered the function of all members of the equivalence class. These findings provide a model for understanding other commonly experienced and clinically relevant transformations of function (e.g., feeling anxious when an anxiety-producing stimulus is merely named).

Because clinical behavior analysts must influence behavior that does not fall just under the umbrella of Pavlovian conditioning, an important follow-up study established that the *operant* function of stimuli could also be transformed. The experiment established two three-member equivalence classes: A1 = B1 = C1, and A2 = B2 = C2. Then, C1 preceded electric shocks, as discussed earlier. When participants learned that they could press a button to avoid the upcoming shock (an operant avoidance response), they spontaneously pressed the avoidance button when, on no-shock probe trials, they encountered A1 and B1 but not when they encountered A2 and B2 (Augustson & Dougher, 1997). Thus, the operant-avoidance function of stimuli (A1 and B1) related as equivalent to a stimulus with an experimenter-produced operant-avoidance function (C1) was transformed without the provision of experience with the operant contingency (i.e., pressing the button had never before been negatively reinforced in the presence of A1 or B1).

These transformation of function findings established that the Pavlovian and operant functions of stimuli in an intact relational network could, through relational framing, be experimentally transformed. Translated to clinical phenomena, a persistent unwanted thought (analogous to C1 in the preceding study) and its ability to elicit emotion (fear) and voluntary behavior (avoidance) could be influenced by altering the function of one or more stimuli in the relational network. For example, the behavior analyst might help the client to emit new operant behaviors when he or she encounters unwanted thoughts and feelings. Where the client had been actively avoiding these experiences, the therapist will encourage the client to explore the consequences of approaching them. What is the consequence of approaching an unwanted feeling, examining its physical characteristics, and noticing one's evolving willingness to engage in these approach behaviors? Such strategies are designed to alter the behavioral function of the thought/feeling and to expand the behavioral repertoire of the client so that he or she may respond in flexible ways to the cognitive content that drove him or her to therapy.

Taken together, rule-following and arbitrary relational responding begin to offer an account of the relation between verbal and nonverbal behavior and the role that verbal processes (cognition) play in the development of clinical disorders. In particular, they situate cognition (thoughts, beliefs, expectancies, memories) as instances of verbal behavior that arise from empirically established verbal processes rather than as mental events whose nature and influence can only be inferred. The behavior analytic view of these private events, as instances of behavior, implies that thoughts and feelings are not causes of clinical disorders as much as they are characteristics or correlates of disorders (Dougher & Hackbert, 1994). As such, interventions aimed at manipulating the assumed biological and environmental causes of disorders should alleviate the associated cognitive and affective characteristics, even when those are not directly targeted in therapy. There is good evidence for this position; in their review of the CBT literature, Longmore and Worrell (2007) concluded, "There is little empirical support for the role of cognitive change as causal in the symptomatic improvements achieved in CBT" (p. 173). This conclusion is in accord with the knowledge base of behavior analysts: The goal is not to replace bad cognition with good but to experimentally alter contexts in which relating behavior occurs so that clients may contact new and more adaptive contingencies of reinforcement.

MAJOR ACTIVITIES

Many ABAs have been and continue to be credentialed or licensed as behavior analysts, with some also credentialed or licensed as clinical psychologists, special education teachers, or social workers. The formal and independent professionalization of ABAs began in the late 1990s, with the founding of the Behavior Analysis Certification Board (http://bacb.com). The need for board certified behavior analysts (BCBAs) has primarily been driven by the recognition of applied behavior analysis as an evidence-based approach for the unique problems associated with autism and related disabilities (Horner et al., 2002; McConnell, 2002), and the resulting legislation mandates requiring private and federal insurance companies to reimburse providers of applied behavior analysis therapy. There are currently 19 states with health insurance coverage of ABA services (http://www.apbahome.net/health.php).

The major activities of clinical behavior analysts include the provision of behavioral interventions, supervision of these interventions, research, and behaviorally based talk therapies. Due to the recent history, many who provide direct services to families of children with autism or related disabilities are baccalaureate-level behavioral technicians who are sometimes credentialed as board certified associate behavior analysts. These services are usually delivered in home or schools, but are also provided via inpatient or outpatient hospital-based services. Supervision of these services is often provided by master's level BCBAs. In the next several paragraphs, we discuss research activities of, usually, doctoral-level behavior analysts that continue to have a bottom-up impact on the practice of BCBAs working with individuals with autism.

Because two of the three core features of autism include impairments in language and social functioning, a major research activity of behavior analysts has been focused on language and social development (Bourret, Vollmer, & Rapp, 2004), in some cases applying Skinner's (1957) functional approach to language and synthesizing single-subject research findings into manualized interventions (e.g., Sundberg, & Partington, 1998). Other research activities focus on the third core feature of autism—stereotypic and ritualistic behavior (Ahearn et al., 2007; Goldman et al., 2009). For instance, research has shown that scheduling brief periods of access to self-stimulating, stereotypic behavior as a reinforcer for engaging in play or other contextually appropriate behavior yields a reduction in stereotypy and increases desirable skills (Potter et al., 2013).

Although not part of the diagnostic criteria, children with autism frequently engage in problem behaviors such as self-injurious behavior, aggression, disruption, extreme emotional outbursts, and sleep disturbances. Thus, major research activities have been directed to developing functional assessment strategies that yield effective, socially valid treatments for these related problems (Hagopian et al., 2013; Hanley et al., 2014). These research activities and resultant findings provide structure to the practices of BCBAs working with persons with autism.

Another major activity of clinical behavior analysts is the development and implementation of interventions for the more common problems encountered by parents of children with and without disabilities. These include nighttime struggles (Friman et al., 1999), incontinence (Friman & Jones, 2005), phobias (K. M. Jones & Friman, 1999), and aggression and disruption (Wacker et al., 2011). In all cases, understanding the function of the problem behavior has suggested the solution. For example, parents can reduce many bedtime struggles (e.g., crying and excessive calling out for parents) by reaching a child–parent detente in which the parent gives the child a bedtime pass that allows one request to be granted each night.

Developing prevention programs for problem behavior is another major activity of clinical behavior analysts, particularly for children experiencing large amounts of nonfamilial care (National Institute of Child Health and Human Development, Early Child Care Research Network, 2003). Research has shown that preschoolers are at risk for school failure if they regularly engage in behaviors such as rudeness, grabbing, whining, and aggression. The application of behavior analytic principles to teaching functional communication and improving delay tolerance can greatly reduce these at-risk behaviors (Luczynski & Hanley, 2013).

Within all of these major activities, there has been a long-standing emphasis placed on ensuring that consumers of the behavior-change program agree to its goals, find the procedures acceptable, and appreciate the amount and type of behavior change (Fixsen et al., 2001; Wolf, 1978). This *social validity* of behavioral interventions is usually assessed with consumer interviews (Foster & Mash, 1999), but such practices can marginalize individuals with autism or other developmental disabilities who have limited language abilities (Hanley, 2010). To solve this problem, researchers have imported procedures for detecting nonhuman animals' preferences (Neuringer, 1967). In these concurrent-chains schedules, salient cues are correlated with different behavioral interventions, and the client learns which cues predict which intervention. Subsequently, the client may choose his or her preferred intervention by selecting the associated cue; a process that continues until a clear preference is demonstrated, thereby objectively determining nonverbal clients' acceptability of interventions (Hanley, 2010). In addition to providing a voice to direct consumers of applied behavior analysis, these assessments contribute to an evolving set of evidence-based values that inform best practice for ABAs.

Additional major activities of applied behavior analysts include parent training (Serketich & Dumas, 1996) and addressing public health concerns, particularly in the area of dietary decision making and substance dependence (Higgins, Heil, & Sigmon, 2013; Lowe et al., 2004). For example, the Food Dudes program was developed using behavioral principles to encourage healthy eating in school cafeterias. The outcomes are impressive, with fruit consumption increasing from 27% to 164%, and vegetable consumption increasing by 32%–51% during the 4-month program (e.g., Horne et al., 2004); strong long-term outcomes have also been reported (e.g., 73% increase in combined fruit and vegetable consumption at 12-month follow-up; Horne et al., 2009). Within the substance abuse treatment literature, when conditioned reinforcers are provided contingent on biologically verified drug abstinence, substance use decreases markedly; indeed, a recent meta-analysis indicated that this *contingency management* of substance use program is the most effective means of treating opiate abuse (Dutra et al., 2008).

A final major activity of graduate-trained clinical behavior analysts is conducting research and practice in talk therapies. Several different approaches fall under this umbrella, but they are united by four core philosophies (Guinther & Dougher, 2013), each of which has been tied in this chapter to research findings: (a) Clinical behavior analysts take a constructional approach to helping clients expand their behavioral repertoire with adaptive, positive, and rewarding behaviors. (b) Clinical behavior analysts adopt a radical behaviorist position on private events (e.g., cognition)—these are instances of behavior that can mediate other behaviors but are not in themselves causal. (c) Behavior analytic therapies emphasize contingency-shaped rather than rule-governed behavior change. The therapist facilitates a process of behavioral and existential change that occurs through contacting the consequences of one's actions rather than through following old or new rules by which to live. (d) Rather than attempting to directly alter thoughts and feelings, behavior analytic therapies attempt to alter their function. This is done indirectly in some of the therapies by helping clients notice the changes in private events that occur subsequent to activation of valued activities. In others it is done directly via techniques designed to alter the relational frame that the client brings to private experience.

Psychotherapies rooted in behavior analysis include functional analytic psychotherapy (FAP; Kohlenberg & Tsai, 1991), behavior activation therapies (BATs; Lewinsohn, 1974), dialectical behavior therapy, and acceptance and commitment therapy. In the remainder of this section, we consider major activities conducted under the first two of these therapies. The latter two therapies are the subject of a separate chapter (on acceptance and mindfulness; see Volume 2, Chapter 10, this handbook); therefore, they are not discussed here.

FAP (Kohlenberg & Tsai, 1991) eschews reliance on clients' reports about their clinically relevant behavior—assuming instead that most of the problems experienced by verbally competent adults are interpersonal, and that these interpersonal problems will appear in the course of therapy. The emphasis is placed on contingency shaping rather attempting to alter the rules governing behavior. Thus, the clinical behavior analyst practicing FAP uses the therapeutic context to reinforce the occurrence of desirable clinically relevant behaviors (e.g., honesty, disclosure, openness, empathy) and to decrease the frequency of problematic behaviors (e.g., defensiveness, withdrawal, hostility, dissimulation) in vivo. Studies exploring the operative components of FAP have found that this in vivo work improves interpersonal functioning outside of therapy (e.g., Kanter, Schildcrout, & Kohlenberg, 2005). FAP-enhanced cognitive therapy is effective for the treatment of depression (Kohlenberg et al., 2002), and FAP-enhanced behavioral activation (BeAct) effectively treats relationship distress (Manos et al., 2009).

BAT uses activity scheduling and social skills training to help depressed clients obtain and maintain stable sources of positive social reinforcement (Lewinsohn, 1974). This approach is taken under the rationale that depression arises from extinction or the loss of stable sources of positive reinforcement (Ferster, 1973; Skinner, 1953), especially social reinforcement. Contemporary BAT (BeAct) is stripped of direct cognitive interventions; instead, emphasis is placed on the identification of avoidance of aversive situations; functional analysis of this avoidance; and the creation of small, achievable goals (Dougher & Hackbert, 1994). Specifically, core treatment components include activity monitoring, activity scheduling, stimulus control, skills training, self-encouragement, identifying avoidance, understanding rumination, and practicing mindfulness.

Varieties of comparative studies (e.g., Hopko et al., 2003) have established the efficacy of the different versions of BAT. When BeAct was compared to cognitive therapy—paroxetine (a selective serotonin reuptake inhibitor antidepressant) and placebo for the treatment of clients with mild depression—the three interventions were comparably effective (Dimidjian et al., 2006). However, the same study reported that BeAct outperformed cognitive therapy and was as effective as paroxetine in the treatment of clients with moderate to severe depression. Because BeAct has lower dropout and relapse rates than paroxetine (Dobson et al., 2008), is effective in group therapy formats (Porter, Spates, & Smitham, 2004), and appears to be effective in the treatment of individuals with posttraumatic stress disorder (e.g., Jakupcak et al., 2006), BeAct is a major activity among clinical behavior analysts.

KEY ACHIEVEMENTS

The key achievement of the specialty of clinical behavior analysis is its demonstrated efficacy in changing behavior. Thousands of individual studies and dozens of meta-analyses demonstrate its capacity to make therapeutic changes in individual behavior (e.g., Bellini & Akullian, 2007; Dutra et al., 2008; Eldevik et al., 2009; Heyvaert et al., 2012; McCart et al., 2006; Öst, 2008; Powers, Zum Vörde Sive Vörding, & Emmelkamp, 2009; Virués-Ortega, 2010). A testament to the effectiveness of this approach is the 2012 report of the Inter-Organizational Task Force on Cognitive and Behavioral Psychology Doctoral Education (Klepac et al., 2012). This task force was led by the Association for Behavioral and Cognitive Therapies, and its mission was to recommend competencies that should be held by those who graduate from doctoral programs in clinical, counseling, and school psychology. At least 60% of the procedures in the task force's list of evidence-based interventions were behavior analytic in nature (e.g., shaping, self-management and habit reversal, extinction/exposure, BeAct, defusion). We regard this as strong evidence for the bottom-up empirical approach taken throughout the history of clinical behavior analysis.

As previously noted, the ABA approach to the treatment of autism spectrum disorders is recognized as the treatment of choice by federal (U.S. Department of Health and Human Services, 1999) and state (e.g., Maine Administrators of Services for Children With Disabilities, 1999; New York State Department of Health, Early Intervention Program, 1999) agencies. This demonstrated efficacy is largely responsible for recent professional recognition by states, the exponential growth in the number of BCBAs (currently numbered at more than 16,000), and in the number of international colleges and universities with BCBA-approved graduate coursework (currently numbered at more than 250). Each year, additional states are establishing licensing processes for ABAs and are passing health insurance mandates relevant to ABAs.

The natural progression from determining the efficacy of behavior-change procedures in highly controlled environments to establishing their effectiveness in homes, classrooms, and communities is also a major achievement of behavior analysis. For instance, the Good Behavior Game (Barrish, Saunders, & Wolf, 1969) is now recognized by the National Institutes of Health as a behavior management method capable of decreasing drug and alcohol use disorders, regular smoking, antisocial personality disorder, delinquency and incarceration for violent crimes, suicide ideation, and use of school-based services (Kellam et al., 2011).

The translational work on stimulus equivalence begun by Murray Sidman in the 1970s and continued by the developers of RFT have led to a comprehensive, experimentally derived, functional account of human language and cognition (Hayes et al., 2001). This theory provides a pragmatic account of the role played by private events in the development, maintenance, and treatment of a range of clinical disorders. Research in behavior-analytic laboratories led to an experimentally derived account of acceptance and mindfulness—an endpoint converged upon by other behavior therapists (e.g., Linehan, 1993) via the route of Buddhism. The focus on the functions (effects) of private events rather than their content is unusual among verbal therapies, and the demonstrated effectiveness of the resulting clinical interventions across a wide range of disorders certainly qualifies as a key achievement.

A final key achievement is the reliable efficacy of behavior activation in the treatment of depression (e.g., Dimidjian, et al., 2006). Interestingly, although these therapies do not specifically target private events or use acceptance-enhancing interventions, they produce changes in affect and cognition that are comparable to cognitive interventions.

FUTURE DIRECTIONS

The future of clinical behavior analysis is anticipated to walk five interconnected paths. The first will be the well-worn path from research laboratories to applied and clinical settings. Important contemporary studies on the nature of reinforcement (e.g., Davison & Baum, 2006), timing and information theory (e.g., Gallistel & Gibbon, 2002), behavioral economics (e.g., Hursh & Roma, 2013), delay discounting (e.g., Madden & Bickel, 2010), and associative concept learning (e.g., Zentall, Wasserman, & Urcuioli, 2014) have the potential to affect the practices of applied and clinical behavior analysts. Likewise, the back-translational research increasingly being conducted by behavior analysts is an important future direction. In this vein, researchers conduct laboratory analogue studies designed to answer questions of primary interest to applied researchers (e.g., Bruzek, Thompson, & Peters, 2009).

This is a critical path to continue walking but one that is in jeopardy. Regulations on animal research have increased substantially the cost of conducting the basic research that has historically proven important in clinical behavior analysis. These costs may deter students considering their prospects as laboratory-based behavioral researchers. Concurrently, the proliferation of behavior-analytic training programs meeting the market demand for ABAs have tailored their curriculum to meeting minimum training criteria outlined by certifying bodies. Unfortunately, these programs rarely offer more than a single course in basic laboratory research. This is problematic, for if future behavior analysts are unable to understand contemporary basic research findings, they are unlikely to translate these into practice.

We offer four recommendations: (a) Students trained in basic behavior analysis should be trained to write grants to support their laboratory research (an activity that prepares the student to succeed in funding his or her own research and one that places a premium on considering the translational potential of one's findings); (b) graduate programs in behavior analysis should ensure that their coursework in basic research is providing ample coverage of contemporary research findings and that these courses are taught by individuals qualified to teach these topics; (c) graduate programs in clinical behavior analysis should do the same (although the coursework is likely to focus on a different set of basic research topics; e.g., RFT); and (d) accreditation and certification boards should incorporate *b* and *c* into their minimum training standards, lest these needed changes be regarded as impractical.

The second path will focus applied behavior analytic efforts on the seven dimensions of applied behavior analysis (Baer et al., 1968). These comprehensive assessments and socially/empirically validated treatment packages will be informed by decades of functional analysis research while retaining the flexibility to assess conditions unique to individuals exhibiting problem behavior.

The third path will involve clinical research exploring (a) the application of behavior analytic talk therapies with an expanded range of clinical populations and (b) component analyses to identify the operative elements of the various therapies and the optimal combination of those elements in the treatment of the specific disorders. These studies should include mediation and moderation analyses to ascertain that the therapies are working according to their purported processes.

A final path forward is research evaluating the need for and efficacy of multicultural and sexual orientation adaptations of behavior analytic therapies. There is strong evidence for better efficacy when mental health interventions are culturally adapted (e.g., Smith, Domenech Rodríguez, & Bernal, 2011), and therefore, this area of emerging research is critical for the advancement of clinical behavior analysis.

Of the core philosophies characteristic of the behavior analytic therapies, the most relevant to cultural factors is the role of a functional analysis in the formulation of a treatment plan. A core tenet of behavior analysis is that cultural/social contingencies play a fundamental role in the shaping and maintenance of human behavior (e.g., Skinner, 1981). More specifically, behavior analysis therapies view clinical problems as the result of whole persons interacting in and with historically and situationally defined contexts. Accordingly, attention to cultural/social factors must play a critical role in any adequate functional analysis of client's presenting problems and the formation of effective treatment plans. It is critical, therefore, that behavior analysis therapists be knowledgeable about the cultural/social factors relevant to individual clients, and these include those pertaining to ethnicity/race, gender, sexual orientation, and other facets of personal identity. In particular, therapists need knowledge and skills necessary for effective multicultural assessment and intervention, including abilities to (a) recognize cultural diversity, (b) understand its impact in the therapeutic context, and (c) help clients to understand/maintain/resolve their own sociocultural identification. Simply applying behavior analysis assessment and therapeutic techniques in the absence of such knowledge could result in inadequate functional analyses and ineffective therapeutic interventions.

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Chapter 19

ELEMENTARY AND SECONDARY SCHOOLS

Olivia Moorehead-Slaughter and Frank C. Worrell

Understanding the social and emotional needs of children and adolescents necessarily requires consideration of the environments in which they spend a great deal of their time. Other than with family, children spend the greatest amount of time in school, and success or failure in this setting is an important indicator of a child's overall level of functioning (President's New Freedom Commission on Mental Health, 2003). Success in school is often enhanced by children's mental health and is frequently impeded by mental distress or disorder.

In both elementary and secondary schools, psychologists work with students, parents, teachers, administrators, and other staff to address the learning and mental health needs of the students. Much of this work is conducted collaboratively with counselors, learning support staff, and other professionals seeking to increase the likelihood of a child's success in school. Several considerations affect the effectiveness of school-based mental health interventions, including adequacy of coordination of services, differing perspectives of school personnel, adherence to evidence-based practices, and access to culturally sensitive services (Varjas et al., 2005). Overarching concerns around insufficient funding and a lack of infrastructure to provide the level of developmentally appropriate services that will adequately meet the range of needs of this population further contribute to the complexity.

In this chapter, we discuss the roles that clinical psychologists play in elementary and secondary schools. We begin by delimiting the training and identity of psychologists working in school settings, and then we briefly review the historical context for psychological and clinical interventions in school settings. The next sections cover the evolution of these services and highlight the unique contributions of clinical psychology practice in schools. The final two sections focus on the present status of and future directions for clinical psychology in the school setting.

DEFINITIONS AND PREVALENCE

Psychologists who work in school settings are primarily school psychologists and clinical child and adolescent psychologists. The specialty of school psychology is "concerned with the science and practice of psychology with children, youth, families; learners of all ages; and the schooling process" (American Psychological Association [APA] Division of School Psychology, n.d., para. 1). Similarly, the goal of clinical child and adolescent psychologists is "to serve children, adolescents, and families with the best possible clinical care based on psychological science" (Society of Clinical Child and Adolescent Psychology, n.d., para .1). A recent estimate indicates that there are about 32,000 school psychologists in the United States, yielding a student to school psychologist ratio of 1,500 to 1 (Jimerson et al., 2009).

A survey of the National Association of School Psychologists (NASP) membership (Curtis, Castillo, & Gelley, 2012) provides a more detailed picture of psychologists working in school settings. Most psychologists working in schools are female

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(78.1%), and they have a mean age of 47.4 years. More than 45% are fluent in a language other than English, and 3.2% have a disability. Most are European American (90.7%); Hispanic Americans (3.4%) and African Americans (3%) constitute the second and third largest racial/ethnic groups. Although most practicing school psychologists have a specialist degree (53.9%), 16.7% have a doctoral degree in school psychology, and 29.4% have a master's degree. Moreover, 10% of practitioners have a doctoral degree in a clinical psychology specialty (Curtis et al., 2012).

We recognize that school psychology is the professional specialty that is most closely associated with elementary and secondary academic settings. However, for the purposes of this chapter, we refer to psychologists more broadly, focusing more on their common clinical role within the school setting and less on the distinctions between the specialties, except as needed for clarity.

Findings from the President's New Freedom Commission on Mental Health (2003) indicate that, in the United States, one in 10 children suffers from a mental health concern of sufficient severity to cause impairment. There are a range of mental health disorders that affect children and adolescents, including attention-deficit/hyperactivity disorder, depression, anxiety, autism, and eating disorders. Results from the National Comorbidity Survey—Adolescent Supplement (Merikangas et al., 2010) are startling. The National Comorbidity Survey—Adolescent Supplement surveyed a nationally representative sample of 10,123 adolescents 13–18 years of age from the continental United States. Results indicated that anxiety disorders were most common (31.9%), with behavior disorders (19.1%), mood disorders (14.3%) and substance disorders (11.4%) following.

Children and youths with mental health problems are more likely to experience difficulties in school and to have a lower level of academic achievement. Up to 14% of youths 12–17 years of age with mental health problems receive mostly Ds and Fs compared to 7% for all children with other disabilities (Blackorby et al., 2003). Moreover, 61% of youths who are emotionally disturbed and who are in special education settings score in the bottom quartile on standardized reading measures. At the same time, less than 40% of these students are receiving any type of mental health intervention as a part of their special education services (Wagner et al., 2006). Thus, these students remain both underserved and understudied.

Children and youths with mental health concerns are also more likely to be absent, suspended, or expelled than their counterparts with other disabilities. For instance, absentee rates for children with mental health problems may be as high as 18–22 days over the course of the school year (Blackorby & Cameto, 2004). In terms of suspension and expulsion rates, this group experiences these negative consequences at a rate that is three times higher than their peers. Data from the U.S. Department of Education, Office of Elementary and Secondary Education (2002) indicated that 47% of all elementary/middle school children that were determined to be emotionally disturbed have been suspended or expelled at some point during these early to midschool years, and this percentage climbs to 73% at the secondary school level. The dropout rate for these youths is up to 44%, with more than 10% of this dropout rate being attributable to mental health disorders (Breslau et al., 2008).

Certain individual and environmental risk factors, many associated with poverty, are related to a higher prevalence of mental health problems. These include receiving public assistance, having unemployed or teenage parents, or being in the foster care system (Knitzer & Lefkowitz, 2006).

Race and ethnicity are also important factors to consider alone and in conjunction with poverty. First, rates of poverty are higher in several of these groups, including African Americans, American Indians/Alaska Natives, most Hispanic groups (with Cubans being an exception), and Native Hawaiian/Pacific Islanders (Aud, Fox, & KewalRamani, 2010). The higher rates of poverty can result in not only greater risk of mental health concerns but also more limited access to treatments. Second, there are differences in prevalence rates across groups (Eaton et al., 2012). For example, African American students are more likely to be suspended or expelled than their White peers (40% vs. 15%; Blackorby & Cameto, 2004; Skiba et al., 2011; Worrell, 2005), and African American youths may be at greater risk for posttraumatic stress disorder than their peers, given the high levels of violence in some urban areas (J. D. Foster, Kuperminc, & Price, 2004; Paxton et al., 2004). African Americans' rates of attention-deficit and disruptive behavior disorders are higher when based on teacher reports than on self-report or parent reports, although the literature is inconclusive with regard to whether these differences are due to teacher biases (Worrell, 2009). African Americans have comparable rates of anxiety disorders compared to European Americans, but they have slightly lower rates for mood and substance use disorders (Angold et al., 2002; Roberts, Roberts, & Xing, 2006).

Students from different racial, ethnic, and immigrant backgrounds sometimes have different clinical concerns. For example, as a substantial portion of recent Southeast Asian immigrants are refugees (e.g., Cambodian, Laotians, Mong, Vietnamese; Thao, 2005), members of these groups often have difficulties related to posttraumatic stress disorder and trauma, in addition to the usual stress associated with resettlement. Hispanic males (24.4%) and females (41.4%) are more likely to report feeling sad or hopeless in the past 12 months and for 2 or more weeks in a row (32.6%), and Hispanic youths are more likely to have made a suicide plan (14.3%). Obesity is also more prevalent among Hispanic and Black youths (Eaton et al., 2012). Finally, although East Asian youths (e.g., Chinese, Japanese, Korean) are stereotyped as model minorities who do well in school (Ngo & Lee, 2007; Thompson & Kiang, 2010), these families often view mental health concerns as personal weaknesses that bring shame to the family and are less likely to seek assistance from mental health professionals (Yoon & Cheng, 2005). Continued clinical research on the impact of racial and cultural factors in determining educational outcomes is warranted.

HISTORICAL PROFILE

The presence of psychologists in schools dates back to the late 19th and early 20th centuries. Indeed, the period from 1890 to 1969 has been referred to as the "hybrid years" (Fagan & Wise, 2007, p. 28)—a time when psychology in the schools was conducted by a combination of various educational and psychological practitioners whose main role was psychoeducational assessment for placement into special classes. During these early years, several social reforms were implemented that heightened the need for psychological services in schools. The reforms included compulsory schooling, juvenile courts, child labor laws, mental health, and vocational guidance. In 1918, Mississippi became the last state to require compulsory schooling for all children, although substantial numbers of children with exceptionalities and from poor and ethnic minority backgrounds still did not have access to an education. Compulsory schooling also meant that schools would need to educate a broad and diverse range of children, making it necessary for schools to attend to the plethora of physical, psychological, and learning needs represented.

To understand the progression of psychology's evolution within the school settings, it is useful to explore the contributions of both Lightner Witmer—considered "the father of clinical and school psychology" (Fagan & Wise, 2007, p. 36)—and G. Stanley Hall. Witmer's work in this area dates back to the late 1800s at the University of Pennsylvania. In the psychological clinic that Witmer founded in 1896, he provided psychological services to individual children who were experiencing (a) insufficient progress in school when compared with their peers or (b) behavioral difficulties that were proving resistant to correction through typical disciplinary strategies. Earlier, Witmer was a high school English and history teacher at Rugby Academy in Philadelphia where he took notice of some students with learning difficulties despite their seeming efforts to achieve (Brotemarkle, 1931; Collins, 1931; Gray, 1963; Witmer, 1907/1996). It was these observations that sparked Witmer's interest in understanding more about what led to learning difficulties and how they might be overcome.

In Witmer's psychological clinic, children were examined both mentally and physically, and they received a combination of medical and pedagogical interventions to address their needs. Children were sent to medical specialists to address any potential vision, hearing, or neurological concerns. Likewise, children's learning needs were addressed through observation of the child in the classroom to determine whether the learning difficulties were the result of retardation or of inadequate educational instruction.

In December of 1896, Witmer addressed the APA, presenting a plan for how to approach work with children. He argued for the following:

1. The investigation of the phenomena of mental development in school children, as manifested more particularly in mental and moral retardation, by means of the statistical and clinical methods.
2. A psychological clinic, supplemented by a training school in the nature of a hospital school, for the treatment of all classes of children suffering from retardation or physical defects interfering with school progress.
3. The offering of practical work to those engaged in the professions of teaching and medicine, and to those interested in social work, in the observation and training of normal and retarded children.
4. The training of students for a new profession—that of the psychological expert, who should find his career in connection with the school system, through the examination and treatment of mentally and morally retarded children, or in connection with the practice of medicine. (Witmer, 1907/1996, p. 249)

Importantly, Witmer (1907/1996) recognized that although psychology was closely related to medicine, it was also closely related to sociology and to pedagogy. Moreover, despite the particular focus on the school setting, he also recognized that the juvenile court system and the larger community were important contexts for psychological study and research. In the laboratory at the University of Pennsylvania, Witmer was particularly interested in training students in child psychology and, more specifically, in the clinical method. This methodology was critical to his approach to research and intervention with children in school settings. Indeed, although Witmer borrowed the term "clinical" from the field of medicine, it actually references a methodology rather than a place. According to Witmer (1907/1996), a "clinical psychologist is interested primarily in the individual child" and examines this child to determine the best plan for "the child's mental and physical development" (p. 251).

Witmer (1907/1996) believed that the clinical method should not be dictated by philosophical speculation or laboratory experimentation but rather by the desire to understand the individual child's development and how this child may deviate from what might be considered the average child at a particular stage of development. This method could be applied to children who excelled as well as those who experienced delays. The clinical psychologist was invested in contributing to the science of the profession, applying specific pedagogical remedies and noting the positive or negative impact of these interventions on the child.

Thus, early practitioners in school settings were generically referenced as clinical psychologists, though they were from a variety of backgrounds such as psychometrists, psychoclinicists, Binet-testers, psychotechnicians, psychoeducational testers, and school psychologists (see Chapter 1, this volume). Some of the earliest psychologists who worked in school settings were affiliated with APA. Others were affiliated with the Child Study Department of the National Education Association. G. Stanley Hall, a founder of APA, emphasized scientific research and assessing patterns of normative characteristics for groups. Witmer focused more on the individual utilizing clinical methodology. The combination of the two approaches formed the basis for what is now school-based psychology practice.

The testing movement is rooted in the early work of Witmer and Hall. At the fore of the individual testing movement was Alfred Binet (1857–1911), who with Theodore Simon (1872–1961) developed the first practical intelligence test battery. Binet's charge in 1904 from the Minister of Public Education was to conduct a study that would result in a method of identifying individual students who would qualify for special education (Roid & Barram, 2004). This test was useful in assessing cognitive skills, and the scores were significantly correlated with measures of school achievement, just as cognitive tests are related to achievement today. Group standardized testing dates back to World War I (1914–1918) with the development of Army Alpha and Army Beta—tests that could be administered to large numbers of individuals and utilized to assign jobs during the war effort. Individuals who did not perform well on these group tests were examined individually using a version of the Binet scales. Indeed, it is estimated that 83,500 individual testing administrations took place in the Army testing program (Boake, 2002).

Psychologists in schools were thus involved in individual clinical work with children, which included both therapeutic interventions and testing. Today's group standardized testing has its roots in the early 1900s and continues to engage psychologists and educators alike in the efficacy of its application and implications for how schools design and implement curriculum and interpret success or failure of educational practices. Although many criticisms have been leveled against cognitive tests (e.g., Ford & Helms, 2012), numerous researchers have found that the validity of inferences from scores on these tests do not differ across racial and ethnic groups (e.g., Jenkins, 1936, 1950; Neisser et al., 1996; Nisbett et al., 2012).

EVOLUTION OF ACTIVITIES

The role of psychologists in schools has evolved over time. Social reforms implemented in the late 19th and early 20th centuries created momentum for utilizing psychologists in schools. As noted previously, some of these reforms included compulsory schooling, the need for mental health and vocational guidance services in school settings, and the passing of child labor laws that specified the ages at which and the length of time that children could work. Key legislation has shaped the mandates of schools, and in turn, schools have changed to meet the needs of all of the children enrolled. By 1910, some special education services were in place in many urban and some rural communities, and "experts" were needed to determine eligibility for these services. The role of the school psychologist as "gatekeeper" evolved from this need.

Perhaps most important for the growth in school-based psychological services was the establishment of compulsory schooling in 1918. With the passage of this law, children from diverse social and economic backgrounds were presenting the schools with new challenges. As the opportunity for schooling was extended to all children, the range of learning challenges and general health concerns increased as well. These needs continued to grow through the 1920s to the 1940s, and the end of World War II coupled with the onset of the postwar baby boom intensified the demand for psychology in the schools (Eiserer, 1963).

During this same time, clinical psychology emerged as a specialty to address the range of psychological problems of returning veterans. The Veterans Administration provided both training and employment opportunities for clinical psychologists. The country refocused on domestic needs, and providing individualized instructional supports for children who were struggling to succeed in the more traditional school settings became a priority (Fagan & Wise, 2007). Psychologists contributed to these efforts through the provision of psychoeducational assessments and mental health services (Bower, 1955; Herron et al., 1970; Reger, 1965).

In 1975, President Ford signed the Education for All Handicapped Children Act of 1975, known as Public Law 94-142, representing the first federal law mandating equal access to a free and appropriate public education for children with disabilities. It became necessary for schools to expand their capacity to not only provide for the academic needs of children but also to provide an education for children with a much broader range of physical and emotional needs (Cappella & Larner, 1999; Dryfoos, 1994). Children with physical, mental, and emotional disabilities were now granted equal access to education (Fagan & Wise, 2007). As children with special needs were no longer routinely relegated to institutions outside of public schools, schools were now required to provide services for all of these students in the least restrictive environment.

Thus, the schools began a movement toward "mainstreaming" or the integration of children with disabilities into the regular education. Early versions of mainstreaming in the 1970s and 1980s generally involved the segregation of children with special needs in separate classrooms within the school building, often with less qualified teachers and with limited access to resources. However, federal scrutiny and inclusion advocates pressured schools to serve as many students as possible in regular education classrooms. With varying success, full-service schools, school-based mental health programs, and schools that incorporate a range of supportive services such as speech and language and occupational therapy have been developed nationwide (S. Foster et al., 2005).

There is continued federal support for better integration of learning and behavioral health. In the Surgeon General's report (U.S. Department of Health and Human Services, 1999) and the report of the President's New Freedom Commission on Mental Health (2003), it was proposed that mental health services for children be expanded within schools. The No Child Left Behind (NCLB) Act of 2001 underscored accountability, particularly for academic achievement and the use of scientifically based programs and teaching methods. It emphasized "student access to quality mental health care by developing innovative programs to link the school system with the local mental health system" (U.S. Department of Education, Office of Elementary and Secondary Education, 2002, p. 427). The NCLB legislation applies to general education and schoolwide programs—areas where traditional psychology practice had previously not been allowed to tread. This legislation has been particularly impactful for psychological practice in schools by making high-quality instruction, prevention, program evaluation, and data-based decision making core to school functioning (Ball, Pierson, & McIntosh, 2011).

Likewise, the reauthorization of Individuals With Disabilities Education Improvement Act (IDEA) of 2004 had important implications for how psychologists function in schools. Although eligibility for special education services was largely unchanged, the role of psychologists in schools evolved in direct relation to aspects of the act. The guidelines regarding funding have been critical in that educational entities are permitted to commit up to 15% of special education funding to early intervention services (IDEA, 2004). Schools can now invest financial resources in prevention efforts, and psychologists can be utilized at the system level.

As the increased need for psychological services in public schools paralleled a similar growth in the need for psychological services outside of school settings (e.g., hospitals, community agencies), school psychology and clinical psychology practice diverged in several ways. First, school psychology training covered both psychoeducational and mental health concerns but with an emphasis on supporting students' capacity to benefit from schooling, whereas clinical psychology training kept mental health concerns to the fore. Second, school psychology practice is now regulated in most states by the Department of Education, whereas clinical psychology practice is regulated by Boards of Psychology. Consequently, to work as a school psychologist requires a special credential in most jurisdictions.

Third, most practicing school psychologists have master's or specialist (i.e., Education Specialist degree) degrees rather than doctoral degrees. The independent practice of psychology outside of school settings occurs at the doctoral level. Clinical psychologists who choose to work in public schools must complete a certification in school psychology, and most clinical psychologists working in the K–12 system are in independent or private school settings. As a result, most school psychologists are affiliated with NASP, which allows full membership to individuals with master's and specialist degrees. NASP has an ethics code that was developed specifically for school psychologists. Clinical psychologists and other licensed doctoral practitioners are subject to the APA ethics code, even if they are practicing in school settings.

UNIQUE CONTRIBUTIONS

Psychologists are key decision makers in determining the eligibility for special education services. They are essential to the referral process as well as the ensuing steps that establish eligibility for an Individualized Education Program. This function ensures that psychologists have an essential role in schools but impedes their ability to be available to all students in the school setting and often decreases their use in a more integrated way throughout the school for broader prevention activities, interventions, consultation, systems change, or program evaluation (Merrell, Ervin, & Gimpel, 2006).

The revision of the eligibility criteria for identifying a specific learning disability (SLD) ushered in an important shift in the role of psychologists in school settings. Previously, identification of a SLD was done by determining whether a student had a significant discrepancy between intellectual capacity, as assessed by an individualized measure of cognitive functioning, and academic achievement. These individual psychoeducational assessments have traditionally consumed a great deal of the psychologists' time in schools, a problem exacerbated by the shortage of school psychologists that is expected to last until at least 2020 (Davis et al., 2004; Tharinger & Palomares, 2004). With the revision of the criteria for SLD, schools are now encouraged to use a response-to-intervention (RTI) model (Jimerson, Burns, & VanDerHeyden, 2007).

The RTI model involves the screening of all students three to four times each year, and it is centered around multitiered prevention and early intervention. Students identified as being at risk receive increasingly intensive evidence-based interventions under close monitoring. The introduction of the RTI model has meant fewer individualized assessments and has the potential to reduce the emphasis for psychologists to act as the gatekeepers to special education services. Within the school setting, psychologists are often uniquely qualified as professionals with training in research, data management and analysis, and program evaluation to properly implement RTI and to understand its implications for large-scale changes for both general and special education service delivery (Ball et al., 2011).

English language learners represent a growing constituency within the school population. In fact, more than 60% of Asian American and Hispanic American children in schools speak a language other than English at home (Aud et al., 2010). Increasingly, psychologists in schools will be challenged to provide services for children whose first language is not English. Psychologists will need to be knowledgeable about appropriate assessment tools and practices for students who are not fluent in English (Ortiz & Dynda, 2008), especially as the research in this area is nascent and contested. Some researchers argue that students who are English language learners require effective bilingual programs with primary language instruction for at least 4–7 years to ensure that they achieve skills comparable to their monolingual English-speaking peers (e.g., Ortiz & Dynda, 2008; Thomas & Collier, 1997, 2002). Other researchers claim that effective teaching in English results in similar outcomes for English language learners (e.g., Cheung & Slavin, 2012). An important difference in the outcome between the two approaches is that the former is intended to result in students who are fluent in their original language as well as English. Thus, psychologists' attention to and knowledge of cultural and linguistic diversity will be critical in guiding the discussions around appropriate interpretations of students' performance and in recommending interventions and services that will best meet an individual student's needs in the school setting.

Psychologists in school settings are often the only professionals trained and certified to make formal learning and mental health diagnoses. Diagnosing difficulties in school settings requires knowledge of IDEA, which specifies the classification criteria for children with special education needs (see the Education for All Handicapped Children Act of 1975). In addition to listing the criteria for common problems that are diagnosed in school settings such as intellectual and learning disabilities, IDEA also includes two broad diagnostic categories that are of particular importance to psychologists: serious emotional disturbance and other health impaired. *Serious emotional disturbance* includes a wide range of disorders (e.g., mood disorders) that are specified in systems outside of the school. *Other health impaired* can subsume behavioral disorders such as attention-deficit/hyperactivity disorder, not specified in IDEA, and also provides a way for schools to acknowledge and deal with physical disorders such as asthma or traumatic brain injury that have consequences for learning.

There are two other classification systems with which psychologists working in schools need to be familiar. The *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (*DSM–5*; American Psychiatric Association, 2013) is used to guide clinicians in the United States in diagnosing mental health concerns. *DSM–5* includes a wide range of disorders that would be classified as serious emotional disturbance under IDEA (e.g., anxiety disorders, conduct disorders, depressive disorders, schizophrenia spectrum and other psychotic disorders, substance-related and addictive disorders). The other classification system is the *International Classification of Diseases, 10th Edition* (*ICD–10*; World Health Organization, 1993), which is used around the world by member states of the World Health Organization and is important in the school context, as the *ICD–10* codes are used for reimbursement from federal sources. In sum, psychologists dealing with clinical concerns in school settings will be familiar with all of these diagnostic systems and are the only professionals in school settings making such diagnoses.

PRESENT STATUS

With the increasing diversity of the U.S. population, psychologists must be prepared for the full range of cultural, socioeconomic, and linguistic diversity that will be represented within the school community. According to the U.S. Census Bureau (2010), the United States will become a majority-minority nation as of 2043. Individuals of European descent will compose less than 50% of the total U.S. population. The arrival of many new immigrants and the higher birthrates among some racial/ethnic groups compared to European Americans has created a population of school-age children that is more diverse than the general U.S. population (Federal Interagency Forum on Child and Family Statistics, 2007; U.S. Census Bureau, 2010). Psychologists in schools must be aware of the well-documented and long-standing history of the overrepresentation of minority students in special education, resulting in many students being labeled as cognitively or emotionally/behaviorally disabled (Jacob & Hartshorne, 2007). Although this designation may afford students access to services that may benefit their learning needs, there is also the potential for negative and stigmatizing impact of being labeled as disabled.

In school settings, more than 90% of psychologists are European American (Curtis et al., 2012). There is both a need to recruit and train a more diverse workforce in psychology and an imperative for all psychologists in schools to be aware of cultural factors as an important aspect of individual differences. African Americans and Hispanic Americans express strong preferences for therapists similar in race/ethnicity, and these preferences may have an impact on choosing to engage in treatment in the first place (Cabral & Smith, 2011), which has implications for parents giving consent for psychological services being offered in schools. Moreover, psychological interventions adapted for ethnic minority groups tend to be more effective with members of those groups than the traditional interventions that were not adapted (Benish, Quintana, & Wampold, 2011; Smith, Domenech Rodríguez, & Bernal, 2011). These findings suggest that culturally competent skills are effective in communication and practice with students, families, and all members of the school community who bring cultural perspectives that likely differ from those of the dominant culture (Ortiz, Flanagan, & Dynda, 2008).

Assessment has been the primary role of psychologists in schools—a function that we have uniquely honed over many years in this setting. Indeed, testing and assessment remain core components of psychologists' training and expertise. With the introduction of the RTI, there is now some professional tension between practitioners about the appropriate role of psychologists in schools related to assessment techniques both in terms of psychoeducational evaluations and whole-school programming (Gresham, Restori, & Cook, 2008; Reynolds & Shaywitz, 2009). Whereas some researchers support the use of RTI as a method of identifying students with learning disabilities (Fletcher & Vaughn, 2009; Gresham et al., 2008), others have raised concerns, including the variable nature of the extant evidence-base, the lack of reliable guidance around implementation, and the need for clarity around what constitutes an acceptable response (Fuchs et al., 2003; Graham & Perin, 2007). Although psychologists are likely to continue to take the lead in assessment in schools, there will likely be changes in the specific responsibilities assigned to them in schools as the needs of individual students and the complex school systems require ongoing revisions of how the skills of the psychologist can be best utilized.

Within the realm of more traditional assessment, psychologists are uniquely qualified in the area of psychometrics. Psychologists have substantial training in understanding the importance of reliability, validity, standardization, standard scores, and test development—all necessary to support the appropriate selection, administration, and interpretation of testing instruments. There will likely be an ongoing need for this role as tests of cognitive ability continue to be a requirement for determining eligibility for some disabilities, including intellectual disability and developmental delay (IDEA, 2004). Amidst the ongoing debate regarding psychological assessment within the RTI framework (Hale et al., 2006), there are many who support the use of IQ testing to facilitate decision making regarding educational services more broadly and beyond establishing eligibility for special education (Braden & Shaw, 2009).

Although the practice of psychology in the schools is well-established in the United States, there are only a handful of countries—including New Zealand, Israel, Canada, Australia, and several Western European countries—that also have individuals with graduate training providing psychological services in school settings (Oakland & Jimerson, 2007). This is demonstrated by data showing that school psychologists in the United States constitute 42% of the school psychologists in the world (Jimerson et al., 2009). Well-established psychological services in schools are associated with education and special education systems that are well-regulated by the national government and a mandate for providing all students with appropriate education.

In many countries, there are no psychological services in schools, and in others, individuals with a variety of psychology credentials across a range of specialties, including bachelor's degrees in psychology, are the only providers that are available (see Jimerson, Oakland, & Farrell, 2007; Jimerson et al., 2009). Nonetheless, with the growing interconnectedness among countries and the increased focus on the rights of children by the United Nations, there is an increasing recognition that psychology has made pivotal contributions to maximize educational and learning opportunities for children.

FUTURE DIRECTIONS

There are several trends that have the potential to affect psychological practice in schools in the future. First, as RTI becomes the dominant assessment and intervention model, there is an increased emphasis on the use of curriculum-based measurement (CBM) to assess academic skill level and to guide prevention, early intervention, and educational decision making. The training of psychologists in assessment and data management positions them well to provide leadership in schools in the use of CBM, but more and better training is needed as psychologists are increasingly asked to utilize CBM and more informal assessments to both screen for a range of learning and socioemotional concerns and to monitor progress within an RTI framework (Kratochwill et al., 2007).

School psychology training programs already include training in RTI; however, it will become increasingly important for clinical psychologists interested in school practice to receive training in using a variety of assessment methods not commonly associated with independent practice. For instance, the ability to conduct systematic observations of students in classrooms and other settings is an invaluable tool that allows for the examination of maladaptive behavior, accounting for both student and environmental factors (Hintze, Volpe, & Shapiro, 2008). Functional behavioral assessment is another method for gathering useful information and feedback about patterns of behavior that allow for examination of both the antecedents and consequences when planning for the most efficacious intervention (Steege & Watson, 2009).

Second, with the implementation of NCLB legislation, schools need to have the capability to track data and to systematically assess performance trends of students who are required to demonstrate adequate yearly progress. Psychologists are trained to manage data and to understand how to design prevention and early intervention strategies that are data driven (Kratochwill et al., 2007). There is limited guidance in the empirical literature instructing schools about how to put systems in place that address the need for careful and systematic data management (Daly et al., 2007). These data are vital for effective program development and evaluation—yet another area where the psychologist's skills can be utilized (Merrell et al., 2006). Relatedly, psychologists are more integrally involved in the evaluation of intervention outcomes in the school settings. Rather than being confined to the role of writing a list of recommendations as a part of a psychoeducational report, psychologists are more directly involved in the selection and evaluation of empirically supported curricula and interventions for students in the classroom. They can use their training in how to select, implement, evaluate, and modify interventions to ensure appropriateness for the individual student or for small groups of students.

Third, as in all aspects of traditional assessment, psychologists must be vigilant in their efforts to consider the cultural appropriateness of the ongoing practices (e.g., RTI) and emerging models they use as well as in undertaking program evaluation activities (Ortiz & Dynda, 2008; Ortiz et al., 2008). Relatedly, there are now several psychosocial interventions that have the potential to increase achievement in low-income and minority populations and to decrease the achievement gap (e.g., Yeager & Walton, 2011), and psychologists are well equipped to translate these interventions, which were developed and refined in social psychology laboratories, into school-based practices (Worrell, 2014a). However, these interventions and their theoretical foundations are not typically taught in programs training health service psychologists, including school psychologists (Worrell, 2014b)—an oversight that must be remedied for all psychologists who aspire to practice in schools.

Fourth, there is a growing body of research documenting the insidious and pervasive problems related to bullying in schools and a range of negative implications for both bullies and victims related to academic difficulties (Fonagy et al., 2005), psychological concerns (Swearer et al., 2008), as well as social relationship problems (Goldbaum et al., 2003). A positive school climate can be an ameliorating factor for middle school students who have few positive peer influences and reported perceptions of their relationship with their parents as less caring (Swearer et al., 2012).

The Olweus Bullying Prevention Program has been implemented in many schools in the United States as well as in Scandinavia. The success of school-wide bullying programs has been inconsistent, particularly in the United States (Merrell et al., 2008). There is a need for large-scale randomized studies that will allow for a better understanding of what factors contribute to the variability of outcomes across school and country settings (Bauer, Lozano, & Rivara, 2007). There also seems to be agreement that school bullying should be considered within a broader context of a school's social, emotional, and learning environments (Greenberg et al., 2003). Psychologists have much to contribute to the continuance of this work.

Fifth, psychologists bring invaluable skills to their roles as consultants to teachers, parents, and other professionals—all partnering to plan the best intervention for an individual student (Kratochwill, 2008). Consultation with teachers in a prereferral problem-solving process is a way for psychologists to forge collaborative relationships with teachers and to contribute their insights and support (Burns, Wiley, & Viglietta, 2008), and this also facilitates the use of RTI. Such an approach both reinforces collegiality across school roles and functions and creates a climate of interdisciplinary cooperation that may ultimately lead to more positive outcomes for students. They can also be productive partners with teachers regarding overall classroom management concerns or in helping to address a particular classroom dynamic that may only involve a subgroup of students in the classroom. Although individual consultation is helpful and necessary, it is time consuming and may not affect the larger system in the short term. Thus, psychologists will also engage in systems-level consultation with principals and other administrators and be involved in school-wide prevention and intervention programs.

Sixth, the proliferation and fast-paced advances of technology have made communication of less sensitive information with both teachers and families less cumbersome and infinitely faster. Psychologists can share their topical knowledge through webinar offerings and attachments via e-mail, and clients can be directed to helpful websites designed to address a range of learning, social, and emotional topics. Access to student data as well as data storage is also increasingly web-based, making these data accessible wherever there is Internet access.

Finally, there are recent indications that school psychology will gradually transition to the doctoral-level degree in the future. Although the doctoral standard has been supported by APA for several decades, NASP approves specialist-level programs. However, many specialist programs are close to programs offering the Doctor of Psychology degree in terms of length and credit hours, and the APA Division of School Psychology (Division 16) has been encouraging specialist programs to consider moving from offering the Education Specialist degree to the Doctor of Psychology. The change in accreditation standards from professional psychology to health service psychology (Hughes & Minke, 2014), the passage of the Patient Protection and Affordable Care Act of 2010, and the increased push for accredited internships in school settings have the potential to facilitate this evolution.

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CHAPTER 20

PSYCHIATRIC HOSPITALS

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In this chapter, we define and discuss a brief history of psychiatric hospitals and the roles clinical psychologists have played in them. Early in the evolution of clinical psychology, such facilities were large, overcrowded institutions intended to shelter individuals with mental illness from society. Following World War II, psychologists found many employment opportunities in such facilities in the profession's nascent phase. As mental health services became more sophisticated, psychologists took an increasingly active role in the development of treatment and rehabilitation services within psychiatric hospitals. Although the course of these developments was controversial for mental health services as well as for clinical psychologists, psychiatric hospitals historically and contemporarily have provided excellent opportunities for challenging and rewarding careers for many psychologists.

DEFINITION AND PREVALENCE

Psychiatric hospitals are inpatient facilities established exclusively for the treatment of mental disorders. The services offered include nursing care, assessments conducted by various disciplines, medications, and individual and group psychotherapies. Most hospitals include other services and therapies, such as recreational and expressive therapies, socialization opportunities, family therapy, and substance abuse counseling. Some hospitals also offer partial hospitalization programs or day treatment as well as outpatient services, although the number of hospitals offering these services is dwindling.

A recent survey shows there are 216 state psychiatric hospitals in the United States (Substance Abuse and Mental Health Services Administration [SAMHSA], 2010) and about 250 private psychiatric hospitals (Hutchins, Frank, & Glied, 2011). At their peak in the 1950s, state hospitals in the United States consisted of more than 550,000 beds (Torrey et al., 2012). Today, there are approximately 43,000 state hospital beds. Despite the precipitous drop of more than 90% in the number of beds since the middle of the 1950s, only 72 state hospitals actually closed between 1972 and 2009 (Fisher, Geller, & Pandiani, 2009). This suggests a continued ongoing need for state hospitals, albeit different from the purposes served by these facilities throughout the 19th century and the first half of the 20th century.

Modern state psychiatric hospitals serve three discrete but overlapping populations (Fisher et al., 2009): (a) people found not guilty of criminal offenses by reason of insanity, for whom a secure setting is the least restrictive treatment environment; (b) convicted sex offenders who may not have any other mental disorder; and (c) the "difficult to discharge" population, which is composed of people who require a secure and intensive treatment environment due to danger to self or others, usually under civil commitment, and for whom community-based alternatives are unavailable.

The number of private psychiatric hospitals in the United States has vacillated considerably over the years, influenced by market forces, practices in the insurance industry, and changes in reimbursement regulations for state and federal entitlement

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programs (Geller, 2006; Hutchins et al., 2011). An increase in demand and readily available reimbursement from insurance carriers led to an explosion in the numbers of private psychiatric hospitals throughout the 1980s, culminating in a peak of 475 such facilities in 1992 (Hutchins et al., 2011). However, managed care influences as well as publicized scandals associated with large corporate market leaders resulted in a collapse of the industry in the 1990s, with more than 200 facilities closing or going out of business in the ensuing 10 years (Geller, 2006; Hutchins et al., 2011). That sudden decline appears to have leveled off in recent years, and such facilities continue to play a role in the mental health service delivery system. Today, the role of private psychiatric hospitals is primarily to provide short-term secure services for children or adults with mental health and substance abuse problems who have some form of health care insurance.

Psychiatric hospitals serve as important employment setting for clinical psychologists. A recent survey of clinical psychologists found that 3% of them report psychiatric hospitals as their primary employment setting and another 3% as their secondary employment setting (Norcross & Karpiak, 2012).

HISTORICAL PROFILE

The consensus among historians is that the first psychiatric hospital in the Western world was established in Spain in 1410 (Rumbaut, 1972). There are reports that institutions housing people who today would be considered mentally ill were established in Middle-Eastern countries as early as the ninth and 10th centuries (Mohit, 2001). The hospital in Spain, started by a priest who felt sympathy for a man with mental illness who was being tormented by people in the street, emphasized humane care, a supportive milieu, and occupational therapies (Rumbaut, 1972). However, such compassionate care was not the norm throughout medieval Europe.

Throughout the middle ages, institutions to treat the mentally ill, poor, homeless, and otherwise troubled individuals began to spring up throughout Europe. Most notable among these was the legendary Bethlehem Royal Hospital in London. Originally founded as a priory or monastery in 1247, it provided shelter and care for homeless people, many of whom were considered to be “mad” (Historic England, n.d.). In 1547, the city of London took control of the facility, and it was established as the first public mental hospital in England (Historic England, n.d.). The local colloquial pronunciation, Bet’l’em, or “Bedlam,” became an expression for an insane, chaotic place or situation. Treatment of mentally ill individuals in Bedlam and similar facilities throughout Europe was driven by religious practices designed to expel evil spirits, somatic “treatment” to remove bad humors, and punishments designed to control behavior (Historic England, n.d.; Porter, 2004). By the 18th century, large facilities throughout Europe housed thousands of patients, many of whom were shackled and subjected to horrific somatic treatments, including bloodletting, corporal punishment, and torture designed to expel demons (Porter, 2004).

In the late 1700s and early 1800s, reform movements shifted care of the mentally ill in some European asylums away from the prevailing punitive practices toward more benevolent approaches. The term *moral treatment* was applied to these approaches; at that time and in that context use of *moral* was more comparable to the use of *psychological* or *psychosocial* today (Bewley, 2008; Notable Names Database, 2014). These initiatives were led by reformers such as Philipe Pinel and William Tuke. In the reformed institutions, most patients were unchained, and emphasis was placed on staff treating them with kindness and dignity.

In the early history of the United States, much like in Europe, individuals with mental illness were considered of weak moral or psychological character and were either cared for by families or placed in almshouses or jails (Ozarin, 2006). The first free-standing psychiatric hospital in the United States was established in Virginia in 1773 (Ozarin, 2006). This was a state-funded institution that continues to operate today as Eastern State Hospital.

Prior to this, beds were added to the Pennsylvania Hospital in Philadelphia, which was devoted to caring for individuals with mental illness at the behest of the Quakers, who took a lead in providing compassionate moral care for individuals with mental illness (Ozarin, 2006). In 1817, the Quakers opened a private psychiatric hospital in Philadelphia, which remains open today as Friends Hospital (Ozarin, 2006). The moral treatment movement led by the Quakers and others included a focus on treating patients kindly and creating structured daily schedules that included work, intellectual activities, and recreation (Ziff, 2012).

As psychiatry evolved as a medical specialty in the later 19th century, American psychiatric hospitals reflected that evolution. One of the most prominent psychiatric hospitals of that era was St. Elizabeth's, which was established in Washington, DC, in 1855. St. Elizabeth's was the first U.S. government hospital, serving individuals with mental illness from the military. It also served people from the District of Columbia, and in its long and storied history, it went on to provide asylum for many famous actors, writers, and artists as well as infamous individuals who committed serious federal crimes. Famed mental health reformer, Dorothea Dix, was instrumental in the establishment of St. Elizabeth's as well as state hospitals throughout the country. Today, it is operated by the Mental Health Department of the District of Columbia, making it administratively more comparable to a state hospital.

Throughout the first half of the 20th century, psychiatric hospitals, especially those publicly funded, continued to grow. By the 1950s, the number of state hospital beds in the United States exceeded a half million. However, the second half of the 20th century was marked by a steady decline in state hospital beds, driven by public reaction to deplorable conditions in many overcrowded state hospitals, a shift toward community-based services, the advent of antipsychotic medications, and the need for cost containment in state budgets (Fisher et al., 2009). The landmark events of this period were passage of the Community Mental Health Act of 1963, establishing a national infrastructure for community-based services, and introduction of Medicaid shortly thereafter, establishing its funding mechanism. These events set in motion the changes collectively identified as *deinstitutionalization*.

Western Europe followed a parallel trend of deinstitutionalization over the past 60 years, albeit at a somewhat more tempered pace, as mental health services shifted from being primarily institution-based to community-based (Killaspy, 2006; McDaid & Thornicroft, 2005). However, Eastern European countries have continued to rely more heavily on large institutions for mental health care, with limited community mental health services and continued strong stigma around mental disorders (McDaid & Thornicroft, 2005).

In addition to the sheer size reductions of deinstitutionalization, the role of public psychiatric hospitals shifted heavily toward *forensics* (Fisher et al., 2009; SAMHSA, 2010). Individuals identified as forensic included those who were committed for evaluation, competency restoration, or treatment. This included people who, through a criminal court proceeding, were found incompetent to stand trial for a crime, not guilty by reason of mental disease or defect, or guilty but mentally ill. Also included were people in the custody of the correctional system and in need of mental health services, as well as people determined to be persistent sex offenders and in need of continued treatment in a secure setting beyond the end of a prison sentence. In most states, the rapidly evolving interface between the criminal justice system and the mental health system resulted in substantial changes in the organization, structure, and services of state hospitals (Fisher et al., 2009; SAMHSA, 2010). A similar trend in the shift toward forensic services in psychiatric hospitals has been seen in many Western European countries as well (Fakhoury & Priebe, 2007).

With evolution of the forensic role of state hospitals, the boundary between *forensic* and *civil* psycholegal practice has become complicated. Civil legal statuses and processes have taken on new importance in mental health. In addition to familiar civil commitment, patients and practitioners must now manage an expanding array of related processes—for example, outpatient commitment, guardianships, conservatorships, advance directives, and others that vary from state to state. At least a third of the residual state hospital population does not have a forensic status as conventionally defined, but they invariably have significant psycholegal problems.

Deinstitutionalization also brought new definitions of the population—the people who had formerly been institutional residents. Terms such as severe and persistent mental illness and serious mental illness (SMI) entered bureaucratic usage, although such terms tend to be extended beyond the historical psychiatric institutional population. For present purposes, SMI is used to denote the historical psychiatric institutional population, also associated with chronic psychotic disorders, schizophrenia-spectrum disorders, adult neurodevelopmental disorders, and others.

Private psychiatric hospitals played a relatively insignificant role in the United States during the 19th century and first half of the 20th century. Prior to 1970, they accounted for less than 3% of the overall number of psychiatric beds (Geller, 2006). The focus of treatment in the early years of psychiatric hospitals was on the provision of a quiet restful time, often in a pastoral setting. As psychoanalysis gained popularity into the 20th century, affluent people often resided in private hospitals for prolonged stays where they received intensive psychoanalysis (Geller, 2006). Following the boom years of the 1980s, the number of private psychiatric hospitals reduced sharply; however, more recently there has been some growth in their numbers.

EVOLUTION OF ACTIVITIES

Throughout their evolution, psychiatric hospitals have played a key role in the history of mental health treatment, and since the second half of the 20th century, they have been important employment settings for clinical psychologists. Prior to World War II, psychologists were minimally represented in psychiatric hospitals. A few worked in army hospitals at the end of World War I, mostly doing psychological testing (Benjamin, 2005). The field of clinical psychology was yet to be clearly defined. Those psychologists who did work in psychiatric hospitals in the 1920s and 1930s focused almost exclusively on psychological testing (see Chapters 1 and 2, this volume). Clinical psychology as a profession burgeoned in the aftermath of World War II. Psychologists were called upon in mass to work in Veterans Administration hospitals—not only testing but also treating the thousands of wounded and traumatized soldiers who returned from the war (see Chapter 23, this volume). Clinical psychology training programs were established by the dozens, guided by the scientist–practitioner model that emerged from the Boulder Conference (Baker & Benjamin, 2000).

By the 1960s, 15% of clinical psychologists were reporting psychiatric hospitals as their primary employment setting (Norcross & Karpiak, 2012). They performed an array of clinical services, including intellectual, personality, and neuropsychological assessments as well as individual and group psychotherapy. Furthermore, they were beginning to develop innovative treatment programs for hospitalized patients (e.g., Atthowe & Krasner, 1968; Ayllon & Azrin, 1965). These programs, based on applications of learning theory designed to teach patients self-management and social skills, formed the basis for the later development of *psychiatric rehabilitation* in both hospital and community settings as well as for empirical approaches to evaluate such technologies.

Throughout the 1970s and 1980s, psychologists led development of an array of psychosocial interventions for individuals with SMI that came together under the rubric of psychiatric rehabilitation (e.g., Anthony, 1979; Anthony & Liberman, 1986). In retrospect, this was the beginning of a paradigm shift in the fundamental understanding of SMI, from a "disease to be treated" to a "disability to be overcome." The paradigm shift soon affected the entire mental health system. By the 1990s, it had converged with the *recovery movement*—a popular consumerist reform movement that rejected traditional assumptions about the course and prognosis of SMI and the traditional exclusive concern for symptom suppression associated with *medical model* treatment (Anthony, 1993; Bellack, 2006; Silverstein & Bellack, 2008). Psychiatric rehabilitation and the recovery movement promoted treatment goals more familiar to psychological approaches, including improved personal competence, interpersonal functioning, self-efficacy, meaningful relationships, and participation in community life. Even as deinstitutionalization proceeded, state hospitals were at the center of the early development of psychiatric rehabilitation and the recovery concept.

A landmark project conducted by clinical psychologist Gordon Paul and his colleagues established a unit-wide social learning approach as an inpatient treatment of choice for individuals with SMI (Paul & Lentz, 1977). The experimental design used in this study, at the time unprecedented in SMI outcome research, compared the effects of two distinct treatments on patients left behind by deinstitutionalization in Illinois. The treatments were provided by the same staff (trained to fidelity in both approaches) in adjacent secure inpatient units. One was based on a social learning model, with emphasis on selective reinforcement of adaptive behavior and acquisition of personal and social skills. The other was based on a social-interactive model, common in inpatient units at the time, sometimes known as *milieu therapy* or *therapeutic community*, with emphasis on participation in a formally organized "patient government" and acceptance of personal responsibility.

Observational assessment of patient functioning throughout all waking hours of the 4.5-year inpatient segment of this investigation found dramatic improvements in all domains of functioning for the patients in the Social Learning Program (SLP), superior to those found for the Milieu Therapy Program. Furthermore, both programs were compared to inpatient treatment as usual at the state hospital on available data such as discharge and community tenure rates. On all variables, the SLP was found to have the most beneficial outcomes, including a 98% discharge rate with only a 3% rehospitalization rate throughout an 18-month follow-up. What many today would consider even more remarkable about these positive outcomes is that they were achieved in the near absence of psychotropic medications, with less than 11% of the SLP group remaining on medications throughout the study. Both the SLP and the Milieu Therapy Program were found to be more effective than treatment as usual at the state hospital.

Paul and Lentz's (1977) study represented a watershed for psychological treatments in psychiatric hospitals. It demonstrated unequivocally that a rehabilitation approach, emphasizing skills training and reinforcement methods, could produce successful outcomes for even the most severely disabled people with SMI. As state hospital beds continued to shrink through the subsequent decades and the patients remaining in state hospitals increasingly consisted of those too difficult to treat safely in the community and/or individuals on forensic commitments, more comprehensive psychosocial programs began to emerge, based on the social learning model and spearheaded by clinical psychologists (e.g., Menditto, 2002; Silverstein et al., 2006; M. E. Sullivan, Richardson, & Spaulding, 1991). Additionally, other evidence-based psychological treatments applicable to inpatient settings were developed for people with SMI, including manualized social skills training (Bellack et al., 2004), neuropsychologically based psychotherapy (Spaulding et al., 1999), cognitive–behavior therapy for delusions and hallucinations (Kingdon & Turkington, 2004), self-initiated treatment planning and behavioral contracting (Heinssen & Hunter, 1998), functional behavioral therapies (Hunter et al., 2008), attention shaping (Silverstein et al., 2009), and dialectical behavior therapy (Linehan, 1993). Many of these best practices were documented by the American Psychological Association (APA)/Committee for the Advancement of Professional Practice Task Force on Serious Mental Illness and Severe Emotional Disturbance (2007).

Despite overwhelming evidence supporting evidence-based psychiatric rehabilitation, such programs have not become the norm. This is partially attributable to the slow dissemination of new methods in mental health, and it is partially attributable to incompatible interests between public administrators and mental health professionals. Most programs survive only as long as there is active protection at high administrative levels. Empirical analysis of closing a well-developed program after more than 20 years of operation shows undesirable consequences, including poor patient outcomes that emanated throughout the service system (Tarasenko et al., 2013). Without sustained administrative, public, and political support for evidence-based practices (EBPs), state hospitals will remain less desirable environments for psychologists.

Psychiatric hospitals long have been controversial settings for psychologists. In the 1970s and 1980s, psychologists had to fight to be recognized as licensed independent practitioners eligible for medical staff membership by the Joint Commission on Accreditation of Hospitals (now called The Joint Commission)—the predominant accrediting body for hospitals (Committee on Professional Practice of the Board of Professional Affairs, 1985). This was an important development because in hospitals, the medical staff is the organizational body responsible for clinical policies, standards of care, professional credentialing and privileging, and the quality of clinical services. Medical staff membership and its associated privileges can enable psychologists to serve in important leadership roles in psychiatric hospitals. However, the decision to allow psychologists to be members of medical staffs is up to each individual hospital. The hospital's governing body and medical staff bylaws must include explicit provisions for such, and local battles over this issue continue to the present.

Another controversy in recent decades has been the definition of "physician" provided by the Center for Medicare and Medicaid Services (CMS; 2008, §482.12 [a][1]). Although this definition now includes dentists, podiatrists, and chiropractors, psychologists have not been added despite ongoing legislative lobbying efforts by the APA. Because of this, psychologists are not able to function as attending clinicians, managing and directing the treatment of people with mental disorders throughout their hospital stay in CMS-certified hospitals (which includes virtually all psychiatric hospitals). Not only does this limit the role of psychologists but it also limits their value to hospitals and, consequently, to the quality and comprehensiveness of services offered to patients.

In addition to controversy about the role and status of psychologists in psychiatric hospitals, another contentious arena psychologists have entered is advocating for the civil rights of patients in psychiatric hospitals. Negative public reaction to state hospital care resulted in the federal Civil Rights of Institutionalized Persons Act (CRIPA). CRIPA directs the U.S. Department of Justice to bring suit against state institutions for violations of patients' right to treatment. Many state hospitals have been taken to court for failing to provide appropriate treatment, and litigation continues to this day. Psychologists have played key roles as federal consultants and experts. There has been only anecdotal analysis of the outcome of the CRIPA project (Lampson, 1983), and it remains unclear whether it has promoted EBPs in public psychiatric institutions.

UNIQUE CONTRIBUTIONS

Despite the controversies surrounding psychiatric hospitals, the training of clinical psychologists enables them to make numerous unique contributions in such settings. Knowledge of specialized assessments and treatments for people with SMI is necessary to maximize the effectiveness of psychologists working with people who present with such complex and challenging psychopathology. Unfortunately, few training programs at the graduate and postdoctoral levels emphasize this specialized knowledge. A recent national survey of clinical psychology training programs found that although many programs offer research and/or practicum experience in settings treating people with SMI, relatively few have specialized coursework related to SMI, and very few provide experience in interdisciplinary treatment programs (Reddy et al., 2010).

Those psychologists who do have training and experience with SMI at either the pre- or postdoctoral level have the opportunity to engage in a range of unique and rewarding roles. These unique roles include *expert clinician and consultant*, *forensic examiner*, *supervising clinician*, *program director*, *researcher/program evaluator*, and *administrator*.

Expert Clinician and Consultant

Psychologists bring to psychiatric hospitals expertise in evidence-based individual and group psychotherapies that assist individuals with SMI to manage themselves and disorders better, learn to control dangerous impulses, develop more effective interpersonal and instrumental skills, and cultivate social supports. The clinical training of psychologists emphasizes the development of a collaborative therapeutic alliance with clients that fosters self-determination and personal goal setting. Such an approach is highly consistent with recovery.

In addition to specialized therapies, another area in which psychologists can make unique clinical contributions in psychiatric hospitals is assessment. Traditional cognitive, neuropsychological, and personality assessments paint an accurate portrait of an individual, including his/her strengths, weaknesses, and psychopathology. Psychologists can bring to bear a number of specialized approaches to assessment that can form the foundation for developing individualized treatment plans for persons with SMI. For example, psychologists conduct functional assessments, behavioral analyses, and comprehensive case formulations.

While providing assessment and treatment services within psychiatric hospitals, it is essential that clinical psychologists do so in a culturally competent and linguistically sensitive manner. African Americans long have been overrepresented in psychiatric hospitals (Snowden, Hastings, & Alvidrez, 2009). Increases in immigration into the United States have resulted in people of varying cultures, ethnicities, and languages being admitted to psychiatric hospitals. The APA has issued guidelines for multicultural service provision (APA, 2002) and the mental health needs of immigrants (APA, 2013) that provide excellent guidance to psychologists practicing in these and other settings.

Forensic Examiner

With the steady increase in psychiatric hospital beds dedicated to forensic services, a specialized role has emerged for clinical psychologists as forensic examiners. These psychologists complete court-ordered evaluations to determine whether individuals are competent to stand trial, are responsible for crimes they have committed, are fit for sentencing, meet the legal criteria to be determined persistent sexual offenders, as well as other requests ordered by courts. They generally practice independent of treatment teams and outside of the therapeutic programs of the hospital (Melton et al., 2007).

Supervising Practitioner

In addition to providing direct services themselves, psychologists in psychiatric hospitals guide and direct the work of treatment teams. In regulatory language, this is the role of the supervising practitioner. It is roughly comparable to the traditional role of "attending physician" in hospitals but is better adapted to modern treatment and rehabilitation. The supervising practitioner incorporates information from a variety of sources, including the assessments of other disciplines, direct care staff observations, and his or her own specialized assessments (e.g., personality testing, neuropsychological evaluations, forensic assessments, functional behavioral analyses) to formulate a comprehensive picture of the individual and strategies to guide clinical interventions delivered by an interdisciplinary treatment team. Psychologists are uniquely prepared to organize and distill information from a wide variety of sources for the purposes of case formulation and to determine an individual's response to treatments.

Program Director

Perhaps the most important unique contributions psychologists can make in psychiatric hospitals are as program directors. Psychologists' broad training in biological, psychological, and social aspects of human functioning coupled with clinical experiences equip them with knowledge of complex disorders and effective psychosocial strategies to alleviate them. This knowledge enables psychologists to oversee program development and implementation efforts. Furthermore, psychologists' strong foundation in measurement, statistics, and research methodology gives them the tools necessary to monitor the fidelity and outcomes of programs.

Leading program implementation often involves working with staff from a wide variety of disciplines and changing the culture within a hospital, unit, or program to not only become recovery-oriented but also to embrace a commitment to EBPs. Most service delivery systems are complex, consist of staff from multiple disciplines, and are nested within bureaucratic and sociopolitical contexts. Psychologists tend to be knowledgeable about systems and mechanisms of system change, approaching systems analytically and identifying key elements that will facilitate or impede change. Additionally, their academic background prepares them to train staff of differing backgrounds. This is critical, as EBP implementation within psychiatric hospitals relies heavily on the coordination and training of staff.

Researcher and Program Evaluator

With their training, psychologists are ideally prepared to evaluate treatment programs and conduct research in psychiatric hospitals. Advanced knowledge of research design, measurement, and statistical analysis can facilitate the understanding of the complex relationships among the many variables that affect treatment processes and outcomes. They identify promising practices in the research literature, critically weigh empirical findings, determine whether a treatment has application for the population being served, and explain scientific findings to staff of other disciplines and administrators to create support for the adoption of an EBP (Gotham, 2006).

Psychologists can evaluate the outcomes of therapies and programs as well as the fidelity with which treatments are applied so that hospital staff and administrators can see whether they are producing the expected effects. Psychologists are equipped to analyze these processes to improve treatment fidelity or to identify modifications in the treatment to better suit the population or setting. By publishing the results of research conducted in psychiatric hospitals, psychologists can add to the scientific basis of treatment and rehabilitation approaches, improve understanding of hospital systems, increase knowledge of severe psychopathology, and adapt treatments for patients with specific sociocultural characteristics.

Administrator

Psychologists in executive-level administrative positions can have a broad impact on the organizational structures and processes of a hospital. Additionally, they can set policy and lead cultural change. The positions of authority include chief executive officer or facility director, clinical director, director of treatment services, chief operating officer, and director of psychology. Psychologists tend to be analytical, take a systemic perspective, be empirically oriented, and have a sound understanding of human dynamics. These are all critical skills to success as a hospital leader.

The primary vehicle of service delivery in a psychiatric hospital is the relationship between staff and clients. Psychologists in administrative positions have the daunting task of figuring out how best to organize and lead these two social groups to create a culture that supports recovery and a commitment to effective treatment. This is a different perspective than that involved in providing direct services. Administration requires a systemic approach to understanding the hospital culture and organizing and leading staff to create a therapeutic environment. Psychologist administrators must bring to bear their knowledge of group dynamics to influence groups of staff to function in certain ways and/or to adopt and implement EBPs (see Volume 3, Chapter 29, this handbook).

Two of the three authors (Anthony A. Menditto and Richard H. Hunter) have held administrative positions in psychiatric hospitals up to and including functioning as heads of facilities, and the other author (William D. Spaulding) has participated in the leadership of a successful psychiatric rehabilitation program for more than 20 years while a university professor. Furthermore, we are not exceptions. Other opportunities exist for psychologists to assume leadership in psychiatric hospitals and in such roles to reform them so that they provide the best possible services to the people most in need.

CURRENT STATUS

Although the number of state hospital beds has been greatly reduced in recent decades, changes in how these beds are utilized have created opportunities for psychologists. The shift toward forensic services in most state hospitals creates opportunities for clinical psychologists to function as forensic examiners. More and more graduate programs, internships, and postdoctoral training experiences are emphasizing forensic training (Hedge & Brodsky, 2013; Malesky & Croysdale, 2009), and there is considerable demand for psychologists possessing these skills. Additionally, many states have passed legislation in recent years allowing persistent sex offenders to be civilly committed beyond their prison sentences for ongoing sex offender treatment. Psychologists are at the forefront of developing programs, most often in state hospital settings, for these individuals (e.g., Stinson & Becker, 2013).

Another opportunity that exists for psychologists working in state hospitals is in providing evidenced-based treatment, rehabilitation, and recovery services to those individuals who remain in hospitals for longer stays secondary to forensic commitments or because they are too difficult and dangerous to treat in community settings. Psychologists continue to be called upon to implement EBPs in state hospitals (Snyder, Clark, & Jones, 2012).

The role of state hospitals in the treatment of SMI is fraught with controversy. Some continue to call for the closure of all such institutions. Meanwhile, the fact remains that there is still a significant number of individuals who remain in state hospitals for prolonged periods and who have no other immediate treatment venue. These individuals deserve the best treatments, grounded in sound theory and science.

Although community mental health has created viable alternatives to hospitalization for many people, there is little doubt that the human costs of deinstitutionalization have been enormous. People with SMI, the historical institutional population, have a shorter life expectancy by some 20 years, a disparity that has increased since deinstitutionalization (Laursen, Nordentoft, & Mortensen, 2014). In addition to being homeless or incarcerated, the historical institutional population is now served in nursing homes and "assisted living facilities," often run-down hotels or warehouse-like dormitories. The first wave of deinstitutionalization did not bring adequate community-based alternatives, and even today, health care disparities continue to place this population at risk. Disparities in mental and primary health care associated with race, ethnicity, economic status, and other social determinants have contributed to the unacceptable conditions and services that many people with SMI face (Sanchez et al., 2012).

The tragedy in these developments is amplified by the demonstrated effectiveness of psychiatric rehabilitation. There is no question that an extended period of treatment, in a setting of intensity comparable to state hospital-based rehabilitation units, can help the vast majority of the institutional population reach higher levels of independence, quality of life, and community participation. This treatment does not reach many of those who need it because, in the contemporary managed health care climate, the potential profits of serving that population are overwhelmed by the risks. Care of the historical institutional SMI population increasingly appears to be something not readily privatized.

FUTURE DIRECTIONS

Public psychiatric hospitals will persist, whether transformed or not. With political and administrative support, and a reasonable time frame, psychologists can transform a public psychiatric hospital. If national policy, U.S. Department of Justice litigation, and public opinion are eventually successful in stimulating appropriate care for the historical institutional population, then we will need more than we have now. The national psychology training community can step up.

For private psychiatric hospitals, change is inevitable. Alternatives to brief hospitalization, such as crisis and respite programs, are proliferating. However, such alternatives are insufficient, as evidenced by the widespread controversial practice of psychiatric "boarding." This practice consists of maintaining and temporarily treating psychiatric patients in emergency rooms for hours or days while waiting for a bed to open in a psychiatric unit or hospital (Abid et al., 2014). Limited availability of inpatient psychiatric beds is one of the main reasons for this practice. Private psychiatric hospitals may fill some of the gap between demand for acute hospitalization and available beds but only if financial incentives are put in place.

A step in this direction can be seen in the Medicaid Emergency Psychiatric Demonstration Project (http://innovation.cms.gov/initiatives/medicaid-emergency-psychiatric-demo). This project, enabled by a provision in the Patient Protection and Affordable Care Act of 2010, allows for an exemption to the Institution for Mental Disease exclusion that heretofore has prohibited Medicaid billing by psychiatric hospitals with more than 16 beds for services provided to individuals 21–64 years of age. With this temporary exemption, private psychiatric hospitals in 11 states and the District of Columbia are now permitted to bill for emergency psychiatric services for these individuals if they present an immediate danger to themselves or others. The purpose is to alleviate pressure on crisis beds and emergency rooms of general hospitals. If this project is successful and the federal government expands Medicaid billing for such purposes, private psychiatric hospitals will assume a new role within service delivery systems.

The future of psychiatric hospitals is inextricably tied to the future of mental health service for people with SMI. Reform should be driven by sound clinical practices grounded in science rather than by political and market forces that have taken us on a journey returning to the days of Dorothea Dix when people with SMI were confined to jails and almshouses. Jails and prisons currently serve as the largest institutional providers of mental health services (Lamb & Weinberger, 2005; L. Sullivan, 2014). Health care disparities among minority and low-income populations limit access to mental health professionals and lead to fragmented services (Sanchez et al., 2012).

Clinical psychologists with the requisite training in treatments for SMI are ideally poised to lead reform. Such reform will include public policy that compels the remaining state psychiatric institutions to provide recovery-oriented psychiatric rehabilitation. The psychology and higher education communities can participate by promoting SMI-specific training and education in doctoral programs and by supporting efforts to extend the CMS "physician" definition to psychologists.

The recently released Recovery to Practice Initiative Curriculum will likely guide doctoral students and clinical psychologists in delivering recovery-oriented EBPs in psychiatric hospitals and other settings (APA & Jansen, 2014). This curriculum will help lay the foundation to prepare psychologists for working with people who have SMI, and it exposes them to important trends and systemic issues relevant to psychiatric hospitals. In addition to leading implementation of EBPs, psychologists will likely participate in health care reform to reduce disparities based on race, ethnicity, and economic status as well as improve the delivery of culturally competent services in psychiatric hospitals.

Psychiatric hospitals, both public and private, will continue to play a role in mental health service in the future, and clinical psychologists will continue to be employed by them. Despite the challenges associated with such settings, many psychologists enjoy working in psychiatric hospitals. This work requires sophisticated clinical skills, the ability to communicate well with staff, and a commitment to reform so that the most disabled and vulnerable citizens can receive the highest quality services. Clinical psychologists have a rich history working in psychiatric hospitals and leading change efforts within them. Inevitably, such efforts will continue into the future.

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CHAPTER 21

OUTPATIENT CLINICS

Julianne M. Smith-Boydston and Sarah B. Kirk

Outpatient care consists of mental health services provided in person at a mental health center, health clinic, independent practice, or community facility such as in a rehabilitation center, probation department, or even a client's home. These services are distinguished from inpatient services, which are provided in a facility where the client resides (such as a hospital) and receives more intensive services. The National Survey on Drug Use and Health defines outpatient treatment as

> any treatment received at an outpatient mental health clinic or center; the office of a psychologist, psychiatrist, social worker, or counselor that is not part of a clinic; a doctor's office that is not part of a clinic; an outpatient medical clinic; a partial day hospital or day treatment program; or some other place. (Substance Abuse and Mental Health Services Administration [SAMHSA], 2012a, p. 74)

DEFINITIONS AND DESCRIPTION

Community mental health centers (CMHCs) provide outpatient care and community-based services, particularly for those who are most vulnerable (Smith-Boydston, 2005). They are required to provide services for children with severe emotional disturbance (SED) and adults with severe and persistent mental illness (SPMI). The criteria for youths with SED include being less than18 years of age and suffering from a diagnosable disorder with functional impairment in at least one setting, such as the family, at school, or in the community. Defining SPMI for adults also involves a diagnosable disorder and evidence of substantial functional impairment in important areas of home, work, or community functioning.

As defined by Medicare and Medicaid, the following services may take place as part of outpatient mental health: individual and group psychotherapy, family counseling, assessment or testing, psychoeducation, and depression screenings (Centers for Medicare and Medicaid Services, 2012). The major theoretical orientations used in outpatient services include psychodynamic, interpersonal, cognitive, behavioral, family systems, ecological, and integrative. Interventions based on these orientations have become more linked to diagnoses with the advent of evidence-based practice (EBP; Burns, Hoagwood, & Mrazek, 1999).

PREVALENCE

In 2011, 13.6% of the adult population used mental health services during the course of a year. Approximately 6.7% of adults utilized outpatient services, which was the second most common modality of treatment behind prescription medication. Adult women in 2011 were more likely than men to use outpatient mental health services (8.4% vs. 4.8%). Source of payment was largely private insurance at 37.9% and self or family member at 33.7% in 2011. Medicare and Medicaid made up the next largest percentages at 15.2% and 11.9%, respectively (SAMHSA, 2012b).

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Similar trends are apparent for outpatient services with children. In youth care from 2005–2009, outpatient treatment was the most common type of treatment, ranging from 8% to 16.90% of youths using these services. Gender differences were evident for use of outpatient care, with girls using it 13.5% and boys at 9.7%. These numbers stand in contrast to inpatient care, which was used similarly between genders (boys at 2.6% and girls at 2.3%). The most common number of visits to an outpatient setting was 7–24 visits (27%), followed by 3–6 visits (24.2%), and then one visit (17.4%; SAMHSA, 2012b).

Use of outpatient services by different ethnic groups often shows less use by minority groups than Whites. A national sample controlling for socioeconomic factors found lower use of outpatient services by Blacks and Hispanics than Whites (Padgett et al., 1994). There is some suggestion that minority groups, particularly Blacks, rely more on mental health services within their religious community (Blank et al., 2002).

The total number of people using outpatient services and the number of outpatient mental health facilities are difficult to estimate given the considerable diversity of outpatient settings and different methods of reporting. The Inventory of Mental Health Organizations, most recently reporting data from 2004, is the only national survey of specialty mental health organizations on outpatient and inpatient care (SAMHSA, 2011). The report indicated a total of 4,159 specialty mental health organizations and non-Federal general hospitals providing psychiatric care. Of those, 1,910 were classified as “all other mental health organizations,” representing freestanding outpatient clinics, CMHCs, partial-care organizations, and multiservice mental health organizations. For the approximately 7.9 million episodes of treatment in 2004, 73.1% occurred in outpatient care in the general category of all other mental health organizations.

More data are reported for substance abuse treatment centers and college counseling centers. Substance abuse treatment centers provide a mix of mental health and substance abuse services, with focused substance abuse treatment 33% of the time and mental health 7% of the time. The total number of substance facilities in 2012 was 14,311 according to the National Survey of Substance Abuse Treatment Services, with outpatient service offered at 81% of the facilities. College counseling centers are often directed and supervised by psychologists, with the average number of sessions provided varying considerably by size of institution from an average of 807 outpatient individual therapy sessions in a year to 10,060 according to the Association for University and College Counseling Center Directors Annual Survey (Reetz, Barr, & Krylowicz, 2013).

The involvement of psychologists in outpatient clinics can also prove difficult to estimate. Demographic characteristics of American Psychological Association (APA) members in 2013 indicated a total number of 87,885 psychologists (APA Center for Workforce Studies, 2013). The leading category of primary full-time work was independent practice with 32% of psychologists, followed by university/4-year college settings at 24%. Other areas listed included clinics (4.1%) and other human services (7.1%).

The diversity of outpatient settings and the roles of psychologists have changed over time. These settings have helped define clinical psychology as a discipline and profession in the development of mental health services.

HISTORICAL PROFILE

Lightner Witmer established what many view as the first psychology outpatient clinic in 1896. Although recognition of child behavioral difficulties lagged behind that of adults, institutional treatment for deviant children was prevalent, including asylums for children with mental retardation (Peterson & Roberts, 1991). In addition, other institutes such as the Juvenile Psychopathic Institute in Chicago, Detroit, and Boston were formed to contain and treat children with socially deviant behavior. Douglas Thom’s Habit Clinic in Boston, formed in 1921, used behavioral principles to treat problematic behavior. These outpatient centers provided the groundwork for the child guidance clinic movement. Child guidance clinics focused on children adjusting appropriately to their environment, advocated for social reform, and trained psychologists to work with children (Peterson & Roberts, 1991).

Another intervention pioneer, John Galt, had many revolutionary ideas about treating persons with mental disorders with dignity. His groundbreaking approaches included the use of drugs, "talk therapy," and outplacement, or serving people in the community with outpatient treatment as an alternative to warehousing. Additionally, Freud developed psychoanalysis in the late part of the 19th century in his outpatient practice (Goodwin, 2012), and after the turn of the century, many of his publications and theories took root in the United States. Outpatient clinics were established across the country, and psychoanalysis became a large part of psychology practice during that time (Goodwin, 2012).

The effects of World War II on soldiers led to increased assessment and treatment of mental health disorders. Also during the 1940s, sweeping national reforms began due to the deplorable conditions in overcrowded insane asylums. The National Mental Health Act provided funding for research about the prevention, causes, and treatment of mental disorders. Research and federal investigation of inpatient institutions found widespread neglect and compromised care. At the same time, the advent of psychotropic medication made it possible for more persons with mental illness to be served in outpatient settings versus hospitals. In the 1950s and 1960s, cognitive and behavioral treatments became more prominent and began to change the focus and length of outpatient treatment, providing shorter term treatments to psychoanalytic approaches (Grob, 1991).

In support of community care, President John F. Kennedy signed into law the Mental Retardation Facilities Construction Act on October 31, 1963. This act and subsequent amendments in 1975 dramatically shifted the delivery of mental health services from inpatient to outpatient care. People formerly institutionalized were discharged to community care. The act provided federal funding to set up CMHCs in each state to provide a continuity of mental health care to people in local settings. Primary areas of care included outpatient, inpatient, day treatment, emergency, consulting, and educational services (J. M. Smith, Shaw, & Witt, 2003). In addition, Medicare and Medicaid were set up to fund mental health services for some of the most vulnerable citizens, including older adults and those with low incomes. The amendments of 1975 to the Community Mental Health Act mandated a more detailed definition of outpatient services and increased accessibility and comprehensiveness of services available. New services for children and addictions were added.

The establishment of CMHCs across the country helped to transform the practice of clinical psychology in outpatient settings. Before this time, internship settings for psychological training were primarily in college counseling centers or in the Veterans Administration. A training survey in 1971 found considerable diversification of internship experiences and areas of innovation, with increases in outpatient service training and more involvement in the community compared to past years (Hafner, 1973). CMHCs provided an increase in community-based internship sites for graduate students to experience a range of mental health disorders. In addition, CMHCs provided psychologists with more experience in leadership and management positions that led to psychologists taking on these types of positions.

President Jimmy Carter's Presidential Commission on Mental Health was constructed in 1977 to address major deficiencies in mental health services. Carter's action was symbolic and historic because no presidential commission had ever been created to approach mental health treatment. The commission formed the National Plan for the Chronically Mentally Ill to create a more comprehensive system of care for the significant population of persons with serious and persistent mental illness in the community. The reports generated by the commission called for increased community-based care. The commission further supported greater health insurance coverage for mental health services and addressing social challenges for persons with serious mental illness. Great attention was also accorded to clients' rights to engage in the least restrictive service and to the Mental Retardation Services Act, which prioritized community mental health services with federal funding contingent on positive outcomes (Grob, 2005).

During the 1970s and 1980s, mental health services expanded to meet the growing needs of clients. More outpatient psychotherapists were trained at professional schools, and more saw clients on a fee-for-service model paid for by health insurance. There was a proliferation of independent practices in psychology and other mental health professionals (Reed et al., 2001). For example, a 1973 survey of members of the APA Division of Clinical Psychology showed that 23% were primarily employed in independent practice in 1973, but by 1986 it was 35%, and by 1995 the number had grown to 40% in this setting (Norcross & Karpiak, 2012). This surge in outpatient mental health care was concurrent with increases in the size of health care and an increase in health care costs. These events led to the rise of the managed care movement in the United States (Reed et al., 2001).

EVOLUTION OF ACTIVITIES

One of the most significant changes to outpatient services came with the evolution of managed care services. The Health Maintenance Organization (HMO) Act of 1973 and other regulatory statutes set the groundwork for the development of managed care plans, which changed the focus of mental health treatment from client services to cost containment. The HMO Act was amended in 1978 and increased federal aid to HMOs after seeing evidence of substantial cost savings. Mental health services were particularly targeted and saw a large decrease in approved services over time due to managed care (Reed et al., 2001). In addition, financial restraints and Medicaid stipulations led services at CMHCs to be targeted to more severe populations, including adults with SPMI and children with SED. Due to the change in funding from direct federal monies to state block grants, mental health services began to differ across CMHCs based on the needs of individual communities (Drake & Latimer, 2012).

The advent of managed care shaped outpatient services (Roberts & Hurley, 1997). It has led to shorter term services and psychologists being required to justify their treatment plans. Managed care markedly decreased and limited the amount of psychological testing that psychologists can complete (Cantor & Fuentes, 2008). A 1995 survey by the APA Practice Directorate of 15,918 licensed psychologists found that more than 50% were practicing in an independent practice, either in a solo or group practice. Four out of five of those reported a negative impact of managed care on their practices, including more time spent with paperwork, ethical dilemmas created by managed care, and managed care changing their clinical practice (Phelps, Eisman, & Kohout, 1998). These difficulties have often led to private practitioners "opting out" of managed care and relying more on fee-for-service models (Cantor & Fuentes, 2008).

Managed care has altered the landscape of providers in outpatient settings. Due to a focus on cost reduction, there has been a preference by many managed care companies for master's-level providers in lieu of doctoral psychologists. Hence, it appears that within these systems, doctoral psychologists have moved to more administrative levels rather than direct service with clients. In surveys of the APA Division of Clinical Psychology over time, as private practice has increased, there has also be a significant decrease of psychologists in outpatient clinics and CMHCs. Each of these settings employed about 6%–8% of clinical psychologists in 1973 but only employed about 1%–4% in 2010 (Norcross & Karpiak, 2012). The 2013 APA Directorate survey also reflects this trend, with fewer psychologists in other outpatient settings, including 4.6% in government, 8.3% in medical, and 12.4% in miscellaneous (school, business, other; APA Center for Workforce Studies, 2013).

Another recent shift has been to contract for mental health services with nonprofit agencies or capitated contracts. Capitated contracts occur when funding sources such as Medicaid or social service agency agree with a particular provider that all patients will seek services with the agency. Gilmer (2010) evaluated the shift in outpatient services to contracted nonprofit providers and found cost reductions and increased utilization of outpatient services. However, concern regarding access of care was evident given the greater number of emergency visits and inpatient service utilization by consumers associated with the nonprofit contracted providers. Investigations of capitated services also generally find fewer visits per user, greater use of social workers in the place of psychiatrists and psychologists, and more reliance on group therapy (Liu et al., 1999).

As managed care has primarily focused on cost containment, psychologists and other mental health professionals have advocated for the increased quality of mental health services (Reed et al., 2001). Two preeminent works—the Surgeon General's report on mental health (U.S. Department of Health and Human Services, 1999) and the final report of the President's New Freedom Commission on Mental Health (2003)—outlined ways to transform outpatient mental health, particularly in examining barriers to accessing services. Both addressed cost as a significant barrier to access. In addressing the problems associated with managed care, the focus of the current marketplace is to look at access to services and the "value" of these services instead of just focusing on cost containment. This clinical accountability has fostered the development of EBP in psychology.

UNIQUE CONTRIBUTIONS

The need to justify services in managed care has led to a unique and somewhat strained partnership between psychologists working in academic settings and those in outpatient settings. EBP has been applied extensively to outpatient care. In 1997, the Robert Wood Johnson Foundation, SAMHSA, and many state departments of mental health partnered with private foundations to implement EBPs in community mental health. Since the 1990s, significant effort has been made to develop EBPs for adults and children. In fact, the President's New Freedom Commission on Mental Health (2003) identified the movement of EBPs as a national priority.

These treatments were in large part developed and tested by psychologists in academic settings, and psychology has been at the forefront of dissemination and implementation of EBPs (Drake & Latimer, 2012). Some evidence-based programs developed for outpatient settings for adults include assertive community treatment, family psychoeducation, acceptance and commitment therapy, dialectical behavior therapy (DBT), motivational interviewing, cognitive–behavioral therapy, and mindfulness-based cognitive therapy.

Similar work has been done to evaluate what outpatient treatments work for children (Burns et al., 1999). Treatments researched in academic settings have identified a range of evidence-based interventions for children across referral issues, including cognitive–behavioral treatment of depression and parent management programs for treatment of externalizing disorders (e.g., multisystemic therapy, parent–child interaction therapy).

Psychologists have tested continuum of care models for children with mixed success. The National Evaluation of the Comprehensive Community Mental Health Services for Children and Their Families Program was the largest federal investment in community-based mental health services for children and families (Manteuffel, Stephens, & Santiago, 2002). The program collected information from several communities across the country over an extended period of time. Results showed significant improvements in behavioral and emotional symptoms after 2 years. However, it was difficult to describe what it was that worked in the intervention, because each program differed in population served, level of collaboration, and how services were changed to fit the needs of families. In contrast, the Fort Bragg study showed that having an integrated continuum of care did not lead to better clinical outcomes (Bickman, 1996). The researchers, however, reported that the large-scale study was not designed to evaluate specific components of the system and that it was premature to study large-scale implementation without studying how effective interventions are in community settings. Others also strongly suggested testing well-documented, user-friendly, clinic-ready, empirically supported treatments first in community settings before moving to national implementation (Weisz, Han, & Valeri, 1997).

Outpatient services continue to evolve. EBPs have started to change the physical location and expand mental health interventions outside of the traditional 50-min hour. Of course, traditional outpatient therapy continues to meet clinical goals within traditional outpatient models of weekly, hourly sessions. However, other services operate outside the "traditional treatment box" to fit services to meet the needs of more severe clients. Due to their ability to show positive outcomes with difficult-to-treat clinical populations, more outpatient settings have adopted DBT for adults and multisystemic treatment (MST) for juvenile offenders. DBT was originally developed to treat clients diagnosed with borderline personality disorder and is now being disseminated more widely for a range of presentations, including adults with SPMI and eating disorders (DiGiorgio, Glass, & Arnkoff, 2010; Telch, Agras, & Linehan, 2001). MST was developed to treat adolescents with severe acting out problems and has growing empirical support for youths diagnosed with substance abuse, health problems, and SED (e.g., Henggeler et al., 2009; Schoenwald et al., 2000).

Such treatments have expanded outpatient settings. First, they may use longer sessions or multiple sessions per week to meet treatment goals. Second, they typically mix multiple treatment modalities, such as individual, family, group, and case management sessions. Third, they move beyond the outpatient office and provide treatment in the community and with other members of a client's system.

Such "out of the box" services can experience difficulties in community settings (Smith-Boydston, Holtzman, & Roberts, 2014). Financial reimbursement can be difficult from insurance companies that are not accustomed to reimbursing for nontraditional treatments. There also continues to be challenges of translation into the community arena. For example, MST has shown to be more effective when used with graduate students affiliated with the program developers versus community therapists with support from MST services (Henggeler, 2004).

Overall, the integration of evidence-based treatments for adults and children into outpatient settings continues to lag (Garland et al., 2010; McHugh & Barlow, 2010; Weisz, Jensen-Doss, & Hawley, 2006). Although most evidence-based programs are behavioral or cognitive–behavioral, those used in outpatient settings are primarily nonbehavioral. With the difficulties seen in dissemination, studies by psychologists have helped identify reasons for these barriers. Several differences between research-based settings and outpatient settings have been identified. For example, outpatient clinics often have more severe and variable presenting problems, comorbid disorders, and heavy client caseloads (Smith-Boydston & Nelson, 2008). These differences have led outpatient clinicians to believe that some EBPs will not be effective on the population of clients seen in the "real-world" setting (Nelson, Steele, & Mize, 2006). In addition, clinicians have not always been trained in EBPs and do not believe they have the time to learn more complicated procedures, particularly the number of different protocols to serve a range of client presenting problems. Many also believe that there is little flexibility in the structured nature of manualized treatments and that they do not take into account the importance of the therapeutic relationship (Lilienfeld et al., 2013; Nelson et al., 2006).

Communication between researchers and practitioners has led to ways to make EBPs more accessible to outpatient settings. For example, there are multiple websites dedicated to EBP, including SAMHSA's National Registry of Evidence-Based Programs and Practices (http://www.nrepp.samhsa.gov/ViewAll.aspx) as well as state departments of health or human services and psychology organizations (e.g., https://www.aap.org/en-us/Pages/Default.aspx; http://mn.gov/dhs; https://www.clinicalchildpsychology.org). In addition, psychologists are working to make manualized treatment more flexible and more inclusive of different and comorbid disorders. Work is underway to focus on transdiagnostic approaches (Barlow et al., 2011). Integrative or modular treatments are also becoming more recognized in combining effective aspects of parent training programs (Kolko et al., 2009) or childhood anxiety disorders (Chorpita, 2007). These consolidation efforts will make it easier for clinicians in community settings to implement EBPs because they will need to learn fewer approaches and can apply them to a wider range of client problems (Weisz, Ng, & Bearman, 2014).

There is much excitement about the next phase of treatment delivery, but the economic realities are affecting access to mental health care. The recession of 2008 led a high percentage of those with mental disorders to lose insurance and to struggle with accessing care. Many professionals are hoping for expanded coverage that may be found through federal legislation such as mental health parity legislation and the Patient Protection and Affordable Care Act of 2010.

PRESENT STATUS

The integration of mental health care with medical care and the increase in affordable health care are having a huge impact on outpatient care. Mental health parity legislation enacted in 1996 has created greater opportunity for people with mental disorders to receive and be reimbursed for treatment on par with medical care (Drake & Latimer, 2012). However, this act only covers parity of mental health benefits with medical benefits if the health plan includes mental health benefits (Glied & Cuellar, 2003). Further the "final rule" requires any financial limits on mental health or addiction treatments be equal to that of physical or medical conditions, which may allow more individuals to seek outpatient services.

The passage of mental health parity has opened the door for ways to coordinate medical and mental health treatment. The idea of a "medical home" was first proposed in pediatrics in 1967 and was later published as a policy statement by the American Academy of Pediatrics in 1992 and expanded in 2002 (Sia et al., 2004). Within a medical home, the pediatrician becomes the lead figure in addressing comprehensive care, including prevention, acute and long-term care, and facilitating the interaction of community members through a central database to assist in collaboration. Because pediatricians or primary care physicians are often the point of first contact for families to address difficulties, it makes sense for them to provide initial screenings and referrals with other professionals to address a range of needs, including health, education, family support, and the social environment (Sia et al., 2004). There is now more of a push to make integrated behavioral health care reality for all patients and to assist not only with medical care but also mental health treatment, through a "health home," a term recommended by APA Practice Central (2009). Psychologists can identify and treat mental health disorders but also provide behavioral interventions to assist patients in complying with treatment recommendations for medical disorders.

The Patient Protection and Affordable Care Act of 2010 empowers states to create health homes to coordinate care for individuals with chronic conditions. Health homes are asked to integrate and coordinate all primary, acute, behavioral-health, and long-term services to treat the "whole person" (for more information, see http://medicaid.gov). Health home services may include comprehensive care management, care coordination, health promotion, comprehensive transitional care and follow-up, patient and family support, and referrals to any necessary community and social support services. A health home may include different practices with a variety of health and mental health practitioners (for more information, see http://medicaid.gov). Health homes allow for the use of patient-centered models of care, reduce administrative burdens, and facilitate smooth facilitation of care across a continuum for each patient (Davis, Abrams, & Stremikis, 2011). The Patient Protection and Affordable Care Act of 2010 aims to strengthen the delivery of primary care and to incorporate outpatient mental health care within the primary care clinic. There are financial incentives for providers participating in health care teams to shift to multiple modalities and sites of delivery (Kazdin & Blasé, 2011). The financial incentives should also help form community-based collaborative care networks so that low-income populations will have greater access to mental health services within an integrated, outpatient setting.

Integrated health care is the new and evolving mode of outpatient mental health treatment. The health home may be a primary care clinic or CMHC (T. E. Smith, Erlich, & Sederer, 2013). The collaboration of health professionals in providing treatment for medical and mental health conditions should result in better collaboration, timely detection and treatment, and parity for medical and mental health conditions. Accessibility should also increase. Programs in New York involving electronic data collection of general health markers with persons who have SPMI resulted in increased efficiency in treatment and early detection of cardiac and other potential health concerns (T. E. Smith et al., 2013).

Outpatient care is moving toward greater continuity of care. A study comparing well-care with children in the United States to 10 international countries—including Australia, Canada, Denmark, England, France, Germany, Japan, the Netherlands, Spain, and Sweden—found several differences from the United States that may be helpful to keep in mind as the United States is restructuring well-care and the role of mental health specialists (Kuo et al., 2006). Most significant, all the international sites had universal health care funding for their citizens, funded primarily through taxation. Child care was publicly funded with very little or no cost sharing. Within several countries, well-care was provided by nurses with pediatricians and physicians serving specific health conditions, and the behavioral services were offered by outpatient providers. These results highlight the need to effectively coordinate physical and mental health service delivery.

A Finnish study (Hautala-Jylhä, Nikkonen, & Jylhä, 2005) investigated continuity of care after Finland went to a model of providing psychiatric postward services in the same location as inpatient services. The researchers found improved continuity of care when a cooperative relationship, flexibility in tailoring care, active maintenance of contacts, consistent availability of contacting the inpatient unit, up-to-date patient information, and active cooperation between outpatient service providers and other collaborators occurred. The success of this model was contrasted with the typical model of discharge from inpatient to outpatient services provided in a different setting, in a different location, and by new providers. Japan has also made shifts away from hospital-based mental health care to community-based outpatient care since 2004. However, they have seen less decrease in inpatient utilization (Kimura, Yagi, & Yoshizumi, 2013). As the United States moves in the direction of integrating care, the landscape and locations of care will also begin to shift.

The current status of outpatient mental health care is in a state of flux. Traditional outpatient settings—private practices, CMHCs, Veterans Affairs clinics, counseling centers, and others—will certainly remain. At the same time, outpatient mental health clinics are moving more and more into integrated health care in health homes, primary care clinics, and specialty health clinics with services provided by a variety of mental health professionals.

FUTURE DIRECTIONS

Advances in technology will exert a significant effect on outpatient clinics. Psychology will probably move toward an outpatient model that will not require a traditional office or clinic. For example, web-based smoking cessation programs have been used in 74 different countries (Kazdin & Blasé, 2011). Smartphones offer a myriad of opportunities to assess, intervene, and assist in completing treatment assignments, such as a texting approach for persons in aftercare. These approaches can provide further cost savings, interaction potential, and customization of approaches. In addition, using technology has helped expand services to more rural areas, which are traditionally underserved (Kazdin & Blasé, 2011). A large evidence base exists to support telemedicine and particularly the delivery of psychotherapy interventions via video conferencing methods (Gros et al., 2013). Treatment of posttraumatic stress disorder, eating disorders, anxiety disorders, pathological gambling, depression, smoking cessation, substance abuse, and tic disorders have all shown comparable outcomes to in-person delivery of EBP.

The future of evidence-based psychological treatment will include telemedicine delivery of interventions, and in-person delivery may decrease. However, this does not mean that outpatient clinics will become irrelevant. Instead, the form of service will expand to meet the needs of current and future generations. Outpatient clinics frequently do not meet the demand for many specialty treatments (e.g., for tic disorders), do not reach underserved populations adequately, and do not disseminate evidence-based treatments rapidly. Telehealth can accelerate the pace and serve high-demand and high-need populations in an outpatient and effective manner. Promise also exists for the delivery of psychological services to children and adolescents. A review by Slone, Reese, and McClellan (2012) supports the use of telehealth with children and adolescents, especially because technology is a strong fit for delivery of service for younger generations. Although there is still much more to be done, the use of telepsychology services is likely to be embraced by youths, and outpatient services may largely transition to the mediums of chat, text, gaming, and video conferencing.

In the future of outpatient clinics, it will prove increasingly important for clinical psychologists to work with expanding health care and technology to stay relevant and culturally responsive. With more people having access to health care, the field needs to be ready to train more psychologists prepared to implement EBPs in community settings (Weisz et al., 2014) and to work with diverse populations. Psychologists in outpatient clinics will need to be flexible in updating outpatient care to embrace technology, coordinated care, and an integrated health care model.

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CHAPTER 22

COLLEGES AND UNIVERSITIES

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Clinical psychologists have been working in university and college settings since the close of the 19th century. Lightner Witmer coined the term *clinical psychology* and in 1896 opened the first psychology clinic, which was university based (McReynolds, 1996). By 1914, there would be 19 such psychological clinics established, mostly with university affiliations.

In this chapter, we focus on clinical psychology in college and university settings. When we refer to *clinical psychology*, we primarily include the fields of clinical, counseling, and school psychology. It is our belief that the training models under which clinical psychologists study influence the types of jobs they obtain on a college campus and influence the manner in which they conduct their various roles in collegiate settings. For example, a scientist–practitioner or clinical scientist is more likely to secure a full-time faculty position, whereas a practitioner–scholar is more likely to work in a college counseling center or student affairs division (e.g., Goodyear et al., 2008; Norcross & Karpiak, 2012).

No matter the training model, this chapter demonstrates that clinical psychologists work in colleges and universities that range from a 2-year public community college to a large research university and occupy positions from faculty to staff psychologist to president. We define and give an overview of the prevalence of clinical psychologists in academia, offer a condensed history of their work, describe their various activities on campus, discuss their unique contributions, and conclude by speculating on future opportunities.

DEFINITION AND PREVALENCE

The list of potential duties of clinical psychologists working in colleges and universities is lengthy; thus, it is necessary to define this area broadly. In general, the careers of clinical psychologists working in colleges and universities cluster around four major activities: research, teaching, practice, and administration. Occasionally, psychologists will work in more than one of these major areas, generally combining teaching and research. In addition to the training model, the type and size of the institution may also define the work conducted by clinical psychologists in these settings.

Academic settings in which psychologists work include universities, colleges, medical schools/academic medical centers, technical institutes and professional schools, law schools, schools of public health, historically Black colleges and universities, and community or junior colleges. These settings may be public (funded by local or state governments), private (generally relying on tuition and endowment), or for-profit institutions. Universities and colleges offering 4-year programs tend to be larger and generally grant a wider range of degrees (e.g., bachelor's, master's, and doctorate) than do colleges that are smaller, offer only bachelor's degrees, and may be contained within universities.

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APA Handbook of Clinical Psychology: Roots and Branches, edited by J. C. Norcross, G. R. VandenBos, D. K. Freedheim, and M. M. Domenech Rodríguez

The number of professional schools of psychology (some freestanding and some within universities) has increased in recent years, and these professional schools are generally staffed exclusively by clinical and counseling psychologists. Community and junior colleges provide 2-year programs and grant certificates or associate's degrees. Within universities and colleges, psychologists may be employed in psychology departments; schools or colleges of education; health/career/counseling centers; or a variety of administrative locations, such as offices of student affairs, the provost, or the president.

The proportion of clinical and counseling psychologists working in academic settings appears to be about 20%. For instance, multiple surveys conducted over the years on members in Division 12 (Society of Clinical Psychology) of the American Psychological Association (APA) have shown that approximately 17%–20% of clinical psychologists work predominately in academic settings (Norcross & Karpiak, 2012). Parallel surveys of counseling psychologists (e.g., Goodyear et al., 2008) find slightly higher percentages of clinical psychologists working in higher education. Compared to clinical psychologists, proportionally more counseling psychologists work in college counseling centers and within student affairs.

Data from the *Occupation Outlook Handbook* (U.S. Department of Labor, Bureau of Labor Statistics, 2012) indicate that there are nearly 30,000 psychologists who provide some combination of teaching, research, and psychological treatment in colleges and universities. Additionally, nearly 9,000 are employed in junior colleges.

With regard to university and college counseling centers, the most recent survey of the Association for University and College Counseling Center Directors (AUCCCD) reported data from 416 directors. Of these, 42.5% self-identified as counseling psychologists, and 27.8% self-identified as clinical psychologists, with psychiatrists, social workers, and other mental health professionals representing the rest (AUCCCD, 2011).

Whether they are in psychology or education departments, counseling centers, administrative posts, or the myriad of other positions, clinical psychologists are well represented within higher education.

CONDENSED HISTORY

In many ways, the history of psychologists' work on university and college campuses mirrors the history of clinical, counseling, and school psychology. The tensions between science and practice, as well as among the theoretical orientations of psychotherapy (e.g., psychodynamic, behavioral, cognitive, systems, humanistic), have often been enacted on college and university campuses. Similarly, the debate around training models (scientist practitioner, clinical scientist, practitioner scholar; see Chapter 2, this volume) has been predominant within colleges and universities.

Prior to the beginning of the 20th century, academic psychologists worked mostly in laboratories focused on scientific psychology, with research that often included psychological assessment of mental abilities. However, by the beginning of the 20th century, psychologists in academia began to integrate science with practice, branching into business consultation and school and vocational counseling (Cautin, Freedheim, & DeLeon, 2012). In 1920, Witmer established a separate vocational clinic at the University of Pennsylvania, directed by Morris Viteles. Witmer's work paved the way for clinical psychologists to work in research laboratories on 4-year college and university campuses. With the creation of community colleges in the early 20th century, clinical psychologist began expanding their presence on these 2-year community college campuses (McReynolds, 1996). The history of inclusiveness within community colleges with high enrollment among women, minority students, nontraditional older adults, working parents, immigrants, and veterans meant that clinical psychologists extended their reach to a very diverse population (McReynolds, 1996).

The role of clinical psychologists as providers of psychotherapy on college campuses greatly expanded after World War II. It was also after the war that university and college counseling centers began to develop, largely in response to the educational and vocational needs of veterans. Although the counseling centers were often connected to counseling departments, clinical psychologists were regular providers and directors of these centers. Directors of these counseling and career centers established the Annual Conference of College and University Counseling Directors (now AUCCCD) in 1950. Over the years, the organization incorporated as a nonprofit group and moved from a predominately midwestern group to an association encompassing colleges and universities throughout the United States, Canada, Europe, and Asia. Currently, there are 677 member programs in AUCCCD employing large numbers of clinical and counseling psychologists.

In 1995, Dianne L. Chambless, currently professor and director of clinical training at the University of Pennsylvania, chaired a Division 12 task force that developed a list of empirically validated/supported psychological treatments. This groundbreaking work has been periodically updated (e.g., Chambless et al., 1998), leading to work by the APA Presidential Task Force on Evidence-Based Practice (2006) and further work by the APA Division of Psychotherapy (2010). This ongoing work by clinical psychologists working in academia has directly affected the way psychological treatment is conceptualized and practiced in college and university counseling centers (UCCs) and clinics as well as in the community.

ACTIVITIES

Clinical psychologists in academic settings perform a wide range of activities, including research and grant writing, teaching, practice (e.g., crisis intervention, psychotherapy, outreach, consultation, supervision and training), and administration. It is not uncommon for a psychologist to begin a career in one unit of a college or university and to then move to other units or other campuses.

Research

The long history of productive research in academic settings by clinical psychologists includes a large variety of topics such as perception, cognition, emotion, attention, motivation, brain functioning, personality, behavior, interpersonal relationships, human development, vocational choices, and resilience. Because college students are a "captive audience" often desiring extra credit, clinical psychologists have tended to use undergraduates as subjects in research projects. In addition, many psychology departments have longstanding laboratories that involve community members who participate in research, sometimes for financial incentives. Clinical psychologists may also oversee training clinics in which students, under supervision by faculty members, learn to provide psychological assessment and psychotherapy to community members.

Psychology professors at large research universities are usually expected to secure research, training, or clinical grants. Therefore, although faculty are expected to teach undergraduate and graduate students, many are also expected to write grants, submit them to funding agencies, and generate funds to support some of their salary and contribute to the financial needs of the university.

Junior faculty in clinical psychology undergraduate and doctoral programs may be selected in part for their particular research areas and their potential or actual ability to bring in grant funding (e.g., from the National Institute of Mental Health). In turn, students may be admitted on the basis of compatibility of their research interests with those of faculty members, and the students' research may be funded from grants written by faculty. Building on existing research for their dissertations and their own eventual careers in academia, such students may work alongside faculty in laboratories.

In clinical psychology Doctor of Psychology programs, however, it is more common for faculty to be involved in scholarship (e.g., writing articles about successful treatment programs) than in research. Funding for students may be provided from foundation grants rather than research grants, and faculty may supervise students exclusively in training clinics rather than in research laboratories. In Doctor of Psychology programs, students may write dissertations that are similar to those in Doctor of Philosophy programs, or they may write doctoral papers instead (which may be case studies or theory papers); therefore, it is less likely that they will be admitted on the basis of their research interests or be expected to build their careers on the existing research of their faculty members. Thus, whereas most faculty members in Doctor of Philosophy programs are expected to write research grants, those who are working in more applied programs are expected instead to engage in clinical practice (and supervision of clinical practice) on campus or at outside agencies and/or to engage in independent practice.

Teaching

Psychologists may teach in undergraduate and/or graduate programs. Teaching positions can generally be divided into tenure, clinical, research, or visiting tracks. Tenure track often proceeds from assistant to associate to full professor in a minimum of 7-year promotion increments. Promotion processes are competitive; involve documenting excellence in one or more domains of research, teaching, and service; and often take into account the psychologist's impact at the university, local, national, and international level. Tenure has historically been supported by academic institutions as a way to ensure academic freedom, such that professors can research and publish even in controversial areas without fear of termination. Nontenure appointments generally carry less stability, and part-time, adjunct, or visiting faculty may only teach on a temporary or occasional basis. Although the proportion of all faculty members, including psychologists, occupying tenure-track lines has gradually eroded over the years, there have been sharp rises in adjunct faculty (e.g., Dobbie & Robinson, 2008).

Present concerns for psychologists in faculty positions include tenure, competency, role overload/burnout, and mobility (Watkins, 1992). The increasing numbers of women entering the field have affected these issues due to considerations such as marriage and children (E. N. Williams et al., 1998). Previously, tenure for male professors was often supported by wives at home; however, the tenure process for women has sometimes lacked similar support. Despite the increasing numbers of women employed in faculty positions, disparities in salary, rank, and tenure persist (e.g., Benjamin, 1999). In addition, many colleges and universities are eliminating tenure tracks entirely due to economic considerations, whereas on other campuses professors are able to work well until old age or when they choose to leave, leading to uncertain career trajectories for early career professionals seeking to become faculty members.

Practice

Most practice-oriented positions in academic settings are in career, counseling, and/or health settings, including health centers, fitness/wellness centers, and medical schools. Depending on the institution, this work may occur in separate or combined centers. Although Norcross and Karpiak (2012) reported a decline in assessment activities among clinical psychologists, working in university career centers often includes providing assessment for students with disabilities and sometimes for those students who have been referred because of conduct and behavioral issues. Those psychologists are most likely to use the clinical interview and sometimes will use the *Diagnostic and Statistical Manual of Mental Disorders*. Although vocational counseling training is not typically a part of the doctoral training for clinical psychologists, those who work in college counseling centers often must provide career assessments for students seeking to understand their best fit with different careers. Such psychologists will generally utilize nonpathological evaluation measures, such as the Strong Interest Inventory (Hansen, 2010). In addition, they may provide career counseling, including help with application materials and interviewing skills, all while considering the emotional aspects of choosing a career. Psychologists who work in counseling and/or health centers focus on individual, group, and sometimes couples psychotherapy. Depending on the institution, such services may be provided to undergraduate students, graduate students, and employees (e.g., through an employee assistance program). UCCs that are independently located on campus tend to utilize brief psychotherapy, emphasizing treatment, consultation, and outreach, particularly to traditionally underserved communities. Most psychologists working in college counseling centers or UCCs also provide crisis intervention, including after hours, on-call responsibilities.

When counseling centers are merged with health centers, they may be more medically focused, often charging clients a fee for service. Academic medical settings and UCCs often have active training programs for master's- and doctoral-level practicum students, interns, and sometimes postdoctoral fellows. Because such centers include graduate students from clinical psychology programs, their supervisors will also include clinical psychologists who provide psychotherapy as well as supervision. Within medical settings on campus, clinical psychologists work interprofessionally with a variety of other disciplines, including medicine, nursing, social work, and physical therapy.

The nature of jobs in counseling centers and student affairs has changed by virtue of the increasing numbers of students experiencing significant psychological difficulties. A study of symptom severity in UCC clients across 13 years revealed an increase in 14 of the 19 problem areas (Benton et al., 2003). An older study found a similar pattern across a 6-year period: Overall levels of distress did not increase, but the number of students with significant mental health issues did increase (Erickson Cornish et al., 2000). In a recent survey, approximately 10% of students on campus utilized the counseling center, with this rate increasing over the years. On average, 25% of clients seen were taking psychotropic medications (AUCCCD, 2011). Although the given diagnoses ranged widely, the frequencies of presenting concerns were 41% for anxiety, 37% for depression, 16% for suicidal thoughts/behavior, 12% for alcohol abuse/dependence, 9% for self-injury, and 7% for eating disorders (AUCCCD, 2011). The emphasis on empirically validated, evidence-based training around such problems makes clinical psychologists well suited to practice in these settings.

Administration

Clinical psychologists who become administrators often begin their careers as either a faculty member in an academic department or as a staff member in a college counseling center. A psychologist might begin a career trajectory as a staff psychologist in a counseling center and then take on administrative duties, such as serving as the coordinator of clinical services or as the training director for interns and practicum students. Such individuals often go on to become the director of the counseling center. As the director of the counseling center, the psychologist will usually take a wider view and greater responsibility for areas beyond the counseling center. For example, the director may be called upon to serve as the chairperson of university or college wide committees that might develop strategic plans for the campus, hire other administrators, or plan professional development conferences. From the director position, it is possible for the psychologist to then seek upper level administrative positions, such as assistant vice president or even vice president or president. A similar progression often happens for those psychologists who rise through the academic ranks. After individuals have attained tenure and promotion, they may be sought out for or seek more administrative roles. Often the psychologist will begin as a coordinator or director of a specific area within an academic department, possibly later serving as a department chair. The role of department chair requires that the psychologist has skills in budgeting, staff supervision, and resource management. Psychologists who are successful as department chairs can go on to become college deans and vice presidents for academic affairs. Deans and provosts/vice presidents for academic affairs are expected to be able to manage large budgets, manage diverse faculties from multiple disciplines, and form cooperative relationships with executive management teams across the college/university. Such individuals at large research universities and private colleges are also expected to develop excellent fund raising skills.

Positions held by psychologists working in administrative careers include senior student affairs officer (commonly entitled vice president or vice chancellor for student affairs) and senior academic officer (most commonly entitled provost or vice president for academic affairs). Some psychologists may even reach the level of president or chancellor of the college or university.

Clinical psychologists holding administrative positions must be concerned with numerous budgetary and personnel matters, such as reduction in funding for higher education, restructuring of resources to meet the needs of the number of enrolled students, and the rise of various types of course instruction including the role of online courses and technology. Administrators must also be familiar with numerous state and federal laws, accrediting bodies, and licensure boards. For example, changes in laws, such as the Americans With

Disabilities Act, dictate changes in the policies and procedures of colleges and universities. Administrators may also be involved in efforts to ensure that the campus is safe, particularly regarding physical and sexual violence.

UNIQUE CONTRIBUTIONS

Clinical psychologists who work in college and university settings have made unique contributions to science, education, and practice, in part because of the large student population to whom they have access. According to J. Gayle Beck, past president of APA Division 12, part of the uniqueness in university settings is that the type of research is “more foundational: work that focuses on theory development and testing, psychometric foundations of assessment devices, and, yes, treatment-based work” (personal communication, April 15, 2014). Such settings are especially attractive to clinical psychologists who are research scientists because of the climate of free inquiry and the opportunities to interact with colleagues who enjoy intellectual challenge.

Contributions from clinical psychologists working in higher education have affected a wide range of issues from improving student learning, to assessing and treating mental disorders, to affecting society in general. For instance, psychologists working in the collegiate environment have been in the forefront of many of the social change and justice movements. They have provided research that influenced the legal desegregation of schools and influenced changes in equity in the work place for women, racial/ethnic minorities, lesbian/gay/bisexual/transgendered individuals, people with disabilities, and other marginalized groups. Kenneth B. Clark and Mamie P. Clark’s (1947) research involving dolls and concerning the impact of segregation on the identity of young Black children helped to reverse years of discrimination in the case of *Brown v. the Board of Education* (Library of Congress, n.d.).

During the height of the civil rights movement, numerous psychologists on college campuses were involved in furthering the understanding of the intersection of race and gender on the individual and collective development of people. William E. Cross (1995) developed his theory of Nigrescence, “the process of becoming Black,” theorizing five stages of development: preencounter, encounter, immersion, emersion, and internalization. Janet E. Helms (1995) added to the research on Black identity development and White identity development, expanding on the work of Cross, such that the scholarship and publications in this arena exploded exponentially.

The research in identity development also has added to the unique contributions of clinical psychologists in academia who are advancing multicultural psychology in the United States. These psychologists (e.g., Pedersen, 2000; Sue & Sue, 2008) have developed hallmark textbooks that have influenced the education of thousands of graduate students in multicultural psychology. The work of psychologists such as R. L. Williams (1972), who developed the Basic Intelligence Test for Cultural Heterogeneity, helped to push the boundaries of multiculturalism into the test-taking business, with the effects still being felt today in changes to tests such as the GRE and the SAT.

Psychologists who work in counseling centers offer contributions that make it possible for students to attend college and thrive in higher education. Although the suicide rates for college students have stabilized in recent years, a large-scale study found that approximately 18% of undergraduates reported having seriously considered a suicide attempt at some point, whereas 6% reported serious suicidal ideation in the past 12 months (Drum et al., 2009; Westefeld et al., 2005).

Counseling center psychologists are leading the effort to implement suicide-prevention programs as a result of grants made possible by the Garrett Lee Smith Memorial Act. Further, as a result of shootings on campuses such as Virginia Tech and Northern Illinois University, many colleges have instituted behavioral intervention teams to assess the potential risk of certain students as identified by members of the faculty and staff. To help diagnose and recommend treatment for troubled students, almost all of the behavioral intervention teams have clinical psychologists as members.

Additionally, psychologists are called upon to establish outreach programs on the campuses to focus on health and wellness for the campus community. As an example, “Question, Persuade, Refer” programs on campus are often spearheaded by staff members in UCCs, and these programs seek to train faculty, staff, and students to recognize warning signs and to walk those at risk to the UCC for crisis counseling and often ongoing counseling. As another example, psychologists frequently lead the creation, delivery, and evaluation of campus programs to reduce substance abuse and binge drinking.

Perhaps the clearest current example of the unique contributions made by clinical psychologists on campus is the issue of evidence-based treatment described earlier in this chapter. Clinical psychologists working in academia have researched treatments that work (based on the best research evidence; the clinical expertise of the psychotherapist; and the patient’s characteristics, values, and context) as well as treatments that do not work or can even be harmful (e.g., Lilienfeld, 2007; Norcross & Koocher, 2010). Interest in such research combined with access to student research subjects allows clinical psychologists to train doctoral students in research methods and clinical interventions that can be scientifically investigated. Because of their competencies as researchers, clinical psychologists have successfully received grant funding for these important studies. Due to the teaching skills of clinical psychologists, they have taught these approaches to future psychotherapists in the classroom. As administrators, some have developed on-campus training clinics in which evidence-based treatments are applied. As supervisors, they have overseen the work of students actually providing evidence-based psychotherapy to clients. Then as researchers again, they have conducted outcome studies to further hone psychological treatments that improve the lives of patients. Perhaps in no other setting are clinical psychologists able to combine advanced analytical skills, research, teaching, practice, and administration in such unique and productive ways.

FUTURE OPPORTUNITIES

Higher education, in general, may be facing a future that includes changes in demographics; technology; costs that outpace inflation; concerns about tuition from parents and students; competition from nontraditional and online schools; challenges to tenure; and the potential for increased involvement from government that could challenge pedagogy, economic models, traditions, and even the continued viability of higher education institutions. Organizational inertia and limited resources could lead to institutional retrenchment, downsizing, consolidations, and/or a general reduction in the numbers of traditional schools.

Certainly, funding issues are an ongoing concern for clinical psychologists working in colleges and universities no matter what their roles are on campus. For instance, for those in government-funded positions, events such as the recent sequester may lead to funding decreases related to direct government support and/or available grant monies. Psychologists working for private and/or for-profit institutions may have additional funding concerns. Those who are employed in academic programs that are fully or partially dependent on tuition for funding must deal with the increasingly problematic levels of student loan debt now carried by some students (e.g., Association of Psychology Postdoctoral and Internship Centers, 2012).

Clinical psychologists in college settings will need to address the increasing cost of higher education and the decreasing support from state legislatures. Funding for state colleges and universities has been cut precipitously over the last several years. States are spending 28% less on higher education for fiscal 2013 than they did in fiscal 2008 (Oliff et al., 2013). Professors are facing mounting pressures to obtain more research dollars and private donations to support themselves, their graduate students, and their institutions. They look to governmental agencies, such as the National Institutes of Health, and to private funders, such as the MacArthur Foundation (Dingfelder, 2005a). While funding agencies such as the National Institute for Mental Health began reducing dollars for some individual projects, they appear to be steadily moving in the direction of *big science*—that is, projects that are more collaborative and interdisciplinary (Dingfelder, 2005b). Educators are also looking at ways to reduce costs through things such as Massive Open Online Courses. Like big science projects, Massive Open Online Courses typically entail collaboration and interdisciplinary teams (Goldstein, 2013). Although tens of thousands of students sign up for such courses, the withdrawal rate is around 90%–95%. Clinical psychologists can help determine how to build strong collaborative teams and help with methods to make the teams successful. There will be opportunities to use evidenced-based interventions to help scientists learn to collaborate and to help students learn how to succeed in the large technological environments.

The future for clinical psychologists working in academic settings is also directly tied to what is happening to psychologists in the larger society. Professors and trainers will be expected to deliver a psychologist workforce that can address the problems that psychologists encounter daily (APA Presidential Task Force on the Future of Psychology Practice, 2009). Among other things, psychologists will need to become a part of teams who deliver integrated health care. As physicians and patients understand the strong impact of mental health on physical health, there will be a greater demand for psychologists to collaborate with health care teams that cross disciplines. It is essential that educators prepare clinical psychologists for that change in the work place.

Toward that end, psychologists must integrate technology to reach more people cost-efficiently and to use electronic health records. Because of the increased use of telehealth methods, APA (2013) recently adopted guidelines on telepsychology. These guidelines clearly indicate that psychology must be a part of the entire integration of technology into the clinical practice of psychology. There are other demands for psychologists to increase their technological skills. An example comes from the field of automated supplemental classroom work in which technology supplements student learning. For example, Art Graesser and his colleagues have designed a system called AutoTutor that helps students learn by detecting their cognitive and emotional states. AutoTutor is then able to send learning prompts that cause the student to refocus and improve his or her concentration and subsequent receptivity to the material that is presented (Graesser et al., 2005).

In all of higher education, psychologists must be prepared to meet the needs of a diverse society. While the number of people of color continues to rise in the United States, the number of racial and ethnic minority psychologists remains at about 5%. What is the impact of the changing racial makeup of a country when the number of professionals in the occupation remains overwhelming White and the population becomes majority racial and ethnic minorities? Clinical psychologists will need to design and execute research studies that address questions of interpersonal dynamics that arise from such changes. They may be questioned about the impact of behavioral economics on such population shifts and about the role of race, gender, and other characteristics on how individuals interact with each other (Kahneman, 2011; Sue, 2010).

Some other important issues are the changing role of psychologists in recovery after disasters and wars, the effects of moving from a rural to a more urban society, and the effects of an aging population on economics (Bingham, 2011). The task to prepare clinical psychologists for all of these changes will fall to clinical psychology professors, researchers, and trainers who work in college and university settings.

The challenges outlined earlier will certainly affect how psychologists continue to work in academe as researchers, practitioners, and educators. Although the future facing clinical psychologists in academic settings may be uncertain and even daunting, it also offers exciting opportunities. According to the 2014–2015 edition of the *Occupation Outlook Handbook*, average growth for psychologists will remain at about 12%, whereas those working in colleges and universities should see growth of about 11% (U.S. Department of Labor, Bureau of Labor Statistics, 2014). According to Norcross and Karpiak (2012), satisfaction among clinical psychologists remains high, and clinical psychology training programs continue to expand in colleges and universities. Therefore, the future looks bright and challenging for clinical psychologists working in college and university settings.

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CHAPTER 23

VETERANS AFFAIRS

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The commitment to honor and care for those who have served in the U.S. military dates back to the founding of our nation, with services funded by states and the federal government, and clinical psychology has been an important part of veterans' care for more than 70 years, as psychology took a prominent role beginning during World War II. Various programs—including soldiers' homes, medical care, vocational rehabilitation, disability compensation, and insurance previously administered by various federal agencies—were brought together under the umbrella of the Veterans Administration in 1930; in 1989, the agency became a cabinet-level unit known as the U.S. Department of Veterans Affairs (VA). The words of President Lincoln's second inaugural address continue to provide a clear, compelling mission for VA, "to care for him who shall have borne the battle and for his widow and his orphan" (Abraham Lincoln, March 4, 1865).

Psychology has been a key provider of services in VA since early in its history, and as of 2014, there are more than 4,700 psychologists employed by the Veterans Health Administration (VHA), the division of VA that provides direct clinical services. That total is composed of both clinical and counseling psychologists; VA makes no distinction between these two training tracks in jobs, titles, roles, or leadership opportunities. In this chapter, we review the role and history of professional psychology in VA, highlighting the evolution and uniqueness of their contributions and outlining future directions. Because psychologists play important roles in all aspects of VA health care, it is important to open this chapter with a broad discussion of the wide array of services available throughout the national VA system.

DEFINITION AND PREVALENCE

The activities of VA are divided into three broad administrations: the VHA, the Veterans Benefits Administration (VBA), and the National Cemetery Administration. Psychologists primarily work in VHA, though a small number are employed in VBA; none work in the National Cemetery Administration at this time. In this chapter, we focus on psychologists' contributions in VHA. Persons who were in active military service and who were discharged under any condition other than dishonorable may qualify for VA health care benefits. Several factors set forth in U.S. law and regulation—such as period of service, length of duty, service-related injury, and current income—ultimately determine each individual's eligibility for VA health care. Although some psychologists work in VBA on issues related to eligibility for VA benefits, the great majority of psychologists in VA work within VHA, delivering care to veterans, conducting relevant research, and developing and administering new clinical programs. In this chapter, we discuss only the work done within VHA by psychologists.

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The health and well-being, including the mental health, of the men and women who served in the military is the highest priority for VA. As of 2014, VHA operates 150 medical centers and 820 community-based outpatient clinics located in every state and territory; VA provides a continuum of mental health services within inpatient, outpatient, and residential programs. Readjustment counseling services also are available for veterans directly involved in combat during their service at 300 veteran centers. The continuum of mental health care is extended through the Veterans Crisis Line, mental health professionals integrated within VHA primary care clinics, VHA staff on college and university campuses, and multiple outreach programs. In 2014, there were almost 22 million living veterans; 8.92 million were enrolled in VA health care, and of those, more than 1.45 million received services in VHA mental health outpatient clinics and inpatient units.

All veterans receiving VHA health care are screened for depression, posttraumatic stress disorder (PTSD), problematic use of alcohol, and military sexual trauma (MST), and those who screen positive are referred for further assessment, including review of risk for suicide, and for treatment as appropriate. Mental health records are fully integrated into the electronic health record, so all practitioners can approach patients with an understanding of the full spectrum of problems each veteran brings for care.

VHA mental health care addresses the needs of veterans and of family members in relation to the veteran's care, with psychologists involved in provision and administration of all aspects of care. The system includes a suicide prevention strategy based on the premise that ready access to high-quality care will help prevent suicide. VHA has published, in collaboration with the U.S. Department of Defense, evidence-based clinical practice guidelines for PTSD, major depressive disorder, substance use disorder, suicidality, and bipolar disorder (all guidelines can be accessed at http://www.healthquality.va.gov). All were developed by professionals from diverse disciplines working collaboratively and are based on rigorous review of available data informed by clinical expertise.

HISTORY OF PSYCHOLOGY IN VA

VA was a fairly small operation from its inception in 1930 until World War II led to dramatic expansion of VA benefits. In 1944, Congress passed the Servicemen's Readjustment Act (G.I. Bill of Rights) to authorize occupational, educational, and health assistance for veterans. Since that time, mental health services and professional psychology have played a key role in VA care. VA's first outpatient mental health clinic opened in 1945, with psychology staff as key health care professionals. At the national level in the same time period, VA Central Office (VACO) in Washington, DC, which organizes and monitors all VA services nationally, appointed James Grier Miller as the first Chief Clinical Psychologist. Since then, there has been continuous psychology leadership in VACO. In 2011, a psychologist (Antonette M. Zeiss) was appointed as the Chief Consultant for Mental Health Services in VA; this position had previously always been held by a psychiatrist.

The emergence of psychology as a core health care profession in VA also had an impact on the development of the profession of clinical psychology. As one example, the American Psychological Association (APA) accreditation process for graduate programs was stimulated in part by VA's need to ensure that psychologist hirees had been trained in accredited, well-organized programs. Similarly, VA's needs also helped stimulate the development of accreditation processes for postdoctoral training programs.

From the 1940s through the early 1990s, VA psychology grew and was integral to mental health care through clinical services, training opportunities, and research initiatives, but broader health care roles beyond mental health were not nationally prominent for psychologists. This was largely because VA did not have the ability to provide primary care throughout the system and was largely focused on tertiary care, with inpatient services emphasized for physical as well as mental health care.

In the 1990s, VA went through a profound systemic change under the leadership of Kenneth Kizer, the Under Secretary for Health. He committed VA to provide a full spectrum of primary care at all medical centers and in the newly developing community-based outpatient clinics (Kizer, 1995, 1996). This transformation was fully accomplished in the next decade, enabling VA to provide a full array of preventive and primary care services as well as continuing its extensive specialty care and tertiary care services. Due to this transformation and VA's early development of a system-wide electronic health care record, VA care has been described as providing the "best care anywhere" in a recent book (Longman, 2010).

Such a transformation, essential and successful as it was, could not occur without challenges. In particular, the primary care system was created without a major increase in VA's budget, so a considerable amount of the needed resources had to be generated internally through reallocation of funds from other VA programs. Some of this reallocation led to an array of funding and leadership challenges that affected psychology as well as other mental health professions. There was a decline in VA psychology staffing during this period. In 1995, a historic high point, 1,832 psychologists were employed by VHA; this declined to a low in 2000 of 1,533 psychologists, with only minor increases up to the end of 2003.

The challenges of the mid-1990s to psychology have since been faced and overcome, beginning in the early years of the 21st century; we turn now to that story. As noted earlier, this expanded hiring of psychologists in recent years has resulted in a total of more than 4,700 individuals as of 2014. As part of that history, the successful transformation of VHA to a full-service health care provider is echoed in expanding roles for psychologists as well as number hired.

EVOLVING AND UNIQUE ACTIVITIES OF CLINICAL PSYCHOLOGISTS

Mental health services within VHA began a resurgence in 2004. The decline in VA's mental health care resources was recognized by leadership in VA, including the Under Secretary for Health and the Chief Consultant for Patient Care Services. In addition, emerging and projected needs for mental health care of returning veterans from the wars in Afghanistan and Iraq necessitated a revitalized system. To meet the needs of veterans for mental health services, the VHA Comprehensive Mental Health Strategic Plan was developed and implemented (VA, 2004). Multiple psychologists collaborated with other professions to create this innovative document, which followed from the recommendations of the President's New Freedom Commission on Mental Health (2003) report and its adaptation for VA, the Transforming Mental Health Care in America Federal Action Agenda (VA, 2003). It further incorporated crucial issues recognized by VA mental health professionals as needed in their system.

The plan was based on several key premises from the President's New Freedom Commission on Mental Health (2003) report, and specific actions to pursue each of these goals were defined:

- Mental health is essential to overall health.
- Mental health care should be consumer and family driven.
- Disparities in mental health services must be eliminated, and early mental health screening, assessment, and referral to services should be common practice.
- Excellent mental health care should be delivered based on the strongest available evidence.
- Technology should be used to access mental health care and information.

As the plan was implemented, mental health leaders, with important psychologist contributions, decided that a valuable next step would be for VHA to systematize and enhance mental health care with the publication of the handbook *Uniform Mental Health Services in VA Medical Centers and Clinics* (hereafter referred to as "the Handbook"; VHA, 2008). VA's endeavor was the first effort by any health care system, to our knowledge, to provide a comprehensive statement regarding the services, manner, and locations through which mental health care is to be made available for all eligible participants. Whereas decisions about services for a specific veteran are made in active collaboration between the veteran and VA mental health staff, all services in the Handbook are available as those decisions are made. The Handbook is also a guide for veterans and their family members to understand mental health services available within VHA. Both the technical document and an abbreviated publication in consumer-friendly language document are available for free online. Notably, the Handbook requires that evidence-based therapies for a number of disorders be available at all VA sites. These are discussed in more detail in a subsequent section.

In addition, the plan, along with subsequent developments, ensures that VA psychologists' work occurs in a health care system that is committed to interprofessional patient care; significant strides in developing policy and training for staff to promote this approach have been taken. This interprofessional model began for VA in geriatric, rehabilitation, and primary care settings but is now the working model throughout all care in the system. Psychology is a key contributor to the team in all of these settings.

In an interprofessional approach, members of multiple professions share responsibility for a set of patients, with thorough coordination among team members in generating treatments and delivering services (see Volume 5, Chapter 10, this handbook). Such care also can be referred to as interdisciplinary, but the interprofessional label is generally used to denote an enhanced appreciation of and respect for the professional expertise of each profession on the team. For example, psychology, nursing, medical, pharmacy, and social work staff on a primary care team would determine the package of nursing, medical, psychological, and patient/family support services as a team; coordinate delivery of all services; and monitor progress and need for care refinements, with full awareness of the multiple levels of care being provided and how they are being coordinated. Each team member has extensive knowledge of and respect for the potential contributions of other team members and how they complement one's own profession.

Implementing the Recovery Model of Care

VA has adopted the goal of recovery as a key mental health principle, with psychology playing a lead role in this emphasis. VA uses the definition of recovery published by the Substance Abuse and Mental Health Services Administration (2012): "a process of change through which individuals improve their health and wellness, live self-directed lives, and strive to reach their full potential" (para. 3). The concept of recovery within the VHA mental health system pertains to (a) a set of services that are provided and skills that are taught, (b) an area of active research and program development, (c) a fundamental belief that guides the entire system of care, and, ideally, (d) a positive change experienced by each veteran who participates in VHA mental health services. Mental health recovery has deep roots in the scientific literature (e.g., Anthony et al., 2002; Corrigan et al., 2009; Davidson, Harding, & Spaniol, 2005, 2006), in the consumer mental health movement, and in the voices of many pioneering leaders. It is not unique to VA, but VA has taken steps to facilitate its application and acceptance within its health care. For example, the recovery-oriented mental health strategy has informed VA efforts to create a personalized, proactive, patient-driven culture of care, with recent efforts that have increased collaboration with community practitioners; extended clinic hours; expanded use of clinical video teleconferencing and home telehealth; and helped to develop mobile apps, social media, and web resources to support the mental health and well-being of veterans.

Further, each VA medical center has a Local Recovery Coordinator to advise mental health leadership and engage in strategic planning to transform local mental health services to a recovery-oriented model of care, to sustain those changes over time, and to support further systemic changes over time. The Local Recovery Coordinator position is open to all core mental health professions; psychologists compose roughly 48% of that workforce. The Local Recovery Coordinators are a key resource for outreach and to reengage veterans who have dropped out of care, particularly those with a serious mental illness.

Peer Support for Mental Health Care

Hiring of mental health peer support staff began in 2005 with the Mental Health Strategic Plan and received major momentum through Executive Order No. 13625 (2012) that required the hiring of 800 Peer Specialists across the system. VA Peer Specialists are veterans with a lived experience of a mental health condition and who are certified to provide peer support services. As full, active members of mental health treatment teams across the system, they create and demonstrate the culture, expectation, and pathway for recovery in an unparalleled manner.

In addition, VHA mental health professionals who have a lived experience of mental illness have begun to come together on a monthly call. This experience was organized by a clinical psychologist, with the goal of empowering psychologists and other mental health professional staff in VA, so that their lived experience can be utilized as a source of knowledge and enhanced clinical sensitivity rather than a secret to be hidden. The goal is to provide peer support among staff and to discuss the best ways to use their personal experiences to support patient-centered, recovery-oriented care.

Evidence-Based Psychotherapies

VA nationally disseminates and implements evidence-based psychotherapies in its mental health care system (Ruzek, Karlin, & Zeiss, 2012). In 2006, VA began a process to ensure that evidence-based therapies are available for all veterans at all sites of care. Dissemination and implementation activities began with competency-based training in cognitive processing therapy (CPT) and prolonged exposure therapy (PE). These therapies are recommended at the highest level in the VA & U.S. Department of Defense's (2010) clinical practice guidelines for PTSD (see all mental health clinical practice guidelines at http://www.healthquality.va.gov). VA has provided training in CPT or PE to VA mental health professionals, resulting in positive outcomes for patients (Chard et al., 2012; Eftekhari et al., 2013). As of September 2014, more than 5,900 VA mental health staff members have received training in CPT and/or PE.

VA has expanded its evidence-based practice (EBP) dissemination and implementation initiatives to include a broad range of therapies directed at various health conditions that research indicates are especially prevalent among veterans using VA health care services (e.g., Whealin, Kuhn, & Pietrzak, 2014), including depression, serious mental illness, substance use disorders, insomnia, chronic pain, relationship distress, and motivation/adherence. VA has provided competency-based training in EBPs to more than 8,800 VA mental health staff, with demonstrated increases in therapist competencies and improvements for patients in symptoms and quality of life. Competency-based training includes an intensive didactic and experiential workshop for staff, followed by 6 months of regular case consultation from national experts, usually psychologists, while these approaches begin to be used with their veteran patients. Thus, training provides not only skill development through hands-on workshops but also ongoing case consultation and feedback on those skills with veterans who present with real-life situations and complications. Psychologists have been leaders in these efforts to disseminate EBPs, and more than 3,600 psychology staff members now have demonstrable competencies to provide them. All VA psychologists have an opportunity to develop those skills.

Telemental Health and Connected Health

As part of its access initiative, VA has made a major investment in using telehealth technologies (e.g., clinical video teleconferencing). Psychologists can provide care through telemental health resources in a number ways. For example, a veteran at a VA outpatient clinic can receive more complex mental health services through clinical video teleconferencing with a VA clinician at the affiliated medical center. In addition, many clinics now provide telemental services from VA staff members directly to the patient's home; this will be a growing resource in years ahead. VA has established regional telemental health centers that can provide mental health care across geographic boundaries to augment and expand care that is otherwise available. These regional centers have a particular focus on evidence-based psychotherapies, and psychologists have had a major role in that initiative. VA also has national telemental health consultation services available through the National Center for PTSD and the National Telemental Health Consultation Program.

PRESENT STATUS

Number of Staff

As noted earlier, as of 2014 there are more than 4,700 psychologists employed by VHA. Most are employed full-time and are engaged in clinical care across more than 1,700 sites, but psychologists also serve in leadership positions, research centers, program evaluation, centers of excellence, and in administrative roles across VA. It is typical for psychologists in VA to advance through the system in their careers and to evolve into leadership roles; sometimes senior psychologists who have not had prior VA experience also are hired for leadership roles. Psychologists in VA are hired under Title 38 of the U.S. Code and accordingly must be eligible according to the Qualification Standards for Psychologists. These require U.S. citizenship; a doctoral degree in psychology from a graduate program in psychology accredited by the APA; completion of an internship training program accredited by APA; and a full, current, and unrestricted license to practice psychology at the doctoral level. After completion of internship and prior to licensure, an individual can be hired on a temporary basis for up to 2 years as a "graduate psychologist," one who must have continued supervision while in this role and who must complete licensure within that 2-year appointment.

Services Provided by Psychologists

VA psychologists offer the full range of services that professional psychologists are trained and licensed to provide. The relative level and the specific content of services vary by site and patient population. For example, the particular approach to assessment or the specific psychotherapy offered will depend on typical presenting problems, age, and other demographics of the veterans served in the setting. These will be delineated more specifically in a following section on VA sites of health care, but first we review the broad range of competencies demonstrated by VA psychologists.

Assessment is crucial for VA psychologists. VA employs neuropsychologists who work in a variety of settings and often with two veteran populations most in need of neuropsychological assessment: (a) older veterans with cognitive changes ranging from mild cognitive impairment to dementia, and (b) veterans returning from active combat in Iraq or Afghanistan who have suffered traumatic brain injury. VA psychologists also provide a wide array of other assessments that can help the whole care team individualize care optimally. A computer-based mental health assistant is an online system, linked to the veteran's electronic health record, that makes well-validated personality and psychopathology assessment instruments available. Patients complete instruments online, and results are scored and sent electronically to the psychologist who ordered the test.

VA psychologists offer individual, couples/family, and group psychotherapy using a wide array of techniques. Evidence-based psychotherapies are available to all veterans for whom they are clinically relevant. The evidence-based psychotherapy may be sufficient to meet the needs of some veterans; for others, these therapies complement and support the delivery of other psychological and medication-based treatments.

Psychologists in VA offer many key competencies that go beyond direct service delivery. They work with other professions to design interprofessional service delivery, often as leaders in design of new and innovative programs based on the evidence bases. Because of the research and evaluation experience integral to psychology graduate training, psychologists often design the evaluation components for new and existing programs.

Psychologists often function as VA supervisory staff. Each VA site has a lead psychologist with professional oversight for psychology staff at that facility and its affiliated outpatient clinics. Because any mental health leadership position in VA is advertised for all of the core mental health professions, psychologists often are selected for these roles, and they direct many interprofessional clinical programs.

Psychologists also function in key national leadership roles in VACO in Washington, DC. The first author of this chapter served as the lead VA psychologist nationally, first serving as Deputy Chief for Mental Health Services and then as the Chief Consultant for Mental Health Services until her retirement. In addition, as of 2013, more than 30 other psychologists had key roles in in national VA leadership.

VA psychologists also work in research settings. These include 10 Mental Illness Research, Education, and Clinical Centers that function collaboratively with affiliated universities to conduct research on improving mental health care and disseminating important findings. Congress has established several other VA mental health Centers of Excellence, including three that conduct and disseminate research relevant to mental health needs of veterans returning from Iraq and Afghanistan, and the National Center for PTSD, which has seven divisions located at different VA sites across the United States. In addition to these Centers of Excellence, VA funds and conducts a large amount of research, and many VA psychology staff members obtain research funding or participate in projects funded by VA's Office of Research Development.

VA Settings in Which Psychologists Provide Health Care

The following list outlines many settings where psychologists play an integral role.

Patient aligned care teams (PACTs). VA has developed programs for integration of mental health into the primary care setting (Kearney et al., 2011). Throughout the VA system, PACTs provide primary care using a patient-centered medical home model, with an integrated mental health care component. One aspect of integrated mental health care in PACTs is a colocated, collaborative mental health staff member, usually a psychologist. The colocated mental health professionals provide services for any identified mental health problems, most commonly depression, anxiety, or problem drinking, referring complex cases to specialty mental health. In addition, the colocated mental health provider assumes an active, collaborative role with the primary care provider, with a particular focus on behavioral aspects of health care, including treatment adherence, treatment of insomnia, psychological treatment of pain, and stress management.

In addition, VA screens all new patients in primary care for depression, PTSD, problem drinking, MST, and traumatic brain injury. If either the depression or PTSD screen is positive, a clinician in the primary care setting also evaluates suicide risk. Many of these screens are repeated at yearly intervals. Psychologists play a major role in conducting screening, following up on positive screens, providing mental health care when needed, and determining when a referral to specialty mental health care is needed.

Inpatient and outpatient mental health. Every VA medical facility has a general outpatient mental health clinic, most VA medical centers have mental health inpatient units, and mental health staff members (usually psychologists) are available in all medical center emergency departments.

Psychologists also provide more specialized outpatient care in intensive care settings. Mental health teams, based on the assertive community treatment model (Dixon, 2000), reduce the likelihood of inpatient mental health hospitalizations among veterans with serious mental illness by improving their ability to live, work, and participate in relationships in the community. Psychosocial Rehabilitation and Recovery Centers also serve veterans with serious mental illness. They are a transformation of the older Day Hospitals and are designed to be much more active in defining patient goals and promoting self-directed activity to reestablish community participation. Psychologists are staff members, and frequently team leaders, for these programs.

Residential rehabilitation. VA supports a large network of mental health residential rehabilitation programs, providing a less restricted, more rehabilitation-oriented alternative to locked inpatient units that serve those with the most acute mental health disorders. Psychologists are part of the staff at residential rehabilitation programs, often in leadership positions, and psychologists participate in research and program evaluation focused on these programs. These programs are valuable because they offer care in a safe environment for those who do not require or who would not be willing to stay in a locked inpatient environment. Veterans live at these programs for weeks to months, receiving an array of psychosocial and biomedical treatments. Such programs also offer the opportunity for more rural veterans to engage in intensive therapy while living at the medical facility rather than having to travel long distances every day for intensive outpatient care.

PTSD. VA has, of necessity, been a leader in development and implementation of treatments for

PTSD, which came into focus as a disorder after the Vietnam war, although it has been recognized by some name after every war (e.g., battle shock, combat fatigue, "soldier's heart"). VA operates the National Center for PTSD, a national resource for promoting effective treatment for PTSD within and outside VA, as well as three additional centers of excellence for postdeployment mental health concerns among veterans from Iraq and Afghanistan.

Certainly not all veterans who experience combat develop PTSD, but combat is a powerful stressor that clearly raises vulnerability. In addition, there may be multiple other experiences during military service that heighten vulnerability for PTSD, such as MST or dangerous accidents during training experiences. VA offers specialized care for veterans with PTSD at every medical facility. Most care is delivered in outpatient contexts, but as noted, VA also has a large network of inpatient and mental health residential rehabilitation programs that offer more extensive care when needed. As more women veterans of combat have returned from Iraq and Afghanistan and sought VA care, VA's programs for women veterans with PTSD have continued to expand.

Psychogeriatric care. Large numbers of veterans served by VA are older adults; by 2014, 43% of veterans receiving care from VA were 65 years of age and older. Of those, roughly 1.2 million are World War II veterans, with the largest proportion from the Vietnam era. Psychologists play important roles in geriatric care nationally (APA, 2008) and in VA. Psychologists in VA have developed innovative approaches to providing mental health care to older veterans (Karlin & Zeiss, 2010; Karlin, Zeiss, & Burris, 2010), which is critical because older adults often do not receive needed mental health care through traditional models of care.

One such program, Home Based Primary Care, provides primary care, nursing care, rehabilitation care, social work, pharmacy, and mental health care, organized in an interprofessional model for veterans who are homebound because of illness or disability. All team members share assessment and treatment information in regularly scheduled meetings, which are used to develop and refine coordinated treatment plans. Treatment plans are implemented through home visits by team members who support each other's efforts. Mental health professionals are integrated into every Home Based Primary Care program, and the majority of such staff members are psychologists. The psychologist provides a range of psychological and brief cognitive evaluation services, capacity assessments, evidence-based psychotherapy, behavior management services, caregiver- and family-oriented interventions, and team-focused activities.

VA also operates extended care settings, known as Community Living Centers, that create home-like, person-centered environments for older adults to nurture as much independence and functionality as possible while providing necessary nursing and other health care. Community Living Centers each have a mental health professional, generally a psychologist, on staff to serve as a leader in culture transformation and to promote the delivery of evidence-based psychosocial services for symptoms associated with dementia or serious mental illness.

New episodes of depression for those moving from a home in the community to a nursing home have been estimated at about 50%—a rate that cannot be accounted for by the health status alone. Instead, much of it is the result of the depressogenic environment in many traditional nursing home settings (Zeiss, 2005). While provision of individual psychological assessment and treatment services is an important role for these psychologists, it is even more important that they work to transform the depressogenic environment, for example, by working with nursing staff; this has been shown in prior research to be less mentally demoralizing (e.g., Bergman-Evans, 2004; Hamilton & Tesh, 2002).

Psychologists have been leaders in developing and implementing the Servicemember Transitional Advanced Rehabilitation Program–VA (STAR-VA), an interprofessional intervention for managing challenging behaviors associated with dementia, which has been adapted from the Staff Training in Assisted Living Residences training program (Teri et al., 2005). On the basis of pilots in 17 VA sites, STAR-VA is associated with significant reductions in frequency and severity of challenging dementia-related behaviors and in reductions in depression and anxiety symptoms (Karlin et al., 2014). This effective, nonpharmacologic approach allows the treatment setting to reduce the use of antipsychotic medications that increase death risk in older patients with dementia. As a result, VA is expanding STAR-VA implementation.

Substance use and dual diagnosis care. VA provides a full array of substance use treatment services. These include inpatient and outpatient detoxification support, intensive outpatient programs, dual diagnosis programs for those with co-occurring mental health problems, care for problem drinking in primary care teams, opioid substitution programs (using either methadone or buprenorphine), and treatment in outpatient clinics. Psychologists participate at every level of these programs as clinicians, administrators, researchers, and evaluators.

Mental health services for homeless veterans. Homelessness is one of the most challenging problems that VA faces. VA has committed to an aspirational goal of providing housing and necessary health and mental health services for all homeless veterans and supportive services to prevent homelessness for those at risk. VA does extensive outreach to identify homeless veterans or those at risk of becoming homeless—for example, because of recent job loss or family changes—and to encourage them to use available services. Ending homelessness is complex and difficult. Most homeless veterans have long-standing mental health and substance use problems, so the veteran needs to be linked to VA physical and mental health services in addition to finding housing. Every year, about 225,000 veterans who are homeless or at risk for homelessness are served by at least one service specifically designed to prevent or end homelessness. One large scale program is called "Stand Downs," which occurs at VA facilities as annual open houses where homeless veterans can get dental care, personal care (such as haircuts or clothing), and connect with other VA resources.

Social workers have taken a lead role in VA in coordinating programs for homeless veterans, but psychologists have been involved and are becoming more involved over time. In particular, psychologists are a key link between the basic social services needed and the right level of mental health care. In addition, research guided by psychologists is key to finding improved methods for addressing homelessness.

MST. On the basis of federal law, sexual harassment and assault are conceptualized in VA as experiences along a single continuum of sexual trauma, with MST defined as "physical assault of a sexual nature, battery of a sexual nature, or sexual harassment" ("Counseling and Treatment for Sexual Trauma," 2011, para. (a)(1)), and with sexual harassment defined as "repeated, unsolicited verbal or physical contact of a sexual nature which is threatening in character" (para. (d)). Because survivors of sexual trauma often do not disclose their experiences unless asked directly, all veterans seen for health care, female and male alike, are screened for sexual trauma. Data generated in VA's screening program show that approximately one in five women and one in 100 men disclose to their VA primary care provider that they have experienced sexual trauma. Rates obtained from VA screening refer only to those veterans who have chosen to seek VA health care; they cannot be used to estimate the actual rate of MST experiences for all those serving in the U.S. military. These data indicate how crucial it is that VA offer services for those who have experienced MST. Psychologists are integral to providing MST-related care in VA.

Suicide prevention. Suicide prevention requires a public health approach in which knowledge of suicidal risk is broadly disseminated and those at potential risk receive early care before a suicidal crisis develops. A large segment of the VA population falls in the group most at suicide risk: older White men with chronic health problems and without an intimate, cohabiting life partner. VA's plans for mental health care address the needs of this population. VA provides crisis care services for those who do not seek earlier care or who become suicidal despite clinical efforts. A major component of crisis care is the Veterans Crisis Line (1-800-273-8255, press 1), which is available 24 hr per day, 7 days per week, and is staffed by mental health professionals. This has proven valuable and has expanded to include a chat service and a texting service, both of which also connect veterans with specially trained responders. In addition, a team of suicide prevention resource staff is available at every VA medical center, serving the facility and its outpatient clinics. Psychologists have been key in all aspects of these programs, and they also have led efforts to adapt and disseminate Safety Planning for Veterans—a brief intervention for suicidal patients—as well as to develop and provide training for VA practitioners in suicide risk assessment.

The independent effect of these interventions is not yet clear. However, rates of suicide among veterans who receive VA health care have remained stable since 2003, at a time when rates of suicide are increasing overall in the United States and among veterans who do not receive health care from VA. There is evidence that veterans do have a higher suicide risk than age- and gender-comparable groups in the general population, but VA's efforts seem to be keeping deaths by suicide from increasing at a time of population vulnerability (for more information, see http://www.mentalhealth.va.gov/suicide_prevention/index.asp).

Psychology Training

Each year, approximately 6,400 mental health professionals participate in VA training programs. With nearly 600 funded internship positions for 2015, it remains the largest provider of APA-accredited psychology internship training in the country. Roughly 70% of VHA psychologists received some of their clinical training at a VA facility, and it has been estimated that about 50% of all licensed psychologists nationally have had some VA training.

VA views its training programs as a crucial resource for development of its own health care staff as well as a resource for national health care education. Since 2002, there has been a 63% increase in the number of VA psychology internship positions (from 366 to 598) and a 1,000% increase in the number of postdoctoral fellowship positions (from 44 to 484). In recent years, VA has expanded its mental health training opportunities in rural facilities and in emerging areas of practice such as interprofessional care. As of 2014, VA is in the midst of a 5-year expansion of training opportunities for the mental health disciplines, pledging to fund up to 1,200 new positions over the 5-year period.

Psychology in VA is committed to interprofessional care with the other health care professions, and this collaboration has been extended to include training programs. This is most prominent in training rotations in primary care mental health integration and geriatric care settings, where psychology is already broadly accepted as a core profession but is rapidly expanding to include additional interprofessional settings where health care is provided. Recently, new interprofessional postdoctoral areas have included care for lesbian, gay, bisexual, and transsexual veterans, care for veterans with HIV or Hepatitis C, and family care.

VA Psychologists and National Organizations

VA psychology has benefited from the support and partnership of APA, which has provided guidance, consultation, and advocacy. VA psychology is represented in several key APA divisions, such as a section specifically for VA psychologists within Division 18 (Psychologists in Public Service). Another vital organization is the Association of Veterans Affairs Psychologist Leaders, created in 1997 as a free-standing association separate from VA institutional lines of authority, with membership open to psychologists who have a leadership role of any kind in their facility or in other contexts such as APA governance, or who are being mentored for VA psychology leadership roles. Similarly, VA has supported APA, with VA members serving in key roles in APA governance and a yearly collaborative meeting with APA staff, with attention to advocacy issues relevant to VA psychologists and VA mental health care.

FUTURE OPPORTUNITIES

VA health care services, including those offered by clinical psychologists, provide an extensive range of care, but there are always ways in which services can and should be enhanced and access made more available for veterans in need. For example, an independent review of VA's mental health care (Watkins & Pincus, 2011) found that VA provides excellent mental health care overall:

> Comparison of VHA performance on nine selected administrative-data indicators with the same indicators assessed in

> a large, commercially insured population indicates that the performance difference is statistically significant for all nine measures. Average VHA performance was found to be superior for all of the assessment and medication-management indicators. (p. 146)

However, the report also notes that the VA system does not yet fully meet its aspirational goals.

Psychology plays a key role through leadership at VACO and throughout the system. For example, in 2015 the annual conference of the Association of Veterans Affairs Psychologist Leaders chose the theme "VA Psychology: Advancing High-Quality Health Care and Timely Access for Veterans." Some key issues in which VA psychology will contribute to continued development of care are outlined next.

In the effort to ensure that evidence-based care is available to all veterans, expanded training opportunities for current treatments as well as development of new modules will continue. These efforts will include more decentralized training—for example, using the cohort of professional staff already trained within a geographic region to guide training and consultation for their local colleagues, as well as using teleconferencing and other technological resources for training. Such approaches are accessible without travel and may be more cost-efficient nationally. It will be important to gather evidence about such decentralized training to ensure that these approaches result in therapist competencies equivalent to those initially trained using more time- and resource-intensive methods.

Increased attention to outcomes for veterans will be a future direction as well. VA collects a tremendous amount of data about its care, but its capacity to gather patient-reported outcome, satisfaction, functional, and quality-of-life data in real time and aggregate it into system-level reports has been limited. Plans to enhance VA's electronic health record system and information technology infrastructure to generate that capacity are under development. Having the ability to track, for every veteran, the results of mental health and overall health interventions is called for intensely both within and outside VA. Such measurement would support the clinician, offering information to work collaboratively with each patient to refine treatment to best meet the patient's needs. It also would support the overall system, offering vital information on a host of issues, including (but not restricted to) what is working best, where additional staff members are needed, and what training is needed to enhance care. In a system as large as VA—serving more than 1.4 million veterans annually at almost 1,000 sites of care—creating change to ensure that such data are routinely collected and reviewed is a daunting goal but one that VA is pursuing.

A final change on the closer horizon is expanding community partnerships and working collaboratively with community practitioners to enhance options for veterans and to optimize access to care. VA has always had such relationships, through contracted and fee basis care, but there are now efforts underway to expand partnerships. These should lead to processes to help veterans understand new avenues of care so that they can access and use all possible resources. One need, highlighted in a recent RAND report (Tanielian et al., 2014), is to educate health care professionals in the community to understand military culture, veterans' needs and strengths, and how best to work collaboratively with VA. The recently passed Veterans Access, Choice, and Accountability Act of 2014 ("Choice Act") lays out a plan of action for such efforts. As with VA-delivered care, evaluation of service utilization, patient satisfaction, and objective outcomes will be needed to determine what works best in such partnerships, where changes should be made, and what further needs for improvement remain.

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CHAPTER 24

INDEPENDENT PRACTICES

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The formal field of psychology is roughly 125 years old. The majority of the founders of the American Psychological Association (APA) were academics who were employed in universities—teaching and conducting research. A small number of the early psychologists provided clinical services, primarily in university clinics. The early nonuniversity psychological services were also provided within organized systems, such as units attached to court systems. The rapid expansion of clinical psychologists occurred during World War II in the organized setting of the U.S. military. The rapid expansion of psychological services after World War II occurred in the Veterans Administration, another organized setting of care.

Independent practice, or private practice, in clinical psychology started to emerge in the 1950s. Although there was independent practice by psychologists in earlier years, the absolute numbers were relatively small. However, it was during the 1950s when, with raised personal incomes, more people could afford to seek psychotherapy and other psychological services outside of educational systems and psychiatric hospitals. The expansion of private practice opportunities continued to grow in the 1960s, as private insurance companies provided for reimbursement for psychotherapy and psychological testing delivered by psychologists in independent practice. In 1979, the number of psychologists employed in academic settings still exceeded the number employed in all other settings, but 10 years later, although educational institutions were still the largest single employer of psychologists, they employed fewer than all others combined (Fowler, 1990). Psychologists are now employed in business, government, and consulting and in various service delivery settings. The academic foundation of psychology has continued to grow even as U.S. psychology has developed as part of the health care system (Fowler, 1990). By 2000, half of all licensed practitioners in clinical psychology in the United States were delivering their services in independent practice settings.

In this chapter, we address the definition and prevalence of independent practices in the United States; provide a historical profile of events leading to the application of psychology in independent practices; describe the evolution of activities, including a summary of those in the private practice of applied psychology; identify the unique contributions by key pioneers in independent practice; and describe the present status of independent practice. We conclude with future directions of private practice.

DEFINITION AND PREVALENCE

Psychologists offering behavioral health services do so in a variety of practice settings. Those who do so independent of agencies or other institutions, and who develop their own businesses to offer such services, are in independent or private practice. Psychologists must be licensed to provide behavioral/mental health services in all 50 states in the United States and provinces in Canada. Although licensure laws vary from state to state, psychologists licensed

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to provide behavioral health services usually have a doctoral degree in clinical or counseling psychology, have completed supervised internship and postdoctoral hours, and have passed the Examination for Professional Practice in Psychology.

According to the APA Center for Workforce Studies (personal communication, October 28, 2014), there are estimated to be approximately 180,000 psychologists currently in the U.S. workforce; approximately 106,500 psychologists are licensed to practice. It is estimated that about half of those licensed are employed in independent practice. Among those belonging to the APA Division of Clinical Psychology, for instance, approximately 45% are employed full-time in independent practice, and of those not employed full time in independent practice, 50% are providing some clinical services in the private sector on a part-time basis (Norcross & Karpiak, 2012).

The Association of State and Provincial Psychology Boards is in the process of surveying all licensed psychologists to build a comprehensive licensee data set. Their current estimate of licensed psychologists is 100,000, slightly less than but comparable to the estimate of the APA Center for Workforce Studies. Future surveys will provide data about practice settings (private, public, individual, group, institutional), focus/specialty, populations served, or whether full- or part-time practice.

Approximately 33.9 psychologists are licensed per 100,000 people in the United States. The South region (24.0) has the lowest representation of licensed psychologists compared to the Midwest (30.6), West (27.5), and Northeast (54.2) regions. Some geographic regions of the United States have very low representation, resulting in underserved populations (Hamp et al., 2014).

Another category of underserved populations includes racial ethnic minority groups. The number of racial/ethnic minority psychologists remains low relative to the demographic representation of racial/ethnic minority groups in society. In a review of various sources, the APA Center for Workforce Studies (2010) found that the percentage of doctorates awarded to minority graduates in 2008 was 24%, with clinical psychology proving to be the most popular, as were the areas of counseling, social, and industrial/organizational psychology. This representation is below the approximately 36.3% of the population that belongs to a racial or ethnic minority group (U.S. Census Bureau, 2010). Ten years ago, the representation was at 15%, so there is increase in numbers. However, the racial/ethnic minority population is an underserved population for various reasons, including the low representation of racial/ethnic minority professionals available to provide services.

HISTORICAL PROFILE

The independent practice of psychology became prominent and valuable to health care with the advent of World Wars I and II as psychologists were needed for assessment and treatment (see Chapters 1 and 2, this volume). During World War I, there was a great need to evaluate potential military candidates for fitness of duty. Conducting psychological assessments was the initial way that psychology was applied. Robert Yerkes, a president of the APA, developed the Army Alpha and Beta Tests for the measurement of intelligence in a group format. These tests were used to evaluate all new recruits in the U.S. Army.

The scope of the practice of psychology was further developed and expanded following World War II. Many soldiers returning home from the war were experiencing trauma and needed mental health care. Psychiatrists had been the primary providers of mental health services, and there were not enough to meet the needs of the soldiers. Psychologists stepped into the role, expanding the scope of their practice to meet those needs. The field was forever changed (Cook, 2011).

A group of psychologists, termed “the dirty dozen,” significantly transformed the practice of psychology. They are credited for “professionalizing” psychology by refocusing the efforts of APA to lobby Congress in defense of psychologists struggling to compete for health care dollars; they also worked to refocus the training of students from scientific research to careers in psychotherapy. Members of the dirty dozen launched free-standing proprietary schools of clinical psychology, acquired influence of state psychological associations, and contributed to increased salience of practice in the APA (Wright & Cummings, 2001). Although some members of the dirty dozen claimed to repudiate the scientist practitioner model of applied psychology training, others claimed to continue to strengthen the evidence-based approach to practice (Fowler, 1990).

Evidence-based practice is the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences. The purpose of evidence-based practice is to promote effective psychological practice and to enhance public health by applying empirically supported principles of psychological assessment, case formulation, therapeutic relationship, and intervention (APA, 2005). The value of psychologists' training grounded in empirical methods helps to improve patient care.

The employment patterns of clinical psychologists over the years reveal the transformation and evolution of psychotherapy practice and independent practice in particular. The APA Society of Clinical Psychology (Division 12) has a lengthy tradition of examining its own members, beginning when Lowell Kelly initiated his seminal 1960 study of the entire membership. His 1960 findings revealed that clinical psychologists were most frequently employed in medical settings where they performed diagnosis, psychotherapy, and administration, primarily with adult patients. His results also demonstrated a decisive shift from diagnostic testing to psychotherapy in the late 1950s (Kelly, 1961).

Over the past 50 years, other researchers have systematically chronicled the Society of Clinical Psychology membership using the same questions and methodology as Kelly. The data on employment settings speak to profound changes in employment trends across the years. In 1960, "almost exactly half of the respondents reported that their primary work setting is what might be labeled a medical one: general hospitals, mental hospitals, clinics . . . and medical schools" (Kelly, 1961, p. 4). In 2010, these settings accounted for only 23% of employment sites. Conversely, the proportion of clinical psychologists employed in private practice has jumped from 17% to 45% during the same time span (Norcross & Karpiak, 2012). Independent practice now represents the modal employment site of licensed psychologists in the United States.

Another significant historical evolution of independent practice has to do with "freedom of choice" legislation. In the late 1970s, psychology passed freedom of choice and mandated mental health benefits legislation that facilitated insurance reimbursement for psychological services. The freedom of choice legislation demonstrated that credentialing, licensure, and receipt of third party payments are highly interdependent. A measure of the maturity of the professional psychology has been its ability to deploy its legitimate expertise in a manner independent of institutions and agencies.

One important step in that process involved a 1979 case, *Virginia Academy of Clinical Psychologists v. Blue Shield of Virginia*. The APA submitted amicus brief on behalf of the Virginia Academy of Clinical Psychologists when Blue Shield unlawfully refused to provide direct payments for outpatient psychological services to Blue Shield subscribers unless those services were ordered, supervised, and billed by a physician. The courts found for the Virginia Academy of Clinical Psychologists. This was a significant step in establishing that psychologists were independent providers of psychological services and eligible for direct payments from insurance companies (*Virginia Academy of Clinical Psychologists v. Blue Shield of Virginia*, 1979).

The credentialing of psychologists in international settings is often different than in the United States. The practice of psychology is not necessarily restricted to those who hold the doctorate in other countries. For example, in much of Latin America, psychologists in independent practice are required to have a master's degree, and in some cases, only a bachelor's degree. Doctoral degrees are reserved for researchers. As in other fields, international professionals who move to the United States must acquire additional credentials to practice as a psychologist.

EVOLUTION OF ACTIVITIES

Psychologists in private practice spend the majority of their professional time on direct service: psychotherapy, assessment, and consultation. Recent research shows that those three activities are routinely conducted by 95%, 78%, and 53% of private practitioners, respectively, which account together for about 80% of their work weeks (Norcross & Karpiak, 2012). A fair number of psychologists in independent practice also conduct clinical supervision (46%), administration (28%), teaching (25%), and research (22%). Although patient care is naturally the predominant activity, independent practice affords a variety of career options and considerable flexibility.

Psychotherapy

Although psychoanalysis was the first major theoretical orientation of practicing psychologists, another development in the field occurred when other forms of psychotherapy were developed. Those included humanistic, behavioral, and systemic therapies. Feminist and multicultural therapies have also evolved. These developments opened the door to looking at various methods of working with patients. They also opened the door for the availability of psychotherapy for more diverse populations.

Thousands of studies have demonstrated the effectiveness of psychotherapy, showing that patients receiving psychotherapy were better off than people not receiving such services (Smith, Glass, & Miller, 1980). The APA endorsed a resolution on psychotherapy effectiveness that reports on its general benefit. It states, in part, that

> psychotherapy is effective and highly cost-effective. In controlled trials and in clinical practice, psychotherapy results in benefits that markedly exceed those experienced by individuals who need mental health services but do not receive psychotherapy. Consequently, psychotherapy should be included in the health care system as an established evidence-based practice. (APA, 2012, para. 29)

The results of psychotherapy tend to last longer and to be less likely to require additional treatment courses than psychopharmacological treatments, such as in the treatment of depression and anxiety disorders. Clients acquire a variety of skills that are used after psychotherapy treatment termination and actually continue to improve.

Psychotherapy has been shown to be effective with a wide array of diverse populations (APA, 2012). Researchers and practitioners continue to develop culturally relevant, socially proactive approaches that make psychotherapeutic services more relevant to racially and culturally diverse, vulnerable, and underserved populations such as adults, children, and families living in poverty. As the discipline of psychology matures, psychologists have become more attentive to context and culture, realizing that individuals exist not in isolation but in relationship to others and to their worldviews. Various strands of identity may include culture, gender, age, sexual orientation, social class, education, abilities and disabilities, religion and spirituality, language, body type, as well as location or geography—all of which may influence the work of the psychologist. An important evolution has been the increased awareness and knowledge that any individual is affected by multiple group identities and that a wide variety of experiences exist within any one group (APA, 2012).

Psychotherapy is thus highly effective and results in benefits that markedly exceed those experienced by individuals who need mental health services but who do not receive psychotherapy. It should always be included in the health care system as an evidence-based, cost-effective practice (APA, 2012).

APA Divisions That Address Independent Practice

The APA was founded in 1892 with 31 members and grew quickly after World War II. Today, APA has more than 130,000 members and 54 divisions in subfields of psychology. The mission of APA is expressed in its vision statement to promote

> psychological knowledge and methods to facilitate the resolution of personal, societal and global challenges in diverse, multicultural and international contexts [and to be] an effective champion of the application of psychology to promote human rights, health, well-being and dignity. (APA, n.d., Bullet Points 6 and 7)

The APA includes several divisions representing subfields that members may join. The Division of Independent Practice, Division 42 (http://www.apa.org/about/division/div42.aspx), is probably the division most associated with independent practice. Formally named the American Society of Psychologists in Private Practice, it officially became a division of APA in January 1982. Division 42, one of the largest in the APA, is recognized as a leader in advocacy for the independent practice of psychology, and it has significant impact on practice issues (Hill, 1999). The original bylaws of the Division noted that the purposes of the Division would be to support and encourage the development of the independent practice of psychology in both its scientific and professional aspects, to promote the objectives of the APA, and to foster collegial relationships among psychologists in independent practice. Division 42 continues to be consistent with its stated objectives.

Other divisions have sections devoted to independent practice as well. APA "practice divisions" are those where a substantial number of whose members consider themselves to be practitioners. Psychologists who are licensed psychologists are encouraged to pay an additional assessment fee for membership in the APA Practice Organization (http://www.apapracticecentral.org), which advocates for the practice of psychology. At least 50% of the members of the following APA divisions pay the practice membership fee: Division 31: State, Provincial, and Territorial Psychological Association Affairs; Division 55: American Society for the Advancement of Pharmacotherapy; Division 42: Psychologists in Independent Practice; Division 40: Society for Clinical Neuropsychology; Division 54: Society of Pediatric Psychology; Division 22: Rehabilitation Psychology; Division 39: Psychoanalysis; Division 53: Society of Clinical Child and Adolescent Psychology; and Division 29: Psychotherapy.

Administration and Business

Running an independent practice not only requires the clinical skills necessary to effectively evaluate, treat, and manage patients but it also requires a business acumen—knowledge and skills that are not typically obtained in graduate school or on internship. Even when courses are provided, the practice requires significant attention to detail.

The business aspects of an independent practice include the following: a successful business plan, assessment of one's relationship to finances, determination of expenditures, business structure, productive marketing strategies, an office well suited to the practice that one wishes to provide, sound policies and procedures, strategies to meet legal and ethical requirements, and other nuts and bolts of a psychology practice (see Volume 5, Chapter 16, this handbook). Membership in the APA Practice Organization provides up-to-date information and resources about the business of practice (http://www.apapracticecentral.org/business/marketing/index.aspx).

A business structure is a reflection of personal goals, tax concerns, and personal liability issues. The following are brief descriptions of three of the common structural options used in many independent practices.

A *sole proprietor* is when one person directly owns the company. An advantage is minimal start-up costs, but it requires that you pay self-employment taxes.

A *partnership* is developed when two or more people agree to share profits, losses, assets, and liabilities. It is relatively easy and inexpensive to set up. However, each member of the partnership has unlimited liability for the mistakes or debts of the partner(s).

A *corporation* is a legal entity that has the rights and obligations of a legal person. A psychologist in a corporation would not be personally liable, which is an advantage; however, the corporation pays its own taxes, and then the psychologist pays taxes again on his or her salary paid by the corporation.

Marketing and managing the practice effectively requires that the psychologist carefully consider and develop strategies. One aspect of marketing is seeking referrals via collegial contacts. In establishing collegial support, one might consider joining professional organizations related to their field and specialty. In addition to joining APA, APA's Division of Independent Practice (Division 42), and the APA Practice Organization, it would be advisable for the person considering independent practice to join their respective State, Provincial, and Territorial Psychological Association. Division 42; the APA Practice Organization; and the State, Provincial, and Territorial Psychological Association advocate for the independent practitioner, protect the practice of psychology, and provide up to date information on what it would take to be an effective and successful practitioner. Many urban areas also have local psychological associations or chapters that can also serve as a place to develop a colleague support network, and several racial/ethnic minority groups have national psychological associations, open to all psychologists who have interest in the competent, ethical delivery of services to those populations.

The development and maintenance of a website is currently considered an optimal way to communicate and market services. A description of the services that one provides, areas of expertise, forms that can be downloaded by potential clients, one's resume, and other professionally relevant information could be included. Other marketing ideas may be obtained from the norms related to one's locale.

Developing Specialties and Practice Niches

Psychologists in independent practice need to determine whether it will be a general psychotherapy practice or a specialized practice. Typically, people entering graduate programs have the opportunity to determine whether they want an area of specialization, such as health psychology, forensic, neuropsychology, pediatric psychology, or primary care. In addition to the general clinical curriculum, there can be focus in the area of specialization. There can be further development of the specialized skills during the practicum experience and internship as well as the postdoctoral experience. There are also certifications in specialized areas from organizations, such as the American Board of Professional Psychology.

Having a specialization may not be the same as having a practice niche. For example, a practitioner may specialize in working with children but may have a practice niche devoted to children with attention-deficit/hyperactivity disorder, evaluating students for special classroom placement, marriage and family, or recovery from trauma. The advantage of having a practice niche is that the person will be recognized as the go-to person for that specific problem, thereby increasing the possibility of referrals. Of course, the clinician will need to have the adequate training and skills necessary to effectively treat that population.

Financial Reimbursement

The practitioner will need to determine whether he or she wants to participate in managed care panels or networks; participation means that you are one of the psychotherapists who has agreed to provide services according to the fee reimbursement schedule and other requirements of that insurance company. These panels/networks provide clients covered by that insurance with names of professionals who may meet the criteria they are looking for, such as location or area of interest/expertise. That is one way that psychologists can receive referrals.

There are both benefits and limitations in being a part of the panels. One benefit is that psychologists can see a variety of clients, including those who may not access services if they did not have insurance coverage. If you choose not to serve on insurance panels, your practice will be limited to certain populations if the decision is made to have a practice that works with patients on a fee for service basis. Only those who can afford to pay your fee will be eligible to access your services. If providing access to mental health care to a wider population is a priority, then the practitioner should consider panel participation. However, accepting the fee that insurance panels pay is less than many psychologists typically charge.

Consent forms and early contact with clients should include clarity about the client's responsibility in being familiar with his or her insurance contract and the possible limitations, such as deductibles, copays, limited number of sessions (if diagnosis is not a serious mental illness), and that information such as diagnosis will be required by the insurance company. There can be much variability in the insurance contracts, and it will prove important for the patient to be clear of his or her responsibility up front before treatment begins.

The psychologist will also need to decide whether he or she will be a Medicare provider. Medicare primarily covers patients who are retired (if more than 65 years of age) or disabled; if the practitioner is working with either of these populations, more than likely he or she will have Medicare as the primary insurance carrier. In addition, most patients have opted for a secondary insurance coverage for their Medicare services, which generally covers copays. Psychologists need to make sure they understand the provisions of Medicare, as it has specific policies and procedures, such as diagnostic codes that will be covered and the recently mandated Physician Quality Reporting System. Physician Quality Reporting System reporting consists of selecting measures that match the practitioner's Medicare fee-for-service patients and identifying the services that the practitioner provides to those patients. It is a reporting program whereby health care professionals, including psychologists, submit data on specified quality measures to the Centers for Medicare and Medicaid Services. If the practitioner decides not to be a Medicare provider, he or she needs to determine what needs to be done to opt out of Medicare. It is important to consider that as the population lives longer, a larger percentage of potential patients will have Medicare as their primary insurance.

Medicaid coverage provided for a variety of populations, including the poverty level population, varies from state to state; the provider who is considering providing psychotherapy services as a Medicaid provider needs to understand the regulations related to the Medicaid program. Not all states provide Medicaid coverage for the adult population.

The choices to take insurance and serve on managed care panels involves billing regularly. A billing service is recommended because there are numerous requirements from most insurance carriers, some of which constantly evolve and change. Frequent and accurate submission of claims can help ensure adequate reimbursement of services rendered.

Policies and Procedures

One of the responsibilities of having an independent practice is to create, implement, evaluate, and revise your own policies and procedures (Pope & Vasquez, 2005). There are many examples of policies and procedures that reflect a multitude of values, approaches, and goals. Psychologists in independent practice should select their policies and procedures carefully. Some of these will be provided to the client in the written form as part of the process of informed consent.

Topics to be considered include the initial session, which is sometimes considered the first session of therapy; others consider that it is a consultation meeting to determine whether the psychologist and client might be a good match. Some psychologists do not charge a full fee for this initial session; others charge a higher fee because they are conducting a psychological assessment.

The length of one's typical session of individual, couple, group, or family therapy should be defined. If you are using insurance, you will need to provide a Current Procedural Terminology code, which includes a defined amount of time. Your rationale for the length of the session—whether it be 30, 45, 50, 55, or 60 min, or something else—should be thought out. When working in integrated care settings, psychologists can generally bill using health and behavior Current Procedural Terminology codes in 15-min intervals. Also, your theoretical orientation may help determine the firmness or flexibility of time boundaries at the beginning and end of sessions. Will you sometimes see clients two or more times a week, regularly, or for emergency sessions? Most psychologists see clients once a week for a period of time to assess the problem, develop a plan, implement the plan, and observe changes and improvements.

Setting your standard fee and deciding when to vary are other key policies. We recommend that you learn to be comfortable charging a fee that reflects your worth and your area's market. Your hourly rate encompasses your overhead business costs and the time you spend outside the therapy hour working on a client's case. Do you offer a "sliding scale" for those who are unable to pay your full fee? When do you collect your fees—at each session (beginning or end?), or do you send out bills on a weekly or monthly basis? You will also need to determine the forms of payment, including cash, personal checks, and credit cards. What is your policy on returned checks?

If you provide services to managed care clients, you will need to obtain their insurance information, and you will need to fill out the most recent insurance form or determine the correct billing procedure if you bill electronically. Will you or your staff person determine deductibles and copays, or will you make that the responsibility of your client/patient? If you do not accept third-party payments (insurance/managed care), you may provide a bill/statement to the client/patient that he or she can submit to the insurance for “out of network” reimbursement. How will you deal with clients not paying on time, or building up debt with you? Would you ever discontinue therapy because a client is not paying the bill? Would you ever consider using a collection agency? You will need to determine whether you will charge your full fee for missed sessions, and how long before the scheduled session you will allow for cancellations—for example, 24 hr.

You will also want to consider your policy about talking with clients between sessions. Some psychologists make themselves available to talk to clients between sessions by phone or e-mail. Others restrict such contact only in case of emergency. Determine whether you are available during evenings, weekends, and holidays. What kind of emergency coverage will you provide when you are away?

This and other relevant information should be communicated to the patient in written form, which the person reads and signs, but informed consent is an ongoing process. It involves the psychologist’s ability to communicate with each person so that the person understands who you are, including your qualifications, whether you are supervised, or whether you consult with colleagues. They should understand as much as possible the reason for meeting and the services you are offering, including the potential effects of the services. They should also be provided with information that may limit or affect the services (limited number of sessions determined by managed care), fee policies, limitations to privacy, confidentiality (e.g., mandatory reporting of child or elder abuse), Health Insurance Portability and Accountability Act of 1996 rights, and so forth.

Legal and Ethical Requirements

It is critical to be familiar with the APA Ethics Code (see Volume 5, Chapter 20, this handbook) and the state and federal laws and regulations that govern your practice. Most state licensing boards incorporate at least some of the APA Ethics Code as part of their practice laws. Most ethicists recommend that, when rules diverge, ascribe to the most stringent of the rules or standards. Ensuring your adherence to the standards of your profession is a critical aspect of conducting a highly effective practice. Specific aspects of an ethical practice include that one maintain appropriate record keeping; ensure clarity about privacy and confidentiality; keep appropriate boundaries with clients/patients; maintain competency in all of one’s work; ensure honesty in advertisement, media, and other presentations; and avoid harm to clients. Most if not all practitioners at times find themselves in a complex “ethical gray zone” of an ethical dilemma, and it is helpful to have a model of ethical decision making, including consultants, to help prevent, mitigate, or resolve problems.

Use of computers and other related technology requires careful consideration for privacy and confidentiality. Location of the technology in one’s office, passwords, encryption, and firewalls are all important considerations in that regard. If one considers conducting his or her own electronic claims submissions, he or she should be aware that different programs can take very different approaches to electronic billing, and this issue is a prominent one under the Health Insurance Portability and Accountability Act of 1996.

The advent of telecommunications, including social media, has introduced a number of challenges for the psychologist. One should be clear, for example, as to whether he or she will engage in social media interactions with clients. Most risk-management consultants would guard against that activity because doing so may constitute a nontherapeutic dual relationship. Use of telecommunications technology to provide services must incorporate two primary components to provide those services ethically. The psychologist must have knowledge and competence in the use of the telecommunication technologies being utilized and must ensure that the client/patient has a full understanding of the increased risks to loss of security and confidentiality when using telecommunication technologies. More and more clients prefer to communicate via e-mail and/or text.

Telepsychology guidelines were developed by a joint task force representing APA, the Association of State and Provincial Psychology Boards, and the APA Insurance Trust. The guidelines provide education and information to psychologists in their practice in applying current standards of professional practice in using telecommunication technologies in providing services (APA, 2013). Be aware that the practice of telepsychology involves consideration of legal requirements, ethical standards, telecommunication technologies, intra- and interagency policies, and other external constraints. It is the responsibility of the psychologist to balance the various considerations appropriately. APA's (2013) *Guidelines for the Practice of Telepsychology* were designed to assist psychologists in making those decisions.

A professional will is recommended in the case that one should die unexpectedly or become unable to provide services. Language in consent forms should allow transfer of patient information to another designated psychologist in such a situation. A professional will usually include the name; phone, cell, and fax numbers; and address of the person you designate to assume primary responsibility to notify your clients in the event of your sudden death or incapacitation. This person may be primarily responsible to notify your clients and to provide potential referrals for them. Information about the location of your office keys, security codes, and so forth should also be available. The location of your schedule (daily planner, office appointment book, computer, or cell phone schedule) should be described as well. A review of the professional will by an attorney who specializes in mental health law can be helpful, especially in light of state law.

Self-care is an important aspect of all professional life (see Volume 5, Chapter 14, this handbook), but self-neglect in independent practice can lead to depletion, discouragement, and burnout. Self-neglect can also lead to harm to clients, including disrespecting clients and the work; finally, it can lead to making more mistakes and losing interest in one's work. Self-care strategies that support, strengthen, deepen, replenish, and enliven should be attended to and monitored, as practitioners' needs may change over time, requiring the need for new strategies. Self-care is an ethical responsibility. The "Ethical Principles of Psychologists and Code of Conduct General Principle A: Beneficence and Nonmaleficence" (APA, 2010) include the aspiration that psychologists be aware of the possible effect of their own physical and mental health on their ability to help those with whom they work.

UNIQUE CONTRIBUTIONS

Several pioneers influenced the direction and evolution of independent practice. Nicolas Cummings, referred to earlier as one of the dirty dozen, was a leader who pressed for more lobbying for recognition and funding of psychologists in independent practice. The reference to "dirty" in their name underscored their willingness to engage in political activism and other activities considered unseemly to advance the interests of practicing psychologists. Although they were successful in advocating for the independent practice of psychology, some feel that they were misguided in repudiating the scientific part of the scientist–practitioner model (McNally, 2003). Fortunately, most practitioners recognize that evidence-based practice is a key foundation of current professional practice.

In fact, a significant set of contributions has indeed been the evidence-based nature of psychotherapy, including in independent practice. Numerous outstanding therapy outcome researchers have conducted thousands of studies to confirm the efficacy of psychotherapy (e.g., Barlow, 2004; Bernal, Jimenez-Chafey, & Domenech Rodríguez, 2009; Beutler, 2009; Lambert & Archer, 2006; Norcross, 2011; Wampold, 2010). The effects of psychotherapy are shown by hundreds of meta-analyses of thousands of outcome studies to be constant across most diagnostic conditions, with variations being more influenced by general severity than by particular diagnosis. Rigorous research studies have contributed significantly to the efficacy of psychotherapy and, in turn, to the legitimacy of psychologists in independent practice.

Psychology, especially counseling and community psychology, is not only the study of weakness and pathology but also the study of human strength and well-being, including the study of fulfillment, enjoyment, and productivity (Seligman, 1998; Walsh, 1999). The initial focus in psychology on personal weaknesses and pathology was guided by the medical model; those services were what got reimbursed, through the creation of the Veterans Administration, the emergence of third-party payments, and the establishment of the National Institute of Mental Health, which funded grants for research on mental illness. The shift in psychology's focus to what makes people's lives meaningful and satisfying is a unique contribution.

FUTURE OPPORTUNITIES

The health care field is constantly changing. Over the last decades, psychologists have experienced the insurgence of managed care, decline in reimbursement rates, the passage of the Patient Protection and Affordable Care Act (ACA) of 2010, continued integration of behavioral health with primary care, the recognition of the importance of cultural context in behavioral health care, and chronic disparities for racial/ethnic minority populations. Psychologists continue to seek prescription privileges and to engage in prevention as one of the major strategies for well-being. Each area of change brings its own tradeoffs and opportunities in the future.

The ACA provides a number of benefits, including increased access to mental health, but variations in health insurance, reimbursement rates, and availability of psychologists to serve on panels are challenges. The involvement in electronic health records for increased communication may be a significant change for independent practitioners, with its own set of benefits and risks. The opportunity to obtain prescription privileges in some states and territories has begun and is likely to continue. Multicultural competence is another area of opportunity.

The full impact of passage of the ACA is not yet fully understood, but there are some clear facts. A primary benefit of the ACA is that more Americans will be able to have access to adequate mental health care, one of 10 areas that insurance must cover. However, in some cases, authorization for services must still be obtained, and the insured does not have access to unlimited treatment. An advantage of the ACA is that patients cannot be denied coverage if there is a preexisting condition. Therefore, theoretically, all can have access to care regardless of previous conditions and treatments.

There are numerous provisions of the ACA. Because individuals choose among a number of managed care companies, the services they access are still dependent on the psychologist's willingness to serve on the insurance managed care panels. Whereas some psychologists choose not to serve on any panels, others serve on many, and still others carefully select among them, based partly on reimbursement rates and schedules. It is up to the individual psychologist to keep abreast of various aspects of the ACA within his or her state (Grohol, 2013) and to communicate to potential clients whether he or she is part of the client's insurance network.

Another future issue will be to attend to electronic health records, which are considered to improve coordination of care but may change independent practice in some ways. The more general term, health information technology (HIT) is envisioned to improve the practice of medicine and make it more efficient. However, HIT systems are not yet interconnected or interoperable; modern HIT systems are not yet widely adopted, and they are not used effectively (DeLeon, 2014). Electronic health records may help psychology fit in with the health care system in which psychologists will increasingly work alongside physicians. The trend toward electronic records will compel independent practitioners to reconsider the ways they communicate with other professionals and keep notes. The challenge will be to balance provision of useful content while ensuring that the data are secure and that access to records is carefully monitored.

The recognition that mind and body are integral, related systems, and that at least half of the care provided for common psychological disorders is delivered in primary-care settings has resulted in the evolution of integrated health care. Inclusion of psychologists on health teams in medical settings increases patient and provider satisfaction. Psychological interventions tend to decrease medical utilizations. Integrated health care is an evolving model in which many psychologists work and in which more psychologists in independent practice may engage.

The evolving information about the mind and body connection also leads to opportunities for psychologists to engage in prevention. Behavioral risks—such as drinking, smoking, and obesity—lead to health disorders. Psychologists have the knowledge and ability to not only address public policy but to address environmental risk factors, advance wellness, and design programs for patient empowerment in managing those issues. Learning how to design and provide prevention interventions is another up and coming opportunity for psychologists. For example, it is known that intense anger is linked to increased risk of heart attack (Buckley et al., 2015). Potential preventive strategies may be anger management to reduce anger, and stress reduction to minimize such unhealthy intense reactions.

In some states and territories (New Mexico, Louisiana, Illinois, Guam), psychologists have prescription privileges. Prescribing psychologists acquire intensive training regarding psychological disorders and psychotropic medications; they use a biopsychosocial model of care. There is a dearth of psychiatrists—their numbers continue to diminish—and psychologists are the logical professionals to fill these gaps in care, especially in underserved areas in the country. More and more states will be likely to approve prescribing psychologists.

Another area of opportunity involves developing multicultural competence. Disparities in providing behavioral health are a critical concern for ethnic minority communities. The lack of attention to the needs of racial and ethnic minorities and the inadequate provision of cultural and linguistically appropriate services demonstrate a clear need for collaboration and finding ways to close the care gap. Partnerships among physicians, psychologists, educators, community leaders, government agencies, and families will help to increase evidence-based treatment, early intervention, and prevention and will also help to ultimately close the disparity gap. Psychologists in independent practice have more opportunities than ever before to obtain training to become multiculturally competent. Multicultural experts acknowledge that multicultural competence is an ongoing endeavor; most competency areas in psychotherapy require lifelong learning.

Although organizational coaching and forensic psychology have been areas of specialization for a couple of decades, many believe that these areas will continue to expand among independent practitioners. Organizational coaching is an evolving area that some counseling and clinical psychologists have moved into. Industrial and organizational psychologists also do work in this area, which involves coaching executives or their subordinates of corporations and/or organizations. Skills involve understanding individual behavior, the organizational setting in which the person works, and the expectations and demands that they place on managers and leaders. Working in this area requires knowledge and expertise such as assessment, measurement and evaluation, change management, adult learning and development, leadership development, performance management, organizational behavior, and team dynamics (Society for Industrial and Organizational Psychology, 2015). Some independent practitioners have gained credentials and expertise to provide these services.

Forensic practice involves the understanding of fundamental legal principles, especially in regard to how those intersect with psychological assessments for the purpose of providing expert witness reports and testimony. Some psychologists specialize in criminal area of the law (competence to stand trial, determination of insanity) or civil law (custody evaluations, workplace discrimination, immigration evaluations, etc.). Specialty training is required, and ongoing consultation is often advised in providing forensic psychological services (see Chapter 14, this volume).

Independent practice is the most popular practice settings among licensed psychologists. Approximately half of all licensed psychologists are employed in that setting. Those who work with populations that they most enjoy and are best at treating, as well as what the market needs, tend to be successful. Adapting to changes in the market will help prevent burn out. Mission and value statements will evolve; the use of consultants in accounting and mental health law can provide helpful information. Lifelong learning, including the development of new talents both in business and practice areas, will be important. Marketing oneself in a way that is reasonable for you—whether it be giving talks, meeting with potential referral sources, developing and maintaining a website—is important. Conducting an independent practice can prove a lucrative and satisfying career in psychology.

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CHAPTER 25

GENERAL HOSPITALS

Linda Maria Garcia-Shelton

In much of the developed world, hospitals are the second and final tier of care, with the majority of medical care taking place in community-based ambulatory settings. The involvement of psychologists in hospital practice varies across nations, but where it exists, their activities are remarkably similar. The organization of national health care systems and payment for health care also vary greatly across nations, and those differences likely influence the activities of psychologists in those hospitals.

In this chapter, I review the definition of general hospitals, summarize the extant data on the number of psychologists working there, and outline the different professional activities of psychologists in those settings. The chapter concludes by identifying the unique contributions of the hospital setting and by anticipating future opportunities there for clinical psychologists.

DEFINITION AND PREVALENCE

As used in this chapter, the term *general hospital* means a hospital that treats many different kinds of health difficulties. A general hospital might be limited to people of a particular age (e.g., children), but it is not limited to a particular problem or condition (e.g., mental health, tuberculosis, substance abuse). A general hospital often provides outpatient services in a variety of settings beyond the emergency department—perhaps it has a family medicine clinic, a prenatal clinic, or some other specialty outpatient clinic within the hospital facility itself or in some other location affiliated with the hospital.

Above all, a general hospital can look different in different communities, because it is organized to serve the needs of those in their immediate area—although immediate is an elastic term. Immediate area for a general hospital on Chicago's South Side may mean a catchment area of 15–20 square blocks, whereas a general hospital in northwest Montana may have a catchment area of 1,000–1,500 square miles. Similarly, the breadth of human diversity in the United States is great and is growing. General hospitals must, and do, respond to this change because they are part of the community they serve and hence change also.

Community hospitals, defined as all short-term general and special hospitals in the United States (excluding psychiatric, tuberculosis, alcohol and chemical dependency hospitals), numbered approximately 4,999 in 2012, which is about 63,000 inhabitants per community hospital. Community hospitals represent about 87.5% of all U.S. hospitals and provide the majority of inpatient care (American Hospital Association, 2015).

The Organization for Economic Co-Operation and Development (OECD; 2015) reported that the United States had 4,577 general hospitals with 14.58 hospitals per million inhabitants. These hospitals were described as general acute care hospitals, nonspecialized community hospitals, military and Veterans Affairs (VA) hospitals, and teaching hospitals, without regard to whether they are public or private, nonprofit or for-profit. Although these

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figures are a bit lower than estimates of the number of general hospitals in the United States provided by the American Hospital Association (2015), the differences are likely due to differences in what to count and how to count it.

The number of hospitals in an OECD nation ranges from 8 to 8,605 (*Mdn* = 275), with the number of hospitals per million inhabitants ranging from 11.2 to 67.33 (*Mdn* = 25.08). When looking at the number of hospital beds in OECD nations, the variability is just as great: The number of beds per 1,000 inhabitants ranges from 1.59 to 13.4 (*Mdn* = 4.75). These figures provide an estimate of the potential for employment that psychologists might find in general hospitals in their country.

However, there is little correlation between the health of people in a nation, the amount of health care provided in a nation, and the number of hospital beds in a nation. For example, the number of general hospital beds in the United States per 1,000 inhabitants is 3.05, and the life expectancy from birth is 79 years. Spain has about the same number of beds per 1,000 inhabitants, but the life expectancy of a Spaniard from birth is 82 years. Canada, Chile, Ireland, and New Zealand all have a smaller number of beds per 1,000 inhabitants than the United States, and they all have a longer life expectancy from birth (from 80 to 82 years). We know that more is not necessarily better when talking about health care, but the interventions psychologists can provide in hospitals and their associated ambulatory clinics can improve health and, hence, improve the balance between cost and health outcomes.

Periodic surveys of psychologists belonging to American Psychological Association (APA) Divisions 12, 17, and 29 (Society of Clinical Psychology, Society of Counseling Psychology, and Society for the Advancement of Psychotherapy, respectively) estimate that about 3,000–3,500 psychologists work either full-time or part-time in general hospitals (e.g., Norcross & Karpiak, 2012; Norcross & Rogan, 2013). An additional 4,000–5,000 psychologists work in VA hospitals (which are considered general hospitals). This estimate suggests that 7,000–8,500 psychologists work either full-time or part-time in general hospitals.

HISTORICAL PROFILE

The role psychology could play in general hospitals is described as early as 1930 in the professional literature:

> Wise hospital administration does not seek to soothe a patient who has been thrown by an improper environment into a wretched, unhappy, and perhaps resentful state of mind, a condition which tends to lessen the efficiency of normal therapeutic measures, but from the moment of its first contact with the patient it sets about winning his confidence, contributing to his comfort, and supplying interests to which his mind reacts in so favorable a manner that he becomes the willing, optimistic and helpful ally of the doctor and nurse, and not their peevish antagonist or unwilling victim. (Goldwater, 1930, p. 52)

Although he does not mention a psychologist, Goldwater (1930) also said that the "principal psychological states with which the hospital administrator is concerned are (1) fear, anxiety, distrust, (2) worry, (3) ennui and loneliness, (4) depression, (5) shame, (6) disgust and (7) irritation" (p. 50). Goldwater clearly acknowledged the central role of psychology in recovering from ill health well before psychologists were clinical providers in any appreciable numbers, which came after World War II (Sarason, 1981).

During the early years of U.S. involvement in World War II, a few psychologists were selected to see whether they could contribute to the work of the neuropsychiatric sections of U.S. Army general hospitals (Layman, 1943). Initially they were left to discover on their own how they might benefit the unit. Later reports indicated that they commonly administered psychological tests, and on the basis of the results, they provided assessments of soldier competence to perform assigned duties. They also commonly carried out assigned administrative tasks typical of any commissioned officer of their rank (Seidenfeld, 1944). Other duties were more varied and were related to the specific needs of their posting. During this time, six commissioned psychologists were serving in this manner, out of an estimated total of 138 psychologists that were serving in the military.

It is generally acknowledged that in the United States, "modern clinical psychology was a direct outgrowth of World War II" (Sarason, 1981, p. 828). Following the war, the Veterans Administration (subsequently supplanted by the U.S. Department of Veterans Affairs [VA]; see Chapter 23, this volume) located their facilities near existing medical centers that included all the major medical specialties of the day. Those centers became the location for training new clinical psychologists with funding support from the VA. Clinical psychology hospital practice, as well as training, was for many years largely linked to psychiatry in both the United States and in Canada, despite the presence of other medical specialists working in the same facility (Jones & Levine, 1963; Sigal, 1967).

EVOLUTION OF ACTIVITIES

As clinical psychology matured, psychologists working in general hospitals expanded their applications and contributions, including collaboration with psychiatry but certainly not limited to it: "Problems of human behavior and adaptation need not be perceived within the realm of mental health or lack thereof" (Goodman, 1967, p. 6). Behavioral science consultation emerged on many services within hospitals. In 1967, the National Institute of Child Health and Development funded a series of four conferences over the following 3 years that focused on behavioral science in medical education.

At the conclusion of the series of conferences, the Association for the Behavioral Sciences and Medical Education (ABSAME) was established (Baldwin, 2008). ABSAME continues to serve its founding purposes, has liaison relationships with the Association of Medical School Professors of Psychology, and is a member of the Council of Academic Societies of the Association of American Medical Colleges. Psychologists have been active in ABSAME since its beginning, advocating for a broad role for the behavioral sciences at all levels of medical education, as consultants to all specialties in medicine and in both inpatient and outpatient settings.

During that same period, there was evidence that psychologists were becoming integrated into clinical and administrative posts in general hospitals. In the mid-1960s, the chief psychologists at eight Canadian university affiliated hospitals were located in a variety of administrative structures, ranging from three with the chief psychologist reporting directly to the hospital director, two with the chief psychologist structurally in a department of psychiatry but with only a loose administrative affiliation to psychiatry, and three fully responsible to the chief of psychiatry (Wright & Knights, 1967). Reasons for the increasing level of independence of psychologists in general hospitals were closely related to new roles they played within their institutions in research, education, and service. Research skills of psychologists were sought by many medical units in the hospital, and psychologists' clinical skills were valued by departments beyond psychiatry. Limiting the service potential of psychologists to only "psychiatry was considered both unjustified and unwise" (Wright & Knights, 1967, p. 225).

Hospital psychological consultation and service on medical units and in hospital-managed outpatient clinics continued to expand throughout the 1970s in the United States. Services provided by psychologists varied according to the needs of the specific organization, although they continued to include consultation, research, student and staff education, clinical supervision, and direct service to a wide range of clinical units (DeGood, 1979; Dörken, Webb, & Zaro, 1982; Gabinet & Friedson, 1980; Hollon, 1972). Because of the broad range of services psychologists were able to provide in hospital settings, psychology specialties other than clinical were present—quite specifically psychologists working in areas of research, systems consultation, and health professions education. Limitations of classic individual psychotherapy in a hospital setting were identified quite early, and alternative interventions were used. Among the most promising roles described for psychologists were group therapies with patients, and provision of instruction to a broad range of hospital staff members about the ways they might provide support, encouragement, and comfort to patients as they went about their regular duties. Examples of the sorts of staff workers who could be trained in these skills, and supervised as they use these new supportive skills, were nursing aides, dietary staff who distributed meals, and nearly any support staff member who repeatedly came in contact with patients in the hospital (Gendlin, 1968).

Outside North America, psychologists were also focusing on opportunities offered in general hospitals. New Zealand psychologists were urged to consider opportunities in general hospitals that focused beyond mental health problems (Bradshaw, 1975). A 1988 survey of general hospitals in Australia revealed that psychologists were most commonly working with patients in neurology (50% of reporting hospitals), with 21%–38% of general hospitals reporting that psychologists provided service for patients on the psychosomatic medicine service, pediatric patients, patients with substance abuse problems, patients who needed pain control, as well as patients who were terminally ill (Groth-Marnat, 1988). When the Australian government began in the mid-2000s to take more control of the entire health care system, including hospital practice of psychologists, the changes were seen by psychologists as both a threat and an opportunity. The Australian government planned to group hospitals into local networks that would receive funds to deliver specific health services and to manage their budget so as to pay for the services. Psychologists quickly identified the need to be included in the newly forming hospital systems to provide services and to be appropriately compensated for those services (Martin, 2011).

In Italy, Pavan (1975) described the psychological needs of patients in Italian general hospitals and argued for a more integrated approach to treating the whole person. A decade later, varieties of physical problems were being treated in-hospital in Italian medical units by behavioral health experts housed not in the psychiatric service but in an independent service named the Behavioral Medicine Centre (Goldwurm, Rovetto, & Sardo, 1986). However, all of the Italian authors cited in the literature as supporting this early integrated approach within Italian general hospitals were psychiatrists, even though one of them was faculty in the department of psychology at a state university. It was not until the mid-1990s that it was possible for psychologists in Italy to work within general hospitals, with Niguarda Hospital in Milano being among the first.

Concurrent with the increased presence of psychologists in medical settings was a profound shift in thinking about the nature of health, disease, illness, and the human experience of them. These changes influenced all professions and institutions concerned with health and welfare, including the world of the hospital. Solomon and Moos's (1964) groundbreaking conception of psychoimmunology, the interaction of the mind and immune system, directly challenged existing Cartesian notions of the separation of the mind from the body. Anthropologists suggested that *disease* is the biological part of ill-health—the outcome of infection, tissue damage due to injury, chronic behaviors, or other pathogenic processes. However, *illness* was the person's experience of the disease, a subjective encounter that others can only come to know through the direct messages of patients; laboratory results, radiographic tests, and other objective tools cannot provide information about illness that is independent of active interpretation by the patient (Barondess, 1979). A person can be ill—namely, take on all the roles and experiences of a sick person—without having any disease, and a person can have a disease without being ill. These experiences do not necessarily go together, but they certainly both cause disability and pain. Both illness and sickness deserve to be treated. People show up in physician's offices and in hospital emergency rooms with either or both of these experiences.

Engel (1977) took these ideas further with his bio-psycho-social model. In addition to considering the ways the body and the mind interacted and contributed to the experience of health or ill-health, Engle expanded his model to include the contribution of social factors. Much like the "improper environment" that Goldwater (1930) described in the opening section of this chapter, the social factors that Engle placed in his model broadened the conception of the formation and maintenance of health and illness.

Expanding notions of the possible causes of ill health were a contributing factor to the expansion of the numbers of psychologists in general hospitals (Mickel, 1982). On the basis of data collected by the APA in 1978–1979, 2,067 psychologists (9.6% of all psychologists reporting) worked full-time in hospitals (Stapp & Fulcher, 1981). Of those working full-time in hospitals, about 10% were employed in public general hospitals, 12% were employed in private general hospitals, 33% were employed in public mental or psychiatric hospitals, 11% were employed in private mental hospitals, and 32% were employed in Veterans Administration hospitals. More than half of the psychologists working full-time in hospitals did not work in mental or psychiatric specialty hospitals. Psychologists were found in general hospital units treating patients with medical problems (e.g., chronic pain, cancer, serious injuries, pulmonary or cardio problems) in addition to patients with primarily mental disorders. Their responsibilities included psychological testing, diagnostic interviewing, providing various therapies, and consultation with staff on a variety of patient problems as well as hospital system issues.

A 1982 survey including 204 Canadian general hospitals reported that 54% of them employed psychologists in the hospital (Arnett et al., 1987). Subsequent surveys in 1999 and 2011 reported continued increases, with 88% of the hospitals responding to this item in the 2011 survey reporting that they employed psychologists (Owens et al., 2013).

The Clinical Psychology Services Program in Ponce, Puerto Rico, began in 2002 consequent to an agreement between the Ponce School Medicine and Health Sciences and the Dumas Hospital (a general hospital). This program provides in-hospital psychological services to patients referred by physicians of any specialty for screening and other consultations as well as needed psychological treatment in-hospital and referral to psychological services in the community posthospital. Up to 2010, about 13,580 inpatient visits were made by psychologists to a variety of Dumas Hospital clinical units. The majority of psychological services provided resulted from referrals from coronary care, intensive care, and cardiovascular surgery. Other clinical units requesting psychology services included the emergency department, internal medicine, the specialty diabetes unit, as well as the skilled nursing unit. In addition to providing direct patient care, the Clinical Psychology Services Program provides in-service workshops to hospital staff (Jiménez et al., 2013).

Although numbers of psychologists around the world have increased dramatically, education and practice patterns vary significantly across nations and are closely related to the culture and resources of the country. Four major international associations supporting cross-national research and education projects are important in providing a forum for the exchange of ideas and practices within the field: the International Association of Applied Psychology, the International Council of Psychologists, the International Union of Psychological Science, and the International Psychology division of the APA (Division 52). In addition, there are more than 250 regional psychological organizations and international specialty psychological organizations (Stevens & Wedding, 2004).

Difficulties in psychologists obtaining full medical staff membership have been a possible restraining factor in the growth of psychology services in general hospitals. In 1974, the Joint Commission on Accreditation of Hospitals (JCAH)—now called The Joint Commission—began issuing citations to hospitals for allowing their medical staff to include psychologists. The number of psychologists in teaching hospitals reporting full membership on the medical staff began to fall (Hong et al., 2012; Matarazzo, Lubin, & Nathan, 1978). This action by JCAH could not go unchallenged (Zaro et al., 1982), as the medical staff is responsible for the organization, management, and oversight of the services provided by its members and by collateral health care professionals. To have psychologists providing clinical services under the direction of physicians with little or no knowledge of the field created an untenable ethical problem.

APA began a concerted and prolonged effort to gain a voice in the policy-making body of JCAH. A change in rules in 1985 resulted in creating a less restrictive medical staff designation in hospitals (Enright et al., 1993), and by the beginning of the 1990s, about 42% of psychologists employed full-time in general hospitals were either full (8%) or associate (34%) members of the medical staff, with another 15% reporting status as a special member of the medical staff. Psychologists with full staff membership rated their satisfaction much higher than did those with associate member status, special member status, or no status (Litwin, Boswell, & Kraft, 1991), and they were arguably in better position to respond fully to the needs of their patients.

In 1978, California was the first state to enact legislation prohibiting hospitals from denying admitting privileges to psychologists (Enright et al., 1993). This law was challenged in court by organized psychiatry, and in 1990 the California Supreme Court upheld the statute. At the time of this California Supreme Court decision, seven states and the District of Columbia had enacted similar legislation. However, nearly half of the states prohibited hospital admitting privileges for psychologists, and the balance did not address the issue at all (Enright et al., 1993).

In Canada, less than 3% of the hospitals allowed full membership of psychologists on the medical staff in 1982.

The number of full-time doctoral psychologists working in Canadian hospitals increased by 1999, as did the number of hospitals with independent psychology departments (Humbke et al., 2004). By 2011, there was yet another increase in full-time psychologists working in Canadian hospitals, but no increase in the portion of psychologists with full staff membership (Owens et al., 2013). Hospital practice opportunities for psychologists were growing in Canada, but membership on hospital medical staffs did not keep pace.

PRESENT STATUS

Many general hospitals continue to have psychologists on staff for the purpose of research, education, and practice that occur in collaboration with other health professionals. Each of these activities enhances positive outcomes accruing to all collaborators: Patients receive improved service, health professions students can learn in settings with professionals from other disciplines, and research on better ways to improve health and to reduce the burden of disease yields information that changes practice (Jiménez et al., 2013).

Not surprisingly, medical staff structures of many hospitals have changed. Psychologists in some medical centers have full membership on the medical staff with all its rights, obligations, and privileges; have appropriate credentialing to match education and clinical experience; and have a department of psychology that functions much like all other clinical departments in the medical center (Eckleberry-Hunt et al., 2009).

Psychologists working in general hospitals throughout the United States can be found consulting and treating people with nearly all of the problems that bring people to hospitals for care. The services typically offered by psychologists in a general hospital include assessment, treatment, research, and education of health professions trainees. Reports of Canadian hospital practice are similar to those of U.S. psychologists with respect to clinical problems treated and interventions administered (Humbke et al., 2004; Owens et al., 2013). The 10 most common problems a psychology consultation/liaison service encountered at one large teaching hospital were

> amputations, heart failure, chest pain, liver disease (not cirrhosis), wound debridement, diabetes in patients age 17 years or older, ante partum complications, and suicidal gesture or attempt in the form of intentional overdose with comorbidities, or intentional overdose without comorbidities. (Lechner & Stucky, 2000, p. 143)

Psychologists perform these activities in multiple departments; for example, psychologists can be found working in emergency rooms, internal medicine, surgical units, anesthesiology, obstetrics, pediatrics, chronic pain, rehabilitation, and radiology departments, among others. Often psychologists are housed in a consultation/liaison unit that responds to requests for assistance. Just as often, psychologists might be primarily assigned to a specific clinical unit for most of their work, whether directly with patients or in response to a consultation-only request from the medical staff. In all cases, whether provided directly to a patient or to the hospital system itself, services are ideally based on research evidence of effective interventions.

Consider as an example of what a psychologist in a general hospital assigned to a pediatric unit might do in working with children who are in the hospital for multiple, and at times quite painful, procedures. The psychologist helps the child understand what is happening, why it is happening, and how the child can help him- or herself to endure the experience. They may teach the child a variety of relaxation techniques (e.g., hypnosis, guided imaging, muscle relaxation), help them practice the techniques in advance of the procedure(s), and be with them as they undergo the procedure(s). Concurrently, they will often work with the child's parents to help them understand what is happening to their child, understand the support and care the child is receiving, and cope with what is often experienced as a terrible nightmare. The psychologist does not replace the physician's role in communicating with the parents, but he or she serves to facilitate direct parental communication with the physician.

A psychologist on the consultation/liaison service might be called to the radiology suite to help a patient in a full panic who was scheduled for magnetic resonance imaging an hour ago but has been unable, despite many tries, to actually get inside the machine. The machine has been out of service this entire time; other patients with appointments following this patient are lined up in waiting room, gowned and ready, wondering what is going on; and the radiology manager is concerned that this incredibly expensive machine is not contributing to the reduction of the great debt incurred at its recent purchase.

The psychologist assigned to labor and delivery may be asked to communicate with a woman who does not speak English, has been in the labor suite for 2 days with no family present, and who the staff believes knows that her unborn baby is dead; however, she will not agree to have the pregnancy terminated. With each day, the mother is at increasing risk of infection, and the physician has talked with the hospital ethicist about sedating her and terminating the pregnancy against her wishes. Both ask that the psychologist try to "make her understand" that she cannot keep this dead baby in her womb any longer.

The requests for help are as broad as the human experience of pain and fear. They are many, and often come with little forewarning. The psychologist learns to wear comfortable shoes that allow for fast movement and to quickly soothe him- or herself before entering a space where action is required.

Whether hospitals have or do not have psychologists on staff, they may have psychologists in the community with some level of staff membership and privileges that allow them to respond to consultation requests of the medical staff or to visit an existing outpatient of theirs who is in-hospital for some medical reason. They may be invited to provide an in-service training program for the medical staff, the health professions students training in the hospital, or for other hospital workers. These community psychologists may also offer some hospital- sponsored educational programs (e.g., a couples group with one member living with chronic obstructive pulmonary disease, a section of a group education program for newly diagnosed diabetics) on a regular or an invited basis. There are many ways psychologists can serve the health needs of the community, whether they are a formal member of the local hospital medical staff or they interact with the health care system in the community in ways that meet the needs of all.

Many direct services provided by clinical psychologists in the hospital (e.g., assessments, psychotherapy, patient consultation) can be billed by hospitals and/or psychologists to health insurers, but there remain questions of how to pay for nondirect services. Nonbillable services can fall into a number of categories; for example, costs related to providing continuing medical education presentations to the medical staff are not billable to third party payers. Yet another increasingly common situation where fees cannot be billed for discrete interventions is the provision of essential professional service that is part of a complex treatment for which payment is fixed according to the diagnosis and patient co-occurring health-related variables; payment is not made for a specific type or amount of service provided. Payment by diagnostic-related groups falls into this category.

Increasingly, the total health care needs (including in-hospital care) of a large and defined group of people provided by a specific large health care organization may be compensated via prospective payment systems that identify a fixed financial payment for an entire specific group of people covered by the contract. It is then the responsibility of the health care organization to decide what is needed and how best to provide it, and it is the responsibility of the payer to define outcome measures to judge the quality of care provided. The work of a psychologist, or any other professional provider, is not billed or paid for via units of care provided. Health maintenance organizations in the United States have functioned in this manner for many years (e.g., Kaiser Permanente, Group Health Cooperative of Puget Sound), and many OECD member nations have a health care system that covers their entire population (universal coverage), is paid for centrally, and provides care for the full spectrum of health needs (including necessary in-hospital care). Providers, including psychologists, working in these systems are not paid on a fee-for-service system but rather are on staff and are paid a salary.

As the U.S. population has become increasingly diverse in culture, ethnicity, race, and language, all health care providers must augment their knowledge of the ways that this diversity can affect their understanding of a patient's presenting problem, the resources available to the patient and family to address the problem, and potential complications posttreatment resulting from cultural diversity. Continuing medical education presentations on diversity issues are a frequent request, often following a specific situation in the hospital that resulted in perceptions of negative consequences. Health beliefs and practices of the Hmong in California's Central Valley, the Mexican immigrants from Chihuahua in the Pilsen neighborhood of Chicago, or the Haitian immigrants in Miami are specific to these groups and most definitely influence their interactions with medical care providers. Even in rural America, internationally trained physicians are found on general hospital staffs, and their presence, and need for an introduction to the U.S. culture, is a splendid opportunity to introduce to all members of the medical staff information about diversity and the ways health care professionals can be prepared to respond.

Another common service provided by staff psychologists, systems consultation, is not billable to third-party payers. Perhaps an oncology unit recently experienced a number of requests from highly trained nurses to transfer to other units, or a higher than usual rate of resignation from the institution. Perhaps the risk-management director has had an unusually high number of patient complaints about medical staff in the coronary care unit. Or perhaps the emergency department had to completely shut down for a full day because a highly infectious child later diagnosed with measles was in the waiting room for nearly 90 minutes before being taken back for treatment. Each of these situations requires sensitive and focused inquiry, the ability to abstain from judgment or premature closure, a familiarity with most work units in the hospital and respect for the people assigned to them, as well as a position that is perceived as unaligned with the traditional power hierarchy within the institution. Not all psychologists will be suited for or skilled at this sort of work, but certainly some are, and they are called on to help the institution with these sorts of systemic problems.

With a growing database of evidence-based treatments, the hospital psychologist can select from a variety of interventions to prevent, reduce, and avoid negative health outcomes. For example, research literature shows that men who are post myocardial infarct or post unstable angina and who score high on hostility are at increased risk for a recurrence of their crisis. A group intervention was developed that proved effective in reducing hostility levels and reducing subsequent medical costs (Davidson et al., 2007).

There are many opportunities for psychologists to participate in improving hospital outcomes using evidence-based treatments in situations where behavioral issues are directly related to poor physical outcomes. For instance, it is well documented that patients with cardiovascular disease as well as patients with diabetes who have poor preoperative glycemic control are at higher risk for postoperative morbidity following surgery. Identifying an intervention for patients with diabetes that reduces risk for postsurgical problems would be welcome. Successful interventions are those that are specific to the cause(s) underlying the risk, that result in measurably improved physical and psychological outcomes on the part of the patient, and that contribute to reducing the total cost of care for the specific problem.

A systematic review of 1,297 patients in 20 different studies on postsurgical outcomes following the use of four different mind–body-based treatments before surgery revealed mixed results. Patients taught how to use guided imagery showed strong evidence for increased psychological well-being after surgery as well as moderate evidence indicative of less analgesic use. Patients taught relaxation showed some support for increased psychological well-being after surgery but no evidence for reduced analgesic use—a similar outcome to patients taught self hypnotic techniques (Nelson et al., 2013). Outcome research studies conducted in hospital are frequently published in both U.S. journals as well as international psychology journals, including the *Journal of Behavioral Medicine*; the *Journal of Clinical Psychology in Medical Settings*; *Professional Psychology: Research and Practice*; and others. Outcome research studies are also found in a variety of medical journals by using Medline or a similar medical literature search engine.

Many hospitals will also be interested in cost-benefit studies of particular treatments. Does an efficacious treatment reduce the overall costs in caring for the health needs of the patient over a longer time frame than simply their hospitalization and immediate postsurgical period? In addition to cost-benefit studies, other approaches used to answer the question of whether a treatment is worth offering are cost-effectiveness studies, cost-utility studies, and cost-offset studies (Kaplan & Groessl, 2002). Hospital psychologists will find it essential to know effective treatments for the problems regularly referred to them as well their associated costs.

Psychologists bring more than clinical knowledge and skill to a general hospital. Research skills that are a central part of psychology education can contribute to studies on any number of questions that the institution might have about the ways its routine procedures relate to patient care outcomes and to the bottom-line financial standing of the institution. The psychologist can be a consultant to the service line leaders (Chief of the Medical Staff, Director of Nursing, Director of Allied Health Staff, etc.) as they sort out what might be underneath a particular problem or the possibilities for resolving an apparent conflict.

UNIQUE CONTRIBUTIONS

The management of hospitals long ago shifted from the medical staff to business executives, and the payment for health services has migrated into the hands of third-party commercial payers (Ludwigsen & Enright, 1988). The ecology of the hospital world for psychology has become increasingly complex and inhabited by many parties with differing perspectives on how to best respond to the needs of patients and how to fund the effort.

Many clinical psychologists began clinical careers and subsequently moved to various administrative roles in hospitals or to various insurance-based payer groups who provide some form of health insurance to the public (see Volume 3, Chapter 29, this handbook), making unique contributions to the work of general hospitals. Sometimes the move from clinical work into administration was consciously planned and formally pursued. Sometimes it occurred with little conscious intent as a series of sequential steps that each made sense and that were consistent with past training and experience but with no specific end-goal. The personal story of a psychologist who made the transition from clinician to health care administrator serves as an example of one way clinical psychologists can apply psychological principles in the service of improving health care. At its core, the function of clinical psychology is to improve the health of the population. Taking on administrative functions is one more way to achieve this goal.

Steven Johnson is President and Chief Executive Officer of Health First Health Plans, located in Rockledge, Florida. He is responsible for the overall direction of the corporation that includes leadership for four hospitals with a full range of specialty intensive services, many outpatient diagnostic and treatment centers, a large multispecialty physician practice, a network of fitness and wellness services, and a health insurance plan with more than 60,000 covered lives. Early in life Johnson was fascinated by his own learning opportunities and then by how people learned. After an undergraduate degree in psychology from the University of Puget Sound, he entered the child clinical program at the University of Kansas where he earned his doctorate in psychology. There he studied under behaviorists, gaining knowledge and respect for the power of operant conditioning to shape behavior.

Johnson's first job out of university was at a residential facility for 60 people with profound intellectual disability and many serious behavioral problems, including self-injurious behaviors. He recounted experiences there that he credits with teaching him that quality patient care goes well beyond the professional staff, including all staff having any interaction with patients. Well-designed and effective treatments can be accidentally undermined by support staff with no knowledge of how or why specific procedures are used. It was immediately clear to him that non-professional support staff needed training so as to support, rather than undermine, the work of the professional staff. However, that particular public institution did not recognize the importance of thinking of the entire staff, both professional and support, as part of the treatment team.

Additionally, Johnson learned during those early years that the appearance of the site, not just how the physical plant looked to the visiting public (largely family members of the patients) but also how the interventions looked to them, was an important part of conveying how successful the site was at providing appropriate and effective treatments. Families who interpreted the effective individualized treatments as nothing more than treating their loved one as a rat in an experimental study were distressed, notwithstanding the knowledge of improvements in behavioral outcomes that they observed. Therefore, another group needed to be brought in to the team to help the family understand, support, and possibly administer some of the interventions that successfully altered the troubling and dangerous behavior of their loved ones.

Johnson recounted a number of moves over the next 30 plus years through both for-profit and not-for-profit health care organizations, each time using what he had learned from past experiences and facing challenges that required him to learn new information and to gain new skills. He credits mentors in those organizations and learning opportunities that each position offered for his continuing advancement in health care organization management. He continues in his work to attend to both intentional and accidental reward structures that lead to change, whether for good or for ill, as well as to a great many other critical issues facing a large health care system. He believes that well-organized systems create intentional change that leads to improvement, and collaterally also identify and make use of unintentional change to better understand shifting variables that affect outcomes. Johnson remains a true psychologist in addition to all the other professional roles he has taken on during his successful career.

FUTURE DIRECTIONS

The future for psychologists working in hospitals holds many opportunities, all of which require active learning and reconceptualization of what we can do and the ways that our knowledge and skill sets can be used in hospital settings.

The Patient Protection and Affordable Care Act of 2010 will have wide-ranging influence on the future of psychology practice in all areas, and especially in general hospitals. Three of the main foci of the Patient Protection and Affordable Care Act are the prevention of health problems, the provision of quality care, and universal access to care. It is expected that health care will be coordinated across the spectrum from primary prevention of disease through tertiary care. It is also expected that outcomes of interventions will be measured and that care will continuously improve as a result of identifying what works best for various people and their unique biology and social/cultural resources. As we move toward this still-distant system, accountable care organizations will likely take on responsibility for providing comprehensive care (including in-hospital care) to a specific population for a specific lump payment and be accountable for health outcomes for the entire group (Fisher & Shortell, 2010).

This may open more opportunity for psychologists to work in general hospitals.

One critical area for the future lies in diversity in health care. With the United States continuing to diversify in many ways, clinical psychologists must use their knowledge of diversity to benefit their patients. They will be aware of continuing research about the many ways diversity affects the way people feel about themselves, experience and interpret their local world, and respond to problems facing them. Any problem that affects personal health has the potential to require response by psychologists based in general hospitals, and the more that the health care provider system is integrated into large organized accountable care organizations, the more likely it is that more psychologists will be associated with general hospitals.

The Pew Research Center (2008) reported that by 2050, nearly 19% of all Americans will be considered immigrants, compared to 2005 when only 12% were immigrants. By 2050, 47% of Americans will be non-Hispanic Whites, and there will be 72 elderly or child dependents for every 100 adults of working age, as opposed to 50 dependents per 100 working age adults in 2005. These changes require not only individual knowledge on the part of clinical psychologists regarding how diverse and intersecting identities affect health, but also a collective advance in how we can respond in individualized fashion to their health problems. The clinical psychology educational system must be more directly responsive to the need for diversity education.

Future opportunities for hospital-based psychologists lie in effective participation in growing networks of health care systems, in caring for the young and the aged as well as those in between, in attending to the needs of immigrants and their families, and in collaborating with a multitude of other health service educators. At all times, the hospital psychologist of the future must contribute to, and take from, the growing information that research provides us regarding what improves the health of our patients.

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CHAPTER 26

PRIMARY CARE SETTINGS

James H. Bray

Primary care settings are where the majority of Americans receive their medical and mental health care, and this is especially true for ethnic minorities and underserved populations (Agency for Healthcare Research and Quality, 2010). Primary care is the entry point for most medical care. It is estimated that the majority (50%–70%) of people receive treatment for mental and behavioral health and substance use problems by primary care providers and in other nonmental health settings (Kessler et al., 2005). Thus, primary care has been labeled the *de facto* mental health care system in the United States (Norquist & Regier, 1996).

Primary care psychology is a relatively new specialty in which psychologists provide behavioral and mental health services within primary care settings (Frank et al., 2004). With the implementation of health care reform, primary care psychology is one of the growth areas for practice (Bray, 2010).

DEFINITION AND PREVALENCE

Psychologists are not currently well represented in primary care settings. Of the 75,248 psychologists with a National Provider Identifier number, only 29% are colocated with a primary care provider (Miller et al., 2014). In contrast, 43% of primary care providers are colocated with other types of behavioral health professionals (e.g., social workers, counselors, as well as marriage and family therapists). Overall, psychologists are more likely to be colocated with a primary care provider in urban settings than in rural settings. In other countries, psychologists are more likely to be integrated into primary care settings than in the United States, and this is linked to better health outcomes in other countries (World Health Organization, 2008).

Primary care is defined by the Institute of Medicine as "the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community" (Donaldson, Yordy, & Vanselow, 1994, p. 15). Notice that this definition uses the term "clinician," not "physician." The primary care medical specialties are family medicine, general practice, general internal medicine, general pediatrics, and geriatrics (Agency for Healthcare Research and Quality, 2010). Sometimes gynecologists are considered primary care providers because many women in the United States go to their gynecologist for the majority of their health care needs. In addition, nurse practitioners and physician assistants may be primary care providers if they practice in these settings.

A key aspect of primary care is that it is usually the point-of-entry for patients into the health care system. The major components of primary care are continuous and comprehensive care for patients over time, including prevention, health maintenance, and sick care; coordination of all the health care needs of the patient; and continuing responsibility for patient follow-up and community health problems (American Academy of Family Physicians, 1994). Primary care providers develop ongoing

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relationships with their patients over time so that they can come to know them and develop long-term relationships across the life span. The Institute of Medicine (2001) noted comprehensive primary care providers are willing to (a) handle, without referral, the majority of problems arising in a health care practice; (b) admit and follow patients in hospitals and convalescent sites; (c) provide home visits; (d) engage in preventive health activities; and (e) assess lifestyle factors that may contribute to morbidity or mortality, such as diet, exercise, injury prevention, family planning, and adolescent behavior. Primary care providers handle a broader range of biopsychosocial problems than do other specialty providers (Rakel, 2007).

Research shows that primary care providers typically feel comfortable identifying psychological and behavioral problems; however, they often do not feel comfortable fully diagnosing and treating patients with these types of problems and prefer to refer the patients to a mental health specialist (Cawthorpe, 2005). In a recent survey of pediatricians and family physicians, practitioners were most comfortable assessing depression, attention-deficit/hyperactivity disorder, and anxiety disorders (Pidano, Kimmelblatt, & Neace, 2011). They were less comfortable evaluating and treating bipolar disorder, posttraumatic stress disorder, psychosis, oppositional defiant disorder, learning disorders, and sexual abuse. Overall, primary care providers were most comfortable with diagnosing children with behavioral disorders than treating them. They reported that they preferred referring to a mental health specialist for treatment. In summary, primary care providers are those clinicians who take care of patients who present with undifferentiated symptoms as well as routine and chronic health conditions; primary care providers also provide health and sick care across the appropriate life span of their specialty (Rakel, 2007).

Primary care psychology is the provision of health and mental health services delivered in primary care settings or in collaboration with primary care providers that involves the prevention of disease and the promotion of healthy behaviors in individuals, families, and communities (Bray et al., 2004). Primary care psychologists are generalists and diagnosis, treat, or refer behavioral health problems that are seen in primary care settings. They have a basic understanding of the common biomedical conditions seen within primary care, the medical and pharmacological treatments of those conditions, and how they interact and affect the psychosocial functioning of patients and their families and communities.

What are the roles of psychologists in primary care? Psychologists treat the most common behavioral health and substance use problems, such as depression, anxiety, and alcohol abuse, which are regularly seen in primary care. Mental health problems, such as anxiety and depression, often present differently and are seen at earlier stages of development than in a mental health setting.

Many people in primary care have subthreshold psychological problems that do not meet full diagnostic criteria, yet assessment and treatment are warranted and effective (Campbell, McDaniel, & Seaburn, 1992). For example, it is common for someone who is becoming depressed to present with sleep disturbance and fatigue as the major presenting problems. Changing the predominate symptom, such as difficulty sleeping, back to normal functioning alleviates the progression of the depression. Likewise, it is common to see people who have had one or two panic attacks but have not developed a panic disorder. They come to the primary care provider because they believe they are having a heart attack. Early detection and intervention by a psychologist often prevents development of a panic disorder and reduces unnecessary medical tests.

In addition, there is a high degree of comorbidity of mental health and chronic disease in primary care settings (Petterson et al., 2008). More than half of patients with chronic medical diseases meet criteria for a coexisting mental disorder, and costs for taking care of patients with comorbidity are much higher than for patients without an accompanying mental health problem (Agency for Healthcare Research and Quality, 2009).

Primary care psychologists also provide behavioral interventions to prevent or ameliorate major health problems that are caused by life-style and other behavioral factors (Johnson, Perry, & Rozensky, 2002). In these cases, the patient may not have a mental health diagnosis, but psychological interventions help with management of the disease. The use of the health and behavior codes in Current Procedural Terminology (CPT) is warranted in these cases (American Psychological Association [APA] Practice Organization, 2006). For example, prevention and treatment of Type 2 diabetes or cardiovascular disease through lifestyle modification, weight management, smoking cessation, and stress management are prime areas of expertise for psychologists (Johnson et al., 2002). Adherence to medical regimens is critical to effective health outcomes. Psychological factors mediate these compliance behaviors. In many chronic health conditions, adherence issues—such as following a diet, smoking cessation, taking medications appropriately, or exercising regularly—are integral to good health outcomes (Johnson et al., 2002).

HISTORICAL PROFILE AND PROFESSIONAL EVOLUTION

Psychologists have been working in primary care settings for more than 30 years, primarily in family medicine and pediatrics because these specialties require training in behavioral science and psychology (Campbell et al., 1992; Committee on Psychosocial Aspects of Child and Family Health and Task Force on Mental Health, 2009). However, the development of the primary care psychology as a subspecialty is more recent (Beacham et al., 2012; Bray, 2010).

Many of the clinical tasks performed by psychologists working in primary care settings were developed in training programs in primary care specialties, such as family medicine and pediatrics (Bray & Rogers, 1995), and in multidisciplinary organizations, such as the Collaborative Family Healthcare Association. There have also been examples of psychologists in independent practice working successfully in primary care settings (Driscoll & McCabe, 2004), in health maintenance organizations (Belar, 1989), and in the U.S. Department of Veterans Affairs (VA; Pomerantz & Sayers, 2010).

Early Efforts by APA Presidents

Nicholas Cummings (1979 APA President) is a pioneer in integrating psychologists in primary care and demonstrating the cost savings of providing psychological services in health care (Cummings, Cummings, & Johnson, 1997; Cummings et al., 1991; Cummings & O'Donohue, 2011). In a groundbreaking study, Cummings et al. (1991) demonstrated that the utilization of psychological interventions reduced the overall costs and utilization of health care services in a large Medicaid population in Hawaii. This is called *cost-offset research*, and the researchers demonstrated that providing mental health services in medical settings reduced the overall costs of health care services.

Joseph D. Matarazzo (1989 APA President) was an early pioneer of working in academic health centers and medical schools (Matarazzo & Carmody, 1981). For many years he chaired the Medical Psychology section at the Oregon Health Sciences Center and helped create the field of health psychology. Logan Wright (1986 APA President), Jack Wiggins (1992 APA President), Ronald Fox (1994 APA President), and Patrick DeLeon (2000 APA President) advocated for the expansion of psychology as a health profession, rather than just a mental health profession. They also argued for psychologists to have prescriptive authority (DeLeon, Fox, & Graham, 1991). Fox (1982) called for psychologists to train with primary care physicians and practice alongside of them in the health care system. Robert Resnick (1995 APA President) focused on how psychology is important to health across the life span (Resnick & Rozensky, 1996).

Primary Care Task Force

To advance the roles of psychologists in primary care settings, the APA Committee for the Advancement of Professional Practice convened a Primary Care Task Force in 1995. The Primary Care Task Force (1996) found that psychologists and psychological services are essential to the primary health care team to deliver cost-effective and effective comprehensive care. This requires a shift in our professional identity from a mental health profession to a health profession (Frank et al., 2004; Haley et al., 1998).

The task force identified three characteristics of primary care psychologists (Primary Care Task Force, 1996). First, the psychologist works in a primary care setting, such as a clinic, group practice, or with an individual medical practitioner. This could also include both clinical and educational services, such as teaching in a family medicine residency. Second, the psychologist works with all patients served in the setting. For example, in pediatrics, this would include children and adolescents from birth through 18 years of age, whereas in family medicine settings, it would include people from birth through death. Psychologists may serve as consultants to the other primary care providers, such as family physicians or nurse practitioners, regarding patient-care issues, doctor–patient issues, or system issues. In addition, the psychologist is able to provide interventions for behavioral components of medical problems, such as facilitating compliance to medical regimes, lifestyle changes, or evaluating eligibility for certain types of surgery. Third, the psychologist contributes to the patient's total health care, both in sickness and in health and not limited to assessment and treatment of mental disorders. This model of psychology requires that the psychologist be a generalist and treat the full range of problems, from birth to death, with individuals and families, that present in these settings.

Health Care for the Whole Person Task Force

Ronald Levant (2005 APA President) commissioned this task force to focus on the integration of psychology using a biopsychosocial perspective with primary care (Levant & Heldring, 2007). The task force developed a joint statement with more than 20 health-related professional associations about the importance of a biopsychosocial perspective in health care and having psychology participate in integrated health care settings. The task force produced a series of articles that reviewed the research supporting this perspective (Kaslow et al., 2007), the economics of behavioral health services in medical settings (Blount et al., 2007), and a rural perspective on health care for the whole person (Stamm et al., 2007).

Integrative Health Care for the Aging Population Task Force

Sharon Brehm (2007 APA President) created this task force on the special needs of the older adult population. The task force created a blueprint for changing health care services to achieve integrated care for older adults (Brehm et al., 2008). The report outlines a plan for implementing integrated health care for older adults through the use of psychological principles and methods to develop interdisciplinary health care teams. Further discussion and recommendations addressed the importance of attending to diversity issues in populations served and understanding the older consumer's perspective on health care.

Presidential Task Force on the Future of Psychology Practice

This presidential task force was created by James Bray (2009 APA President) to address the needs of practitioners and the future of psychology practice (Bray, 2010). The goals of the task force centered on identifying the following: (a) opportunities for future practice to meet the needs of an increasingly diverse public and integrate an emerging science, (b) strategies and tactics to effectively address these opportunities, and (c) sustainable partnerships to implement new opportunities for practice and to develop a common public policy agenda (Bray, 2010). The task force identified practice in primary care and integrated health systems as one of the top growth areas for psychologists in the near future. The APA used this work to lobby the U.S. Congress to include psychologists in primary care as part of the health care reform process.

UNIQUE CONTRIBUTIONS

Psychologists provide many unique contributions to primary health care. These contributions include diagnosis and treatment of mental, behavioral, and substance use problems; management of behavioral aspects of medical disease; clinical leadership; and system development and evaluation. As Joseph E. Scherger (2004), former president of the Society of Teachers of Family Medicine, stated,

> Someday, the U.S. health care system will get it. Integrating psychologists into primary care makes the system more effective, allows for early recognition and intervention in the pervasive psychosocial

> nature of health and illness, and will save a ton of money by avoiding needless tests and treatments. (p. xi)

Diagnosis and Treatment of Mental, Behavioral, and Substance Use Problems

Many primary care patients with mental health problems are either not diagnosed or are underdiagnosed and undertreated for their problems (Carney et al., 1999). Psychologists are experts in assessment and treatment of mental health and substance use problems and have developed most of the evidenced-based assessment methods and nonpharmacological treatments for them. However, because mental health and substance use problems often present differently in primary care and are often co-occurring with medical conditions, it is imperative that these differences be understood to successfully work in primary care settings.

Psychologists use psychological tests and assessment procedures to help primary care providers properly diagnose and treat mental health and substance use problems. An example of this is in the new developments around substance use problems in primary care called SBIRT—screening, brief intervention, and referral to treatment (Babor et al., 2007). Traditionally, the focus on substance use has been on patients with abuse and dependence problems that represent only 10%–20% of substance use issues. The focus of SBIRT is to screen all patients for risky alcohol and substance use and to provide brief evidence-based interventions to prevent the development of substance abuse and dependence. Risky use is associated with multiple medical problems, and helping people reduce their substance use to healthy levels improves their overall health status and reduces medical costs (InSight Project Research Group, 2009). SBIRT involves collaboration with medical providers through the use of screening and brief interventions based on motivational interviewing (Bray et al., 2012).

Psychologists who have training in psychopharmacology can provide consultation services to primary care providers by recommending and monitoring psychotropic medications for patients. Nonpsychiatric physicians write more than 50% of the prescriptions for psychotropic medications in the United States (deGruy, 1996). In some states, in the U.S. military, and in the Indian Health Service, psychologists have the authority to prescribe medications (McGrath & Sammons, 2011). Further, some psychologists have become dually licensed as psychologists and nurse practitioners to prescribe psychotropic medications. This is an important contribution to patient care because many primary care patients are not appropriately treated with the correct medication or correct dosage and therefore unnecessarily suffer from ongoing mental health problems (Carney et al., 1999). In addition, because a psychologist often sees a patient more frequently than does a primary care provider, the psychologist can monitor compliance and side effects of the medications and make recommendations for needed changes in dosages or medications.

Management of Behavioral Aspects of Medical Diseases

Psychologists can provide primary care behavioral health services and diagnose or manage a number of health problems seen in primary care settings. Psychologists have much to offer in the development and management of compliance to medical regimes. Behavioral interventions that foster behavior change have been clearly demonstrated in the prevention of HIV/AIDS (Pequegnat & Bray, 2012), and similarly effective interventions can be developed and applied for other health problems (National Institutes of Health, 2009). Primary care providers are using psychologists to improve access and care for people with chronic illnesses, such as diabetes and heart disease (Clancy et al., 2007) or medication adherence (Moitra, Herbert, & Forman, 2011). Psychologists can use their expertise in group dynamics and therapy to facilitate these groups and to collaborate with the primary care provider.

In providing services for behavioral aspects of medical diseases, there may not be a mental health diagnosis. In these cases, psychologists can use the health and behavior CPT codes to bill for their services (APA Practice Organization, 2006). The health and behavior codes were designed by the APA and were approved by the American Medical Association CPT editorial panel in 2002. The codes require a medical diagnosis made by a physician and thus contribute to collaborative care. There are codes for both assessment and intervention. The interventions provided must focus on patient functioning related to the medical diagnosis. Mental health diagnoses and treatment may not be billed simultaneously with the use of the health and behavior codes (APA Practice Organization, 2006).

Clinical Leadership

The definition of primary care developed by the Institute of Medicine (Donaldson et al., 1994) specifies that a clinician and not a physician can be the head of a primary care team. This approach was also included in the Patient Protection and Affordable Care Act of 2010 health care reform legislation. Thus, one role for psychologists in primary care may be that of a clinical leader. It is important for psychologists to consider these roles, as often master's-level mental health providers and health educators are hired to provide direct services as a cost-savings measure. Being a clinical leader means that psychologists design, implement, and evaluate services and manage staff. As a clinical leader, the psychologist may supervise the services of other behavioral health providers, provide ongoing training in evidence-based practices, and develop outcomes assessments. This requires that the psychologist step outside the usual roles of health service provider and assume a consultant/leadership role that is more common in consulting and industrial organizational psychology.

With their expertise in relationships and emotional factors, psychologists are also experts in team development and functioning (McDaniel & Fogarty, 2009). Attending to the emotional aspects of the patient is important but so too is attending to the emotional well-being of the clinicians and team functioning. Important functions in this area include preventing staff burnout, enhancing self-care, improving team functioning, consulting with other clinical leaders to improve system functioning, and helping staff deal with difficult patients. In all of these roles, attending to the emotional and relational factors are unique skills that psychologists possess and that can benefit the delivery of primary care services.

System Development and Evaluation

Because of psychologists' expertise in research and evaluation, they are in a prime position to help with the development, evaluation, and quality improvement of integrated health care systems (Bobbitt et al., 2012). Whether as a clinical leader or part of the primary care team, psychologists have the expertise to help create innovative systems and to evaluate their efficiency and effectiveness. The Patient Protection and Affordable Care Act of 2010 requires that the quality improvement and outcomes assessment be implemented within health care systems, and psychologists have the expertise to contribute to both (Bray, 2010).

There are many examples of these types of contributions. Alonso et al. (2006) developed Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) for the Agency for Healthcare Research and Quality and U.S. Department of Defense to improve patient safety in medical systems. TeamSTEPPS is built on prior work in aviation safety and the use of evidence-based crew resource management processes (Pizzi, Goldfarb, & Nash, 2001). TeamSTEPPS teaches four core teamwork skills—leadership, situation monitoring, mutual support, and communication—as well as a set of tools to support teamwork in an institution. These include such tools as how to conduct effective team briefs, how to debrief team performance, and how to communicate critical information within the team. TeamSTEPPS has been implemented in more than 1,500 sites to effectively improve patient safety (Alonso et al., 2006).

Psychologists have been leaders in the development of integrated primary care in the VA (Brawer et al., 2010). The VA has been at the forefront in developing primary care systems that integrate behavioral health and psychology. The St. Louis Initiative for Integrated Care Excellence, for example, dramatically increased access to health care and helped primary care providers address mental health issues (Brawer et al., 2010). A special issue of the journal *Families, Systems, and Health* (Sayers & Pomerantz, 2010) provides multiple examples of how psychologists have helped develop integrated primary care systems within the VA system.

PRESENT STATUS OF PRIMARY CARE PSYCHOLOGY

Primary care psychology has evolved as a new subdiscipline and specialty of clinical psychology. The Presidential Task Force on the Future of Psychology Practice identified primary care psychology as one of the growth areas for the future of professional psychology (Bray, 2010). Jobs for primary care psychologists are now regularly advertised in the *APA Monitor* and other publications. There are many new and exciting opportunities to work in primary care because of health care reform and the development of integrated health care (Beacham et al., 2012; Miller et al., 2014).

Integration of psychologists into primary care settings is also rapidly expanding across the world (World Health Organization, 2008). In many cases, other countries are ahead of the United States in the integration of psychologists into primary care (Bray, 2010). For example, the Norwegian and Australian governments have provided substantial funding to ensure that psychologists are integrated into primary settings in both urban and rural areas. The World Health Organization (2008) developed international policies to promote the integration of mental health services into primary care because it "is the most viable way of closing the treatment gap and ensuring that people get the mental health care they need" (p. 1). There is no single best model that is recommended for all countries. Best outcomes are achieved through the local implementation of competencies and principles that are cost-effective and improve the overall health of the population.

Primary Care Psychology Practice Models

Psychology practice in primary care can take a variety of forms. The functional arrangement of primary care practice varies along a continuum of locations of practice and level of collaboration in patient care (Bray et al., 2004). The following are descriptions of three of these variations in primary care practice.

Separate practices with referral and consultation arrangements. In this type of practice, psychologists maintain their separate practices and offices and receive referrals and consult with primary care providers. From a medical perspective, this is like any other referral to a specialist. The primary care provider expects to receive documentation about the treatment and recommendations for the patient. Psychologists understand the practice of primary care and keep the primary care provider informed of patients that they share. These are not detailed psychotherapy notes but rather the diagnosis, treatment plan, and any recommendations for the primary care provider. Factors that facilitate these types of arrangements include developing a specific linkage plan so that providers can maintain regular contact and making referrals in both directions (from the psychologist to the primary care provider and vice versa; Bray & Rogers, 1995). Proximity of providers enhanced collaboration between providers. Familiarity with the other professional's support staff and office practices also supported better collaboration. Having a "warm handoff" from the primary care provider helped the patient feel more comfortable to seek psychological care. Factors that hindered collaboration included lack of proximity and regular settings for contact and not being on the same insurance panels. Primary care providers usually take all types of patients (insured, Medicare, Medicaid) and provide some pro bono services to their community, and they expect other providers whom they collaborate with to do the same. This requires primary care psychologists to provide culturally sensitive services to a broad range of patients from different socioeconomic and ethnic backgrounds.

Colocation but separate practices. In this arrangement, the psychologist and primary care provider share office space but maintain separate practices and financial arrangements. Psychologists provide informal consultations (called curbside consults) in the offices, provide formal consultations, and take referrals from the primary care providers. The providers may meet informally or on a regular basis to discuss common patients (Bray & Rogers, 1995). Estimates from implementation of these arrangements indicate that three to seven full-time primary care providers can create a full-time psychology practice for one psychologist (Margolis, Pollard, & Niemiec, 2013). In these arrangements, patients from both practices use a common waiting room and support staff. Many patients like this type of arrangement, as it reduces stigma of coming to a psychologist's office for mental health services.

Integrated health care systems in primary care. In this arrangement, the psychologist is a member of the health care team that provides patient care to primary care practice patients. Full integration would include physicians, nurses, social work, nutrition, dentists, clinical pharmacists, and care managers. Psychologists are located at the practice site and are embedded in the practice. They provide immediate consults to patients during their primary care visits as requested by the primary care provider (Auxier, Farley, & Seifert, 2011). Patients may also be seen for other behavioral health problems during separate visits, but the visits are typically shorter in duration (15–30-min sessions, rather than typical 50-min sessions), are time limited (6–10 sessions), and are problem focused. If the mental health problems require more intensive treatment, then patients are usually referred out to a mental health specialist or clinic (Auxier et al., 2011). A staff model or capitated system, rather than a fee-for-service model, is usually used in these settings. Records are shared and fully integrated.

On the basis of a demonstration project, Margolis et al. (2013) found several challenges that needed to be addressed for the development of a successful integrated care private practice. The first was establishing a viable business relationship. They offered three alternative business arrangements: an *independent contractor model*, in which the psychologist provides certain contracted services for a negotiated fee; a *salaried model*, in which the psychologist is a paid member of the team; or a *full partner model*, in which the psychologist enjoys financial partner status and shares risk with the other medical partners. Other issues identified included demonstrating the financial value of behavioral health services in primary care, problems with inconsistent reimbursement for the health and behavior codes, obtaining reimbursement for same-day procedures for medical and behavioral health care, and creating sufficient patient volume and referrals from the primary care providers. Although these are challenges, they are not insurmountable, and they can be successfully addressed to build an integrated primary care system in private practice.

Training for Primary Care Practice

Specialized training in primary care settings is required to be competent to work as a primary care psychologist (Bray, 2004). Psychologists who plan to work in primary care settings or collaborate with primary care providers need to understand the differences between psychological and primary health care perspectives, and they need to develop specific competencies for practice (McDaniel et al., 2014). There are differences in theoretical orientations (biomedical vs. psychosocial), lack of common language (biomedical vs. psychological), different practice styles, varying expectations for assessment, diagnosis and treatment, and different types of practice styles (Bray & Rogers, 1995). It is also important to have practicum training experiences in primary care to understand the style and pace of these practices (Robinson & Reiter, 2007). The Presidential Task Force on the Future of Psychology Practice (Bray, 2010) recommended that psychologists who plan to transition to primary care settings obtain training through continuing education, independent study, and practicum training in these systems. Training institutions in universities and postdoctoral training institutes are also needed to help psychologists move into integrated primary care systems.

Ethical Considerations for Working in Primary Care

It is important to consider potential ethical concerns that arise when participating in primary care practice. What are the unique ethical challenges encountered? Are there special concerns with use of technology, such as electronic health records? Because these settings include professionals with different ethical guidelines, this can present some unique challenges for psychologists (Hodgson, Mendenhall, & Lamson, 2013). Generally speaking, the ethical guidelines for the American Medical Association would be the basis for practice in integrated primary care settings. However, these need to be combined with federal and state laws and ethics code from other disciplines, including psychology.

The major issues that psychologists face are ensuring informed consent to treatment in integrated primary care settings, protecting patient confidentiality and privacy, and complying with special rules regarding sharing of information about substance abuse assessment and treatment, particularly federal regulation 42 C.F.R. Part 2 (Reiter & Runyan, 2013). The Health Insurance Portability and Accountability Act (HIPAA) of 1996 and state laws related to mental health care practice must also be considered. Psychologists generally have stricter confidentiality standards than do medical providers, and primary care providers often do not understand these limitations. This may interfere with working in a primary care setting because medical providers expect team members to be able to discuss all patient care, yet psychologists sometimes are reluctant to do so because of privacy and ethical concerns (Bray & Rogers, 1995). Further, there are concerns about multiple relationships in primary care settings, as it is common to see more than one family member or relative in family practice (Reiter & Runyan, 2013).

Patients must receive information about what treatments they can expect to receive and make an informed consent to receive such treatments. There are federal and state laws that govern the type of information and notice that patients must receive prior to receiving treatment (e.g., HIPAA and 42 C.F.R. Part 2) and the process by which consent must be obtained. Patients have a right to know who is treating them and a reasonable expectation about what treatment involves. For example, if a patient is referred to see a psychologist, he or she has a right to know this in advance and for what diagnosis he or she is being treated. Primary care providers do not always tell their patients about this process or that the patient has a mental health problem. Patients may comply with the referral because they are following doctors' orders yet be upset when they find that they are referred to a psychologist. It is imperative that if a psychologist is asked to consult with a patient, as part of a primary care visit, that the patient be informed at the beginning of the visit about this consultation and given the opportunity to decline the service.

Federal laws, state laws, and professional ethics require that psychologist protect the privacy and confidentiality of patient information. HIPAA and 42 C.F.R. Part 2 are the federal statutes that apply in all states. HIPAA concerns privacy of health information and applies irrespective of provider type, whereas 42 C.F.R. Part 2 concerns the sharing of patient information about substance use. Health information may be shared between a psychologist and primary care provider without a specific patient authorization if the patient is notified in writing about the provider's privacy policies. Psychotherapy notes have special protection under HIPAA. However, state laws may be more stringent than HIPAA requirements, and if so, state laws must be followed. Psychologists need to be mindful of these issues when working in a primary care setting and watch for changes in requirements and ethical guidelines as these systems of care develop.

FUTURE OPPORTUNITIES

The Patient Protection and Affordable Care Act of 2010 brings exciting opportunities for psychologists, as mental, behavioral, and substance use services are part of the core benefit package in health plans. In addition, psychologists are one of the named treatment providers within integrated health care teams, patient centered medical homes (PCMHs), and accountable-care organizations. Psychologists are not required to be included in these systems of care, but they are recognized as important players. It is up to individual psychologists to become involved in these opportunities, or professionals from other disciplines, such as nursing and social work, will take psychologists' places (Bray, 2010).

The Patient Protection and Affordable Care Act of 2010 includes revitalization of primary care as one of the top priorities in health care reform. The model for revitalization is the PCMH (PCMH Collaborative, 2007), which provides comprehensive primary care for children, youths, and adults that facilitates partnerships between individual patients and their primary care providers and, when appropriate, the patient's family. Although similar to primary care, there are important differences. In PCMHs, there is a focus on whole person health care, the use of integrated health care teams for patient care, and the use of electronic health records and other high-tech innovations to facilitate integrated and coordinated health care that distinguishes it from traditional primary care.

The 21st century health care homes include interdisciplinary teams, care management and care coordination programs, quality assurance mechanisms, and health information technology systems that should lead to improved quality and better access while containing costs (PCMH Collaborative, 2007). There is some limited evidence that implementation of the PCMH model results in improved health care and patient outcomes (Crabtree et al., 2010). The National Committee for Quality Assurance requires that practices seeking designation as a PCMH provide screening for mental health, substance abuse, and health behaviors (http://www.ncqa.org). Further, a designated PCMH needs to have evidence-based protocols that include at least one that is related to unhealthy behaviors, a mental health problem, or a substance abuse problem. Given this set of standards, it would be difficult to not include behavioral health professionals as part of the interdisciplinary health care team (Beacham et al., 2012).

Psychologists are one of the named professions in the PCMH, but it is up to individual psychologists to become involved in them. Although physicians argued for physician controlled and driven PCMHs, the U.S. Congress did not agree with that position; the law states that an appropriate clinician may lead the PCMH. This opens the door for psychologists to be leaders of PCMHs. Psychologists have a lot to offer to facilitate the successful implementation of PCMHs, but it requires that they have the appropriate training and experience to work in primary care (McDaniel & Fogarty, 2009).

Accountable care organizations (ACOs) are new health delivery systems authorized by the Patient Protection and Affordable Care Act of 2010. They are still under development, and all of the rules and regulations have yet to be defined by the Centers for Medicare and Medicaid. ACOs are composed of a group of providers who collaborate to share responsibility for the health care of a defined population of patients. They must include at least one hospital, primary care physicians, and specialty care providers. Psychologists would be considered as a specialty care provider. The current models are operating within a fee-for-service payment structure, but all providers are expected to coordinate care to improve quality and efficiency. The ACO is held accountable for the population's care, and its providers share in any cost savings the ACO achieves from increased efficiency and improved patient outcomes (Croft & Parish, 2013). ACOs must provide coordinated and integrated patient-centered care that improves population health, measures performance, integrates health information technology, and reduces costs (Singer & Shortell, 2011).

Because ACOs are so new and not widespread, the advantages of psychologists' participation are not yet clear (Nordal, 2012). If they are implemented successfully, psychologists could join together with other physicians to develop a system to share savings and to create a more integrated system of care (Croft & Parish, 2013). As the law is not well defined, it may be possible in the future for the focus of the ACO to be on behavioral health care.

In the future, to work in primary care settings, psychologists will need to adopt some of the language and methods of biomedicine, epidemiology, and public health while retaining their distinctive psychological perspectives and methods (Bray, 2010). For example, in most of medical care, the World Health Organization's (1994) *International Statistical Classification of Diseases and Related Health Problems, 10th Edition* (*ICD–10*) is used for diagnosis rather than the American Psychiatric Association's (1994) *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*. Primary care providers do not use the *Diagnostic and Statistical Manual of Mental Disorders*. The Patient Protection and Affordable Care Act of 2010 requires the use of the *ICD–10* system beginning in 2015. Thus, psychologists should familiarize themselves with this system rather than transitioning to the new *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (American Psychiatric Association, 2013) system.

Psychologists have many new opportunities and much to offer for enhanced patient care in primary care settings, and individual psychologists can take advantage of them by participating and taking leadership roles. If psychologists do not, then certainly other professionals will, and psychology may be left out of future developments in integrated primary care settings. The welcome mat is down, the door is open, and primary care providers are excellent colleagues to work with.

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CHAPTER 27

BUSINESS AND OTHER ORGANIZATIONS

Rodney L. Lowman

This chapter focuses on the application of clinical psychology in business and other organizations and the roles that clinical psychologists can potentially play in those organizations, both with and without additional training. It also addresses the intersection of work and mental disorder; both the epidemiology of psychopathology in the workplace; and the ways in which work and work organizations can create, exacerbate, or help to treat or minimize psychological dysfunctions. Necessarily, this chapter aims wide but not deep because of the need to introduce many topics and because this application of clinical psychology in such contexts is still not as diffused as it has potential to be.

DEFINITION AND PREVALENCE

Defining applications of psychology in business and other organizations is inherently challenging. This is because, unlike uses of psychology in traditional areas defined by the field of clinical psychology such as those involving particular disorders (e.g., depression or anxiety), applications of clinical psychology in and to organizations and to work-related issues vary across a range of areas. As a working definition for the purposes of this chapter, I refer to those applications of clinical psychology knowledge and methods that take place in the context of organizations (especially business and work-related organizations) and the uses of clinical psychology with groups within organizations and with organizations themselves.

As for the prevalence of psychopathology in work organizations, several studies have examined this question in the context of specific samples in various countries. First, it should be noted that occupation/work is a moderator of type and level of psychopathology (Lowman, 1987, 1989, 1993a, 1993b; Stallones et al., 2013). The most seriously mentally ill will typically not be found in the work place, at least when their illness is not under control. Therefore, distributions of mental illness in work organizations would not be expected to be consistent with those in the overall population. Additionally, in organizations or occupations that screen for psychopathology and discharge or put on leave those who experience psychopathology (such as pilots, train engineers, and those working in certain military or police positions), their prevalence and incidence rates may be lower than those that do not. Conversely, the base rate for psychopathology is higher in certain occupations, so occupations and organizations cannot begin with the assumption that all organizations would have about the same rates of psychopathology. In particular, those in artistic occupations (e.g., writers, visual artists, actors) are at higher risk of psychopathology in general and affective disorders in particular (Jamison, 1993). Hence, aggregations of workers will mask important subgroup differences.

Growing numbers of epidemiological studies have examined the prevalence of mental disorders among employed persons. As examples, Stansfeld et al. (2011) reported the results of mental disorders assessed using in-person interviews of 5,497 community-residing men and women between

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16 and 64 years of age. This was a subsample of a larger epidemiological study in the United Kingdom and focused on a specific geographic area within the country. The study measured only common mental disorders (generalized anxiety disorders, mixed anxiety and depressive disorders, depressive episodes, phobias, obsessive-compulsive disorders, and panic disorders)—clearly a subset of all mental disorders. These were identified in 15% of the sample (17% female, 13% male), suggesting that those at work with mental disorders are not a trivial part of employee populations. Note that this study underestimates the percentage of workers with mental disorders because the study did not assess for, as examples, substance abuse or personality disorders.

Even higher prevalence rates have been reported in other studies. Published research leads to the conclusion that "mental illnesses affect on average 17% to 20% of employees in any 12-month period" (De Lorenzo, 2013, p. 220). Such disorders are often not disclosed for reasons of nonsupportive company policies, fear of social stigma, or anticipated job consequences, suggesting that employers may well not be aware of these disorders. This finding is generally consistent with epidemiological studies of mental disorders that break down data among the employed versus not employed. The Organisation for Economic Co-operation and Development (2008) reported that about 15% of employees experience common mental disorders and that 5% of employees experience serious mental disorder.

Of course, not all work-related psychological dysfunction rises to the level of a diagnosable mental illness. For example, the subclinical incidence of anxiety and depression as measured by the Hospital Anxiety and Depression Scale in a 2-year prospective cohort sample was 4.6% for anxiety and 3.3% for depression (Andrea et al., 2009; Bültmann et al., 2006). Higher levels of anxiety were reported by those with lower social support; higher levels of depression were reported among those with job insecurity.

Such studies provide useful information, but many mental health epidemiological studies are not specific enough to the occupation or organization in which the employed participants were working, and these studies also do not examine the effect of their mental disorders on work, including productivity and absenteeism. Other studies have focused on specific occupations and specific disorders, including what are often work-related disorders, such as posttraumatic stress disorder (e.g., Jenkins et al., 1996; Kumar, 2011; Mustard et al., 2010; Salkever, Shinogle, & Goldman, 2003; Santiago et al., 2013).

The incidence and prevalence of mental disorders among workers also vary by external factors, including the state of the economy and the stressors experienced on the job. Evidence supports the conclusion that the incidence of mental disorders increases in times of economic distress with more layoffs, higher unemployment, and greater anxiety about such potential outcomes among those still employed. The still-employed in economically challenging times also often have greater work-related pathology when companies have cut positions. Among a Canadian sample in two periods of the recent global recession, the 12-month prevalence of major depressive disorder climbed from 5.1% to 6.8% to 7.6% over three time periods (Wang et al., 2010). Lifetime reported rates of dysthymia during the same periods also rose from 0.4% to 0.7% to 1.5%, respectively. However, no changes were found in the 12-month prevalence of social phobia, panic disorder, and generalized anxiety disorder at the three data collection points.

There are two major reasons why these issues matter. First, consistent evidence shows that there are relatively high absenteeism and productivity costs among employees with mental disorders, and there are also high costs associated with the short- and long-term disabilities found among employees with such disorders (e.g., Adler et al., 2006; Dewa et al., 2004; International Labour Office, 2000; Lim, Sanderson, & Andrews, 2000; Marciniak et al., 2004). Second, there is evidence that work and management of the work function and stressors in the work place can have positive influences on mental health and mental illness prevention (Lowman, 1993a; Organisation for Economic Co-operation and Development, 2008).

HISTORICAL PICTURE OF THE SETTING

I begin this historical profile with my personal example of how I came to apply clinical psychology to business and other organizations. Following undergraduate degrees in business and psychology and a stint in the U.S. Air Force, my graduate training was in industrial–organizational (I-O) psychology at Michigan State University. Fortunately, several of the luminaries (e.g., Jack Hunter, Frank Schmidt, Neal Schmitt) in I-O psychology whose work came to heavily influence the field were members of the faculty then. In addition to, but contrasting from, these methodological superstars, there was a senior professor named Carl F. Frost (Harvey, 1994; Lowman, 2010; Schmitt & Davis, 2010) who had trained in clinical psychology, who spent most of his career applying that knowledge to work organizations, and whose work I discuss in this chapter.

My dissertation research (Lowman, 1979) focused on development of a "clinical–organizational psychological" model of organizational consultation mirroring Frost's approach and was validated using perceptions of Frost's organizational clients with regard to his consultation efforts with them. The model helped to identify the relevance of clinical psychological approaches to organizational consultation. I return to Frost's work later in this chapter as an example of a clinical psychologist in industry and his use of clinical psychology constructs in organization development.

Those readers who recall a perennially favorite Christmas movie *Miracle on 34th Street* (Perlberg & Seaton, 1947) will know that it featured a character (Kris Kringle) claiming to be the real Santa Claus. As concerns were raised at the department store employing Mr. Kringle about his sanity, he was assessed by the store's (presumably clinical) psychologist, the character named Mr. Granville Sawyer, who pronounced him mentally unstable, resulting in his losing his job as store Santa Claus. Later in the movie, the fictional store founder, Mr. Macy, upset with the termination of Santa, fired Mr. Sawyer, accusing him of having received his degree from a mail order house.

Employee counseling programs actually predated this movie. Psychologists have been involved in business and work organizations at least since the early part of the 20th century. Most psychologists are familiar with the *Hawthorne effect*, the idea that the process of observing human behavior affects and changes it. However, few know or recall that the term derived from work done at the Hawthorne Electric Works in the Chicago area (Homans, 1950; Roethlisberger & Dickson, 1939). Fewer still know that a mental health counseling program was developed as part of the extensive, innovative work done in that organization (Dickson & Roethlisberger, 1966).

The literature about work and organizations was mostly "owned" by those who focused on workplace and organizational effectiveness. In early years, those whose concerns were with psychopathology and clinical psychology did not care much about work. There were of course exceptions, including I-O psychologist Kornhauser's (1965) important research on the mental health of a sample of industrial workers in Detroit, and clinical psychologist Harry Levinson's (1962) classic work titled *Men, Management, and Mental Health* as well as his important studies on mental health of organizations.

Levinson (1962) began his work with the Topeka State Hospital and a large electric company while he was with the Menninger Foundation. From there he moved on to the Massachusetts Institute of Technology (MIT) and later to Harvard University, where he was affiliated with both the medical and business schools. He also founded the Levinson Institute and consulted with a number of Fortune 500 companies and influential U.S. government organizations, such as the U.S. State Department. He wrote frequently in the *Harvard Business Review* where he published lively case examples and clinical articles. Levinson's writings on organizational consultation were prolific and influential. His important works on organizational assessment (Levinson, 2002a, 2002b) reflected his applications of clinical psychological assessments to organizations (Levinson, 2009; see also Lowman, 2005). Levinson believed in the power of diagnosis, and he freely applied his knowledge of clinical psychology and methods to his work (Lowman, Diamond, & Kilburg, 2010).

Another influential clinical psychologist already introduced was one of my mentors in graduate school, Carl Frost. Frost had started his undergraduate studies in pre-med and had earned a bachelor's degree in chemistry and zoology before deciding medicine was not for him. He completed a master's degree in psychology at the University of Oregon. He completed his clinical psychology Doctor of Philosophy (PhD) work at Clark University and his internship at the famed Worcester State Hospital, where he worked primarily with those with serious mental disorders.

After his service in the U.S. Navy in World War II, Frost returned to Clark University and completed his PhD and then, through a fortuitous encounter, joined the faculty of the MIT. There he worked with an unusual group of associates who were interested in labor relations with the goal of improving the fractured labor–management relations. These colleagues included Joseph N. Scanlon, an open hearth steel furnance tender, prize fighter, and cost accountant who had served as a researcher for the U.S. Steelworkers before joining the MIT group because he had seen the potential for management and labor to move beyond its continual conflict (Scanlon, 1941–1945). He was involved with efforts to improve labor–management relationships along with social psychologist Douglas McGregor, who had founded the Industrial Relations program at MIT. McGregor later served as a university president and wrote the influential book introducing Theory X and Theory Y: *The Human Side of Enterprise* (McGregor, 1960).

When a decision was made not to continue the program at MIT, Frost was recruited to come to Michigan State University to provide Michigan businesses the same type of consulting service that was then being offered to Michigan farmers, translating the latest knowledge into applications. The requirement was that all of his consulting fees be paid to the university (Harvey, 1994), and those monies were mostly used to support graduate students.

In the 1970s, Frost developed a flourishing network of companies using the Scanlon Plan, a participative management approach to organizational change among business, mostly in western Michigan (Markham, Scott, & Cox, 1992; Ruh, Wallace, & Frost, 1973). He was intricately involved in the development of several companies (e.g., Herman Miller, Donnelly Mirrors) that later became internationally recognized for their work in management–labor projects (Frost, 1996).

Although Frost focused on making organizations and individuals effective, he also used the principles of mental health and clinical psychology to approach organization-wide change. Typically, Frost did not advertise his training as a clinical psychologist when working with organizations, but he embedded several of the basic concepts of mental health and illness into his organizational change. Most noteworthy was his work with a four-dimensional model of organizational change and well-being: identity, equity, participation, and competence (Frost, 1996; Frost, Wakeley, & Ruh, 1974).

To understand the model, it is first necessary to briefly explain the Scanlon Plan around which Frost organized much of his consultation. The Scanlon Plan was developed by Joe Scanlon, who was a labor union leader searching for better ways for management and labor to work together constructively, and his associates at MIT. Sometimes labeled as a gain sharing plan, the Scanlon Plan introduced to the workplace, and particularly to manufacturing organizations, the idea of labor–management cooperation organized around a series of labor–management committees designed to focus on ways to improve productivity, save costs, and address identified issues in the company. Additionally, a shared bonus system was an important part of this approach to organizational change such that when a baseline level of production costs was bested, a portion of the cost savings was passed on to all workers as a percentage of their wages. The fact that bonus checks were distributed as separate checks and that finances were shared with those on the committees were no doubt also instrumental in improving working conditions. Frost (seemingly consistent with Scanlon, 1941–1945) told them that they were not ready for a Scanlon Plan because they did not have a sufficiently identified and/or diffused understanding of why they needed to put in such a plan, what challenges it was trying to solve, and why, therefore, the plan should be supported by the various constituencies in the company.

Unlike some of the consultants who were involved with use and promotion of Scanlon Plans, Frost saw it as a way to develop organizations, not just as a practical guide for plan implementation (Moore & Ross, 1978). One of Frost's major contributions over the years was the elaboration of the conditions he thought were necessary for successful

Scanlon Plan implementation and, by implication at least, for any effective organization. These included identity, equity, participation, and competence. The principles illustrated Frost's integration of clinical and organizational psychology:

1. *Identity*. Identity is the most directly related to clinical psychology of Frost's four conditions. Frost (1996) defined identity as

> the knowledge, understanding, and acceptance of the fact that reality places survival at risk—personally, professionally, and organizationally. The primary cause of organizational failure and death is management's failure to educate employees about reality and the employees' inability to understand and respond to the competitive demands for survival. Given the ignorance of competitive realities among many organizational members and their unreal perceptions of personal threats to the organization, the consequences are predictable. (p. 13)

2. *Participation*. For its bonus plan, the Scanlon Plan relied on cost-saving ideas from employees at all levels of the organization. The belief was that original ideas on how to make products more efficiently came from those closest to the product, whose ideas and innovations were often not solicited or seriously considered. Such an approach might be viewed in recent times as being intuitively obvious, but few companies even today seriously open up the organization to genuine opportunities for participation. Indeed, the approaches to workplace democracy in Scandinavia (Gustavsen, 2007) and the expectations of widespread participation by highly selected employees of such organizations as Google and Apple belie the reality of many, if not most, workplaces today whose nod to worker participation is often superficial. The Scanlon Plan was an example of workplace democracy in that all employees had the right and responsibility to participate. This too reflected Frost's belief that responsible participation was a necessary condition of mental health, just as its opposite—"do your job and do not complain or expect to have input"—reflected different conditions.

3. *Equity*. In today's world in which social equity seems more and more absent and in which the vast majority of wealth is controlled by a shrinking minority, the idea that equitable distribution of earnings should be the reward when employees submit their ideas for making the organization more effective and efficient may seem idealistic and anachronistic. The premise of the Scanlon Plan is that when, collectively, employees can produce the same amount of product for less expense, and when innovative ideas result in better results, all in the company should share in those rewards. The Scanlon Plan addresses equity by including a bonus distributed to all employees in the organization when they are successful in doing better than an agreed-upon base formula for the historical costs of production. The presence or absence of bonuses becomes then like a report card, which communicates whether the company is succeeding or needs to reexamine the identity and participation issues.

4. *Competence*. The first three "conditions" were introduced by Frost as being necessary for successful implementation of a Scanlon Plan (Frost et al., 1974). Over time and on the basis of expanded experience, Frost (1996) added a fourth condition for successful Scanlon Plans: competence (in particular, managerial competence) based on his increasing realization that companies often failed by not having good leaders and managers in place.

The rationale for this condition was that the Scanlon Plan opened up organizations to the views of employees throughout the organization. Because employees in Scanlon Plans can question ideas and decisions, management cannot hide behind managerial prerogative as the basis for decisions to have been made. Additionally, educating employees on "what day it is" at their company helped employees understand competitive realities, the financial conditions of the organization, and the consequences of decisions made by management. Ultimately, Frost (1996) also identified the importance of integrity—particularly of managerial integrity—as part of competence. The Scanlon Plan espoused values such that breaches of integrity would limit the ability of the plan to succeed.

Frost's approaches to consultation were centrally influenced by his clinical psychology training. Those perspectives informed almost everything that he did to help work organizations, primarily in the private sector, become more effective. However, his particular pattern of consultation was more like a wise therapist asking provocative questions rather than providing pat answers based on expertise consultation. As Frost (1996) noted in a charming vignette,

> Hugh DePree, former president of Herman Miller, Inc. [a famous furniture company that for many years used both the Scanlon Plan and Frost as its consultant] was once asked by a prospective client, "What has Frost done for Herman Miller?" After a prolonged pause, Hugh answered, "I really can't think of anything that Frost has done for Herman Miller." The caller then asked whether I was still employed as a consultant to Herman Miller. Hugh's second answer came more quickly, "Oh, of course. You know he keeps asking the damnedest questions." (p. xi)

Although the developers were not empirical researchers, the Scanlon Plan resulted in studies of outcomes. The research to date has consisted of two types of studies. First are the case studies that describe some of the impressive results achieved by companies implementing the Scanlon Plan (e.g., Adams et al., 2014; Collins, 1998; Friedman & Deinard, 1991; Millers & Schuster, 1987; Rifkin, 1994; Weber, 1992). The second type study has examined the causes of success within Scanlon Plans or has attempted to examine the Scanlon Plan's outcome in terms of its component parts (typically, participation, increased motivation, gainsharing plan components; e.g., Burtnett, 1973; Frost et al., 1974; W. H. Greenwood, 1977; Ruh, Johnson, & Scontrino, 1973; J. K. White, 1979). Because the Scanlon Plan intervenes at the organizational rather than individual level, it is more difficult to scientifically measure outcome variables (J. K. White, 1979).

EVOLUTION OF PROFESSIONAL ACTIVITIES AND UNIQUE CONTRIBUTIONS

It is clear that the contributions already discussed were all pioneering—the *sui generis* work of innovators and not activities being made by the then-typical clinical psychologists who focused narrowly on the individual level and mostly on dysfunction (rather than on effective functioning). These contributions began at a time when there was no field of organizational development, and the contributions of I-O psychologists were mostly in the area of personnel selection and research-based understanding of particular organizational phenomena. The contributions of these clinical psychologists were not, by and large, science driven; the work was qualitative and prescientific.

Sensitivity Training and Tavistock Groups

Other efforts that began in the same era largely based on clinical and social psychological methodologies included the sensitivity or T-group movement (Argyris, 1964; Freedman, 1999) and the Tavistock approach (Gould, Stapley, & Stein, 2004). Both were oriented to experiential approaches to improving personal understanding and, in turn, behavior in organization—or so the story went. The popularity of the T-group movement spread rapidly, including the founding of the National Training Laboratories (Freedman, 1999). Later empirical research, however, found limited evidence for the work-related effectiveness of T-groups (Campbell & Dunnette, 1968). Worse, they also put some participants at risk of harm ("causalities" or "deterioration effects"; Hartley, Roback, & Arbramowitz, 1976).

The Tavistock movement (Gould et al., 2004), like the sensitivity groups, was also fairly unstructured but coupled lack of structure with an aloof consultant whose interpretations, particularly as to unconscious processes, were intended to help people understand their reactions to group phenomena including to power and authority, group conflict, and to other group members. The model built heavily on Bion's ideas of work groups (French & Simpson, 2010). These groups had (and to some degree still have) a following among some clinical psychologists, but again there has been little objective empirical evidence as to the approaches' effectiveness or positive impact on work-related outcomes.

Assessment

In contrast to the small-group approaches to change, Bray and Grant (1966) developed a rigorous, empirical process for the assessment of individual candidates for managerial positions at what was then known as "the phone company," AT&T, then the largest private corporation in the United States. Their models for assessment were patterned after the assessment processes used by the Office of Strategic Services to select spies in World War II. These assessments were based on simulations, assessment of abilities and personality, and the clinical combination of the collected data to make predictions about performance. The projective assessments included the Thematic Apperception Test (Murray, 1938) and were summarized by clinical psychologist Joseph Rychlak. Bray received his master's degree in abnormal psychology before going on to obtain a PhD in social psychology at Yale University (Lowman, 2008).

The use of a predictive validity paradigm that spanned multiple years, that included follow-up assessments midcareer, and that tracked career progress of managers in an era when managers tended to stay in one corporation throughout their careers was (and remains) unprecedented. Howard and Bray's (1988) *Managerial Lives in Transition* (also see Howard, 2010) showed that the early midcareer assessments were highly predictive of outcome criteria and that the clinical assessments using projective measures were themselves predictive of some aspects of the results.

During the study, Bray was asked by psychologist William Byham to partner in creating the first corporate assessment center company. Today the internationally successful Development Dimensions International is one of the largest managerial assessment companies in the world.

Organizational Approaches to Treating Mental Disorders

Other pioneering efforts to use or change organizations to reform the treatment of individuals with mental illness are found in the work of George W. Fairweather, a rigorous empiricist, and Seymour Sarason, whose work was based more on theory, advocacy, and experience. Both of these men were innovators and challengers of the common treatments that then dominated the care of those with serious mental disorders (Fairweather) and persons with mental retardation (Sarason).

Fairweather (1967; Fairweather et al., 1969) applied rigorous experimental research paradigms to evaluate alternatives to the then-dominant modality of treating mental illness: long-term hospitalization. He and colleagues also demonstrated the effectiveness of innovative organizations, including the Fairweather Lodge.

Sarason (Weinstein, Reppucci, & Levine, 2010) was also a major influence in the community mental health movement and a critic of many of its organizational limitations (Fried, 2003; Sarason, 1972). A champion of the downtrodden, he advocated for new community and organizational approaches to working with those with mental health and intellectual problems. His books were numerous ($n = 45$) and influential. Among others, they included the following: *The Culture of Schools and the Process of Change* (Sarason, 1971), *The Creation of Settings and the Future Societies* (Sarason, 1972), and *Prospects for a Community Psychology* (Sarason, 1975).

The history of clinical psychology in organizations has been circuitous and diverse. In many cases, the history emphasized the work of pioneers who turned to organizational approaches and the help for people within them in frustration with the limits of the then-dominant clinical psychology paradigms.

PRESENT STATUS

In this section, I document direct and more distal roles for clinical psychologists. This is not an inclusive list but most of the major roles for clinical psychologists are identified.

Direct Applications of Clinical Psychology

In this section, I examine applications of clinical psychology that are directly related to clinical psychology and in which relatively little translation or new knowledge is needed. This is akin to providing psychological services in alternative settings, such as schools rather than in mental health clinics, but where little new knowledge is needed except as related to learning the purposes and issues specific to the application.

Employee assistance programs (EAPs). Arguably, clinical psychology is most directly applicable in EAPs, also called occupational mental health programs. In such programs, individual employees and/or family members or families themselves are assessed and either provided short-term treatment or referral to other providers.

In widespread current usage (Merrick et al., 2007), EAPs reflect the application of counseling and psychological services to their employees and family members. These services provide, usually at no direct costs to employees, assessments of psychological problems and brief treatment when problems are amenable to such care. Otherwise, employees or family members are referred out to local community service practitioners who typically see them using the company-supported insurance benefits. In the case of employees or even family members who present with both mental health concerns and work-related ones, it is desirable for the clinical psychologist to have background and familiarity with work roles because that may be what brings the employees into contact with the EAP.

Although social workers staff many EAPs, clinical and counseling psychologists are also widely found in EAP work. Clearly there are employment opportunities for clinical psychologists in such settings. EAPs have demonstrated their efficacy (e.g., K. L. Greenwood, DeWeese, & Inscoe, 2006) and have generated interesting findings about their effects on organizational variables such as absenteeism (e.g., Spetch, Howland, & Lowman, 2011).

However, they are fundamentally about delivering mental health services in an alternative setting, not about the integration of clinical psychology with the needs or work and other organizations. Only when EAPs intersect with organizational consultation or assessment of work skills does this become a new area of practice but also an area in which clinical psychology knowledge may be useful. For example, research has shown that there are more days absent in the U.S. workforce from depression than from hypertension and heart disease combined, identifying depression as a major cost to employers (Steffick et al., 2006). The workplace provides an unusual opportunity for early symptom treatment and intervention. However, EAPs are only one area in which depression could be identified and managed in the workplace, and clinical psychologists would benefit by working closely with the company's occupational health staff and with company personnel because there are complex issues of how to communicate with employees about depression and in how to assess and intercede.

Assessment of mental health disorders. Assessment for psychopathology is one area in which clinical psychologists have a skill set that is applicable for purposes of selection or evaluation. Certain jobs, particularly those in safety-sensitive positions—such as childcare workers, law enforcement, pilots, bus drivers, and those with access to nuclear weapons—are evaluated for their psychological well-being and absence of risk factors when hired and periodically after hire. The nexus between presence of psychopathology and job risk is not a simple issue, and the presumption that someone without psychopathology will never experience mental disorders potentially affecting job performance is naïve.

The assessment of such conditions in the United States is governed by the Americans With Disabilities Act (e.g., Hein & VanZante, 1993; Landy, Gutman, & Outtz, 2010) passed in 1990 and later amended. Essentially, for protected conditions, assessment of job-related conditions involving physical and mental disabilities are made only after an applicant has otherwise been evaluated and determined to be able to perform the job. Only then, and only after all candidates with or without known handicapping conditions have been similarly evaluated, can the condition be considered (Piechowski & Rehman, 2011).

Probably few would want to fly in an airplane whose pilot and copilot had not been screened to ensure that they were mentally competent to fly the plane. However, pilots may fly for 30 years or more, and, if their personal lives are typical of others in the population, assuredly some will be at risk of mental disorders, substance abuse, and cognitive impairment at some time in their careers. Ruling out "at-risk" candidates for safety relevant positions provides opportunities for clinical psychologists but so does evaluating already employed individuals in safety sensitive and other such positions. In all such cases, in the United States at least, the guiding principle is job relatedness and treating similarly situated individuals in a consistent manner.

It is clear that psychopathology can adversely affect work performance and that persons with predisposing mental disorders can have problems in the work role (Cullati, Courvoisier, & Burton-Jeangros, 2014; Lowman, 1993a, 1993b). For example, as discussed, major depression or anxiety disorders can adversely affect the work role (Steffick et al., 2006). Clinicians are well advised to assess the work role as a standard part of their assessments of adults. This can be through a formal assessment using psychometric instruments or as simply as asking the questions "Are you presently working?"; [if yes] "How are things going at work?"

Less well studied is the impact that work can have on psychopathology. Yet, it is well established that under extreme stress, bullying, harassment, or continual demands for high volume performance, anyone, even those not predisposed to such conditions, can be subject to debilitating mental health (e.g., Boschman et al., 2013; Szeto & Dobson, 2013; Vogel et al., 2012). To take an obvious example, presumably well-functioning and carefully screened adults in the military who serve in war zones are at high risk for the development of posttraumatic stress disorders (Wittchen et al., 2012).

A taxonomy of *psychological work dysfunctions* is presented in Exhibit 27.1 (Lowman, 1993a). Clinical psychologists can serve a useful role in evaluating persons who are at risk even in the case of narrowly clinical diagnostic questions (e.g., "Is this employee at risk for harming self or others?"; "Is this person experiencing medical problems affecting cognition still able to work?").

Distal Applications of Clinical Psychology

Applications in which new competencies and training must be learned are presented next.

Career assessment. In the inter-domain model of career assessment, the goal is to assess in three

EXHIBIT 27.1
A Taxonomy of Psychological Work-Related Dysfunctions

I. Determining the relation between psychopathology and work dysfunctions
    A. Affecting work performance
    B. Not affecting work performance
    C. Affected by work performance
    D. Not affected by work performance
II. Disturbances in the capacity to work
    A. Patterns of undercommitment
        1. Underachievement
        2. Temporary production impediments
        3. Procrastination
        4. Occupational misfit
        5. Organizational misfit
        6. Fear of success
        7. Fear of failure
    B. Patterns of overcommitment
        1. Obsessive-compulsive addiction to the work role ("workaholism")
        2. Type A behavioral pattern
        3. Job and occupational burnout
    C. Work-related anxiety and depression
        1. Anxiety
            a. Performance anxiety
            b. Generalized anxiety
        2. Work-related depression
    D. Personality dysfunctions and work
        1. Problems with authority
        2. Personality disorders and work
    E. Life role conflicts
        1. Work–family conflicts
    F. Transient, situational stress
        1. Reactions to changes in the work role (e.g., new job) whose impact on the work role is time limited
    G. Other psychologically relevant work difficulties
        1. Perceptual inaccuracies
III. Dysfunctional working conditions
    A. Defective job design (role overload, ambiguity, etc.)
    B. Defective supervision
    C. Dysfunctional interpersonal relationships

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separable but conceptually overlapping domains of occupational interests using Holland's (1997) Big Six model of interests, a variety of career-related abilities, and the Big Five model of normal personality (Judge et al., 2008). The integration of data across these three domains combines with knowledge of the individual assessee's reasons for seeking referral and the integrative work across personal career history. It speaks to the clinical skill set found in the classic work of R. White (1960). In conducting a wide array of career assessments, I am struck with how often the problems people encountered and were trying to work through were intricately related to their life themes, to how their interest–ability–personality patterns influenced how they approached these challenges, and with their psychopathology. The psychopathology may not have preceded the career problems but in effect may have been caused by it. An example was the case of depression that does not precede career problems but follows it and one of the clinical issues (Lowman, 1993a, 1993b). Career assessment and counseling is a way to apply clinical skills to important problems faced by most of those who do not naturally fall into a well-fitting career (see Volume 3, Chapter 9, this handbook).

Assessment of "dark side" personality characteristics. The assessment of psychopathology has already been discussed as one application of clinical psychology in work settings. Important work (Dalal & Nolan, 2009; Guenole, 2014; Kaiser & Hogan, 2010; Kaiser, LeBreton, & Hogan, 2015) has emerged about the so-called assessment of the dark side of personality. These characteristics have been demonstrated to place persons at risk for derailing from a position or career path (e.g., Hogan, Hogan, & Kaiser, 2011). To the extent to which these overlap personality disorders in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (American Psychiatric Association, 2013), clinical psychology assessment skills may provide a useful foundation on which to build the subtle assessment process.

Measures such as the Hogan Personality Inventory (Hogan, Hogan, & Murtha, 1992) were designed specifically to measure these dark side characteristics and to predict reasonably well to the propensity to derail on the job. Clinical psychologists receiving further training in this area and interested in personality disorders may find their skill set well suited for assessments and interventions with such individuals, provided they understand and work within work organizations rather than mental health contexts.

Assessment for selection. Assessment for purposes of selection are different in kind from assessment for career development or change. In the case of assessment for selection, the job is given, the individual being assessed is not. The typical purpose is to determine who among a group of candidates is best suited for a particular job or career progression (as in identifying "high-potential" candidates). This type of selection work is quite complicated and calls on content-specific knowledge of a complex literature, laws, and ethics (e.g., American Educational Research Association, American Psychological Association [APA], & National Council on Measurement and Evaluation, 2000; Farr & Tippins, 2010; Society for Industrial–Organizational Psychology, 2003; U.S. Department of Labor, 1978). By and large, this work should be left to, or at least conducted in partnership with, those who have content-specific knowledge because the consequences of being wrong in the approach used or in tricky legal issues can be serious.

Clearly there are opportunities for trained clinical psychologists in such evaluations. The typical graduate training program in clinical psychology does not cover workplace applications, so graduates need to train further in work applications or to partner with psychologists or persons from other relevant disciplines when considering whether the presence of psychopathology is or is not job relevant, does or does not constitute a risk factor worthy of not hiring, and may or may not be accommodated.

Individual coaching. Coaching has flourished because it meets the needs for people to better understand and improve themselves (Kilburg, 2001; Lowman, 2013). Individual coaching is most typically a service focusing on the needs of managers and executives, but there are a variety of other types of coaching, including executive coaching (Skibbins, 2007).

Executive coaching typically includes a one-on-one helping relationship performed in the context of a work organization (where the organization rather than the individual may be the client) and where the purpose is to improve the individual's effectiveness in a work-related role (Kilburg, 2001). Its efficacy is currently in the process of being investigated, but initial results are promising (Grant, 2013).

Clinical psychologists are active in this work. A recent study (Pearlman et al., 2015) found that 34% of a sample of consulting and I-O psychologists performing coaching had trained in clinical or counseling psychology. Coaching parallels psychotherapy in terms of the skill set needed by helping professionals who provide it. With proper preparation, clinical psychologists could apply services relevant to their expertise. Additional training is needed to understand the context in which coaching takes place and to further understand that the purpose of coaching may often be on employee-mandated improvements to the individual's job performance and that continued employment may be dependent on successful change. Of course, coaching may also be directed to issues relevant to personal development, in which case there are fewer ethical issues that apply to the psychologist's role in the multiple relationships that are the norm rather than the exception for doing this type of work.

Management roles. It is likely that few ever undertake training in clinical psychology (or any other specialties in psychology) with the primary ambition or expectation of becoming a supervisor, manager, or leader of others. However, clinical psychologists do become supervisors, as they may have some of the best people skills, or because direct service roles often have natural plateaus, and assuming leadership roles may be the only way to advance in salary and responsibility (Noble, 2006; see also Volume 3, Chapter 29, this handbook).

Leadership can indeed be conceptualized as being a profession in its own right (Drucker, 1954; Kaiser, Hogan, & Craig, 2008). Clinical psychologists who assume leadership need to receive training (formal and otherwise), mentorship, and feedback when they move into such roles (Ball, 2001; Early, 2013; Lowman, 1999). Many of the important competences required for leadership are learned "on the job," and psychologists can apply their natural gifts for learning and for working with people to master these new skills (Chu et al., 2012). It is also important to caution that some principles learned in psychology programs (such as interpreting unconscious motivations) may not be appropriate or may be even counterproductive for supervisors and managers; this is not, after all, psychotherapy.

Ethics and competence. Although clinical psychologists can develop the competencies needed for many of the organizational roles described in this chapter, they will need training and supervision to the extent that their graduate or postgraduate training did not emphasize these skill sets. The Ethics Code of the APA (2010) specifically mandates that psychologists be competent in the services that they provide. The code states the following:

> 2.01 Boundaries of Competence:
> (a) 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. (p. 5).

Additionally, the Ethics Code identifies ethical requirements for new and emerging areas of practice as part of its 2.01 standard:

> (e) 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 clients/patients, students, supervisees, research participants, organizational clients, and others from harm. (APA, 2010, p. 6)

Clinical psychologists who desire to apply their skills to the world of work and the challenges of organizations potentially have much to offer, whether it is in applying clinical psychology in new settings or in ways that require abstraction and further learning. From this chapter's coverage, there is considerable overlap between applications of clinical psychology in new settings, and the learning curve, though still present, should not be too steep. However, for areas that involve mastery of major new domains of knowledge to apply their knowledge and skills, clinical psychologists will need to look to formal training and respecialization programs to be ethically appropriate.

FUTURE OPPORTUNITIES

As the knowledge base of psychology has grown and, as a consequence, has become enormously specialized, it has become more difficult to be competent in more than one area of research or practice. Yet, the future of the field—and its major innovations—will likely be generated by boundary spanning: looking beyond the useful but rigid boundaries that demarcate territory and the privilege of practice but also stifling innovation and advancement. The clinical psychology of the future has the potential, not just to train psychologists competent in doing clinical assessment and psychotherapy, but also in leading others in organizations, in consultation skills and in deeply understanding the work role. If, as Freud (1930/1961) once famously suggested, both love and work are life's two major essential activities, it is time that clinical psychologists be expected to know as much about work as they do about love.

Many new opportunities for clinical psychologists in business organizations will be presented by the Patient Protection and Affordable Care Act of 2010 (ACA). The ACA opens up expansion of care opportunities with a number of previously uninsured individuals who will now have health insurance coverage that includes mental health benefits. However, if all clinical psychologists consider in the ACA is the opportunity to deliver more fee-for-service mental health services, they ignore some of the major opportunities (Fontenot, 2013; Mayes, 2011). The ACA places emphasis is on effectiveness and efficiency of health care delivery, on prevention, and on effectiveness of teams rather than that of individual performers working alone. This requires new perspectives and new ways of training—for example, wellness programs in the workplace (Horwitz, Kelly, & DiNardo, 2013). Programs will reevaluate their offerings, and clinical psychologists will do well to seek out new opportunities for learning new skill sets not likely having been included in their training (Chu et al., 2012).

Regarding the future course of research and practice the psychology of work dysfunctions, I envision a future in which

- every clinical psychologist has at least minimal competency in conducting a diagnostic evaluation that includes the psychological state of the client's work role, and psychotherapists untrained in work issues are considered to be as ill-prepared as those now who are not qualified to address couple or sexual concerns;
- psychologists' involvement in career and work issues is motivated less by anticipated profits than by professional necessity and personal interest;
- specialty clinics are widely available to assist in work diagnosis and intervention; and
- workplaces throughout the nation, and ultimately the world, have teams of competent professionals that can be assembled to create programs in the workplace for treating and preventing work-related problems.

Clearly this vision needs much more work to be fulfilled. At the same time, there is impressive research helping clinical psychologists to apply their expertise to the workplace, to become managers, and to consult to organizations. Furthermore, because of outstanding role models such as Harry Levinson and Carl Frost, clinical psychology can make valued contributions to many areas not typically thought of as mainstream clinical psychology. Our training programs need to find space in already-packed curricula to provide space to help clinical psychologists understand the role and relevance of work, organizations, and leadership to those whose needs they have pledged their professional lives to serve.

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CHAPTER 28

MILITARY SETTINGS

W. Brad Johnson

It is difficult to imagine an institution more fundamentally intertwined with the evolution of psychology than the U.S. military. For the past century, most of psychology's dramatic periods of growth and many of the salient innovations in clinical psychology have originated during the nation's military conflicts and in the context of military clinical practice. Clinical psychologists share a long and distinguished history of service in support of military personnel and the nation (Budd & Kennedy, 2006; McGuire, 1990). The field of military clinical psychology is defined less by distinctive clinical techniques or a unique set of clinical problems than by the context or focus of clinical activity—the military (Driskell & Olmstead, 1989).

At present, approximately 500 uniformed (active duty) military clinical psychologists are employed around the globe in a wide range of contexts, including assignments in service academy classrooms, inpatient medical centers, primary care facilities, outpatient mental health clinics, and forward-deployed combat stress units; on ships at sea; and amidst detritus and chaos following natural disasters (Budd & Kennedy, 2006; Kennedy & McNeil, 2006). An additional 500 hundred civilian psychologists are also employed in military medical centers, mental health clinics, and military educational centers. Military clinical psychologists screen, evaluate, and treat military recruits, active-duty service members, spouses, children, and other dependents. Unlike their nonmilitary counterparts, military psychologists must be competent generalists immediately following internship because uniformed psychologists may be deployed to relatively isolated duty stations or combat theaters to operate as solo mental health experts (Johnson & Kennedy, 2010). In addition to generalist competence, psychologists in the military must demonstrate special expertise in areas such as diagnostic triage, crisis intervention, neuropsychological screening, and posttraumatic stress disorder (PTSD) treatment early in their careers.

Several factors distinguish the military as a unique context for clinical psychology practice (Driskell & Olmstead, 1989). First, military psychologists are obligated to place the superordinate military mission before the interests of both self and individual service members. In the military, anything that does not contribute to the mission—defend the country and fight and win wars when necessary—is often considered superfluous in the eyes of military leaders. Second, clinical work in military contexts is often high-stakes in nature in that the consequences of faulty candidate selection, classification, training, and treatment are probably more serious than in other contexts. Third, military clinical psychologists often have considerably more influence over the lives and careers of individual clients and organizational policy than may be true in civilian settings. Fourth, military psychologists are increasingly likely to deploy—as an embedded health care professional—with military ground units, air squadrons, and aircraft carriers. Finally, clinical psychologists in the military are likely to encounter frequent mixed-agency ethical dilemmas characterized by tension between the best interests

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of the individual client and the best interests of the military organization. Writing about this phenomenon during World War II (WWII), Robert R. Sears (1944) reflected that

> In the services, the main task is one of making the group operate more effectively as quickly as possible and with the largest number of people. The individual's civilian aims and motives give way to his efficient performance of military duties as the principle frame of reference within which his welfare is sought. (p. 504)

In the balance of this chapter, I highlight the historical milestones and the evolution of practice in military clinical psychology. Next, I review both the unique contributions of military practice to clinical psychology broadly and the distinctive ethical dilemmas created in military contexts. Finally, I present the current status of clinical psychology in the military as well as several predictions regarding the future of military clinical psychology.

HISTORICAL PROFILE AND EVOLUTION OF ACTIVITIES

Major developments in the history of clinical psychology are inextricably linked to periods of American military conflict (see Chapters 1 and 2, this volume). Psychologist involvement in selection, assessment, personnel placement, diagnostic triage, and mental health care is tied to the exigencies of national requirements in time of war (B. L. Jones, 2013). Beginning with World War I (WWI) and extending through the current Global War on Terror, clinical psychologists in military settings have evolved from a limited role in assessment and placement to an indispensable role in combat readiness, combatant care, and mental health policy development.

WWI

The entry of America into the WWI in 1917 marked the birth of military psychology and the first effort to apply psychology to military problems (Kennedy & McNeil, 2006). At that time, the field of psychology was barely 25 years old and had only 366 members in its association (Driskell & Olmstead, 1989). In 1917, American Psychological Association (APA) president Robert Yerkes convened a special meeting at Harvard University to determine how psychology might contribute to the war effort. The meeting included psychology luminaries James McKeen Cattell, G. Stanley Hall, Edward L. Thorndike, and John B. Watson (Kennedy & McNeil, 2006). Participants suggested that psychologists might assist in areas such as selection, training, aviation, and motivation of troops. Also in 1917, the National Academy of Sciences created the National Research Council (NRC) for the purpose of organizing scientific support for the war effort.

The NRC proposed that the Surgeon General commission psychologists as active duty officers to implement the recommendations of the Yerkes committee, including testing to screen for mental defects and psychological problems and to facilitate effective job assignments (Hopwell, 2013). By 1918, 132 commissioned officers worked in the new division of psychology in the Office of the Surgeon General (Zeidner & Drucker, 1988); psychologists' ideas for testing, selection, training, aviation, and motivation become major wartime research programs. Simultaneous to the push for group intelligence test development, the NRC developed a Moral Division when it became immediately apparent to officers that many recruits seemed unclear about the purpose of the war and far too many recruits presented problems of motivation, discipline, and leadership (Keene, 1994). The Committee on Methods for the Psychological Examination of Recruits was headed by Yerkes and initiated one of the first applied psychological research projects in support of military operations. Under Yerkes's leadership, the research program screened 4,000 recruits in the Army and Navy in the process of developing the first large-scale IQ tests (Driskell & Olmstead, 1989)—the Army Alpha test (for literate recruits) and the Army Beta test (for illiterate recruits). Although the success of Yerkes and his colleagues won General Staff approval to apply the new IQ tests broadly in screening and placing recruits, throughout the war, many commanders remained dubious that intelligence tests could measure the factors that mattered most in fighting men (e.g., zeal, confidence, initiative, courage). Despite these reservations, the

Army Alpha and Beta tests were developed with stunning rapidity and were used with such success that by war's end in 1918, there were 24 induction camps for soldiers around the country. Eventually, 1,750,000 soldiers were screened with these early intelligence measures (Hopwell, 2013; Keene, 1994).

According to Yerkes (1918), the WWI war effort constituted the first attempt by the discipline to deal "scientifically and effectively with the principle human factors in military organization and activity" (p. 114). The success of psychological testing and screening during WWI was the tipping point resulting in the public recognition of psychology as a respected scientific field. Group testing developed during the war had dramatic implications for schools, universities, and other civilian entities, and the Army Alpha Test became the precursor to the Wechsler intelligence tests (Kennedy & McNeil, 2006). Further, aviation psychology was devised and launched during WWI as psychologists developed protocols for screening pilots, including algorithms for predicting which recruits would be successful during aviation training (Kennedy & Kay, 2013). Moreover, the first clinical treatments for a syndrome known as "war neurosis" in WWI were developed and implemented by psychologists working in clinical settings (Young, 1999). Precursors to modern-day treatments for PTSD, these early interventions for war neurosis, combat stress, and shell-shock included the first cognitive-restructuring techniques and contributed to the advent of cognitive psychotherapies (Kennedy & McNeil, 2006).

WWII

Although psychology and the military effectively went their own ways in the period between the two great wars (1918–1939), WWII would mark the dawn of clinical psychology as a distinct specialty area within psychology and a renewed effort to apply the burgeoning science of psychology to the challenges of war. WWII would mark the beginning of neuropsychology as a specialty as well as a program of research by B. F. Skinner to train pigeons to guide missiles to targets in the days before the advent of electronic guidance systems (Kennedy & McNeil, 2006).

In anticipation of WWII, the Army Adjutant General's office established the Personnel Testing Section to develop plans for mass classification and placement in the event of war (Driskell & Olmstead, 1989). It was during the war that psychologists' efforts to develop sophisticated group intelligence screening measures evolved to include the Army General Classification Test (Zeidner & Drucker, 1988). During WWII, psychologists also developed the first "culture fair" intelligence tests for screening recruits with markedly heterogeneous backgrounds and educational experience (Kennedy & McNeil, 2006). Personality testing was launched during the war, leading to development of the Minnesota Multiphasic Personality Test (Page, 1996). Moreover, the first scientific efforts to assess and identify malingering—specifically, efforts to avoid military service—originated in the work of military psychologists in the early 1940s.

WWII also marked the birth of military clinical psychology as leaders of the mobilization effort recognized the need for a robust neuropsychiatric service to support troops. By the end of WWII, approximately 400 psychologists had been commissioned in the Medical Administrative Corps to provide direct clinical services to deployed troops (Harding & Cravens, 1957). Some of these became the first clinical psychologists assigned to military hospitals around the world. Due to the vital importance of psychologists in the war effort, military psychologists achieved permanent active duty status in 1947, and a series of permanent military psychology internships was established at major military medical centers in 1949 (McGuire, 1990).

At the height of the war, Sears (1944) provided a snapshot of the activities of military clinical psychologists in an article for *Psychological Bulletin*. His 1944 survey of clinical psychologists revealed that they were scattered throughout the services, often in somewhat isolated duty stations and sometimes with ambiguous titles and job descriptions. Nearly all of them worked under the direct supervision of psychiatrists. In the Navy, clinical psychologists were assigned primarily to training stations and general hospitals as independent examiners and as consultants to psychiatrists. In the Army, psychologists were called "Personnel Consultants"

(Sears, 1944, p. 505). They offered selection, classification, and broad command consultation services in addition to assignments in the neuropsychiatric units of large military hospitals. Additionally, Army clinical psychologists were attached to the Rehabilitation Centers of individual service commands:

> Here the clinical psychologist applies his skills in dealing with soldiers who have made such a poor adjustment to the military situation that they have been convicted by a general courts-martial and have been sent to these centers in the hope that they may be made into useful members of the armed forces. (Sears, 1944, p. 506)

At war's end, the Division of Military Psychology became a founding division within the reorganized APA, and Boring (1945) published a seminal work titled *Psychology for the Armed Forces* in which he created a typology of the various activities or competencies required of military clinical psychologists during WWII. Salient competencies included (a) *observation*—accuracy in perception; (b) *performance*—skill acquisition and efficiency in clinical work; (c) *selection*—classification and job placement; (d) *training*—teaching and learning; (e) *personnel adjustment*—individual's adjustment to military life, motivation, morale, resilience, and stress management; (f) *social relations*—leadership and interpersonal skills; and (g) *public opinion assessment and propaganda*—psychological operations (Boring, 1945). In an opinion survey of military psychologists at war's end, veteran psychologists made three consistent recommendations regarding the future of military clinical psychology moving forward (Andrews & Dreese, 1948). The recommendations were that (a) psychologists should be assigned to jobs consistent with their level of competency as established by training and experience, (b) a special corps should be established for psychological services so that psychologists might function independently, and (c) military commanders should be better educated regarding the unique skills and services provided by psychologists.

Post WWII

With the development of allied medical service corps throughout the branches of the U.S. military and a system of APA-approved internship sites by the 1950s, clinical psychology had arrived as an independent health care discipline in the years following WWII. In the 1950s, the roles of military clinical psychologists became quite similar to the roles of civilian clinical psychologists. For the most part, uniformed psychologists engaged in diagnosis, research, psychotherapy, and teaching (Harding & Cravens, 1957). Typical work assignments included hospitals, mental hygiene clinics in boot camps, disciplinary barracks, research centers, and teaching at military service academies or other training schools.

It was during the Korean and Vietnam Wars that clinical psychologists were fully integrated members of treatment teams—typically including a psychiatrist, clinical psychologist, social worker, psychiatric nurse, occupational therapist, and other specialties. In many instances, psychiatric teams were assigned to forward-deployed combat theaters (Harding & Cravens, 1957).

The Korean conflict marked a significant turning point in the treatment of combat stress. Traumatized service members began to be treated near the front lines and quickly returned to duty according to the model of trauma treatment developed at that time (proximity, immediacy, expectation, and recovery). This immediate exposure approach resulted in return-to-duty rates between 80% and 90% for combatants with stress-related disorders (F. D. Jones, 1995).

During the Vietnam War, psychologists developed the Armed Services Vocational Aptitude Battery as a broad aptitude selection tool that continues in use to this day. In the Global War on Terror, psychologists utilize Armed Services Vocational Aptitude Battery scores as a baseline estimate of premorbid intellectual functioning in service members who sustain head injuries (Kennedy & McNeil, 2006). The recent conflicts in Iraq and Afghanistan have ushered in an entirely new era of forward or embedded deployment to combat theaters for clinical psychologists. In the past 15 years, nearly a thousand uniformed psychologists have deployed to forward triage centers, combat surgical hospitals, Navy aircraft carriers, and Marine amphibious assault ships at sea (Kraft, 2007).

UNIQUE CONTRIBUTIONS

Among the many contributions of the military context to clinical psychology, perhaps none have been so important as the rapid evolution of conceptualization, assessment, and treatment of traumatic stress syndromes. Beginning with the classification of "soldier's heart" or "exhausted heart" in the Civil War and continuing to the present day diagnosis of PTSD, military health care professionals—clinical psychologists in particular—have been instrumental in refining treatments for combat-related stress syndromes (B. L. Jones, 2013). During the Korean conflict, clinical psychologists were deployed to medical holding companies within 25 miles of the battle front (Harding & Cravens, 1957). Utilizing the U.S. Department of the Army's (1994) emerging doctrine for controlling combat and operational stress, four principles were applied to combat-related stress: (a) provide interventions in close proximity to the battle to keep the service member part of his or her unit, (b) provide intervention immediately or as soon as possible after the stressful event, (c) communicate an expectation of full recovery to the combatant, and (d) keep the interventions simple while emphasizing restoration of basic physical needs and self-confidence (Moore & Reger, 2006).

Pioneered by military psychologists, this rapid-response trauma debriefing model was soon applied to noncombatant critical incidents in the military. For instance, the Army and Navy trained and deployed special psychiatric rapid intervention teams to respond quickly following training accidents, suicides, and other fatal mishaps (Kennedy & McNeil, 2006). Special psychiatric rapid intervention teams are typically multidisciplinary (e.g., psychologist, psychiatrist, nurses, corpsmen) and have become a model for civilian application in law enforcement and emergency response organizations following natural disasters and bombings (McCaughey, 1987).

Another noteworthy contribution of military psychologists has been the evolution of operational or intelligence applications of psychology. In the midst of WWII, the United States established the Office of Strategic Services and employed psychologists to contribute to America's clandestine intelligence-gathering efforts (Banks, 2006). The evolution of activities and competencies in this area included special mission personnel selection, influence and information operations, indirect behavioral assessments, survival-evasion-resistance-escape training, and operational interviewing and debriefing support (Banks, 2006; Staal & Stephenson, 2013). Many of the specialty areas developed in association with the Office of Strategic Services have found significant utility among psychologists working in forensic evaluation, law enforcement, personnel selection, and social influence (e.g., advertising, political campaign consultation).

A final contribution of military psychology to clinical psychology has been the creation of evidence-based training programs in psychopharmacology for psychologists (see Chapter 15, this volume). In the 1990s, the U.S. Department of Defense (DOD) pioneered a program of prescription privileges for military psychologists. In 1994, the first psychopharmacology fellows graduated from postdoctoral training (Sammons, Levant, & Paige, 2003). The military's success in training psychologists to safely and effectively prescribe psychotropic medications has served as a model for prescription privileges broadly and the evolution of prescription privileges for clinical psychologists in a growing number of licensure jurisdictions (Kennedy & McNeil, 2006).

UNIQUE ETHICAL DILEMMAS

Over the years, clinical psychologists in the military have encountered distinctive challenges when attempting to adhere to APA's (2010) *Ethical Principles of Psychologists and Code of Conduct* while abiding by federal regulations governing the roles of commissioned military officers. There are several elements of military environments that create unique ethical dilemmas for psychologists. First, military psychologists must balance the roles of commissioned officer and clinical professional (Jeffrey, Rankin, & Jeffrey, 1992). Following graduate training and certainly following licensure, clinical psychologists are obligated to uphold APA's Ethics Code. Yet, after taking the oath of office, all military officers are obligated to adhere to federal statutes, to obey lawful orders, and to promote the fighting power and combat readiness of military personnel (Zur & Gonzalez, 2002).

Mixed-agency dilemmas occur when there are conflicts between loyalties or obligations to patients and an organization (Howe, 2003). Military mixed-agency dilemmas may be exacerbated when the country is at war because of the need to routinely determine service members' fitness to return to duty in combat zones (Kennedy & Johnson, 2009). Psychologists in military settings often report role stress related to the range of professional duties owed to the individual client, DOD, and perhaps even to the larger society. Exacerbating mixed-agency tensions is the occasional challenge of identifying the psychologist's primary "client." Is it the service member sitting in the consultation room, or is it the service member's commanding officer, or is it even an unknown entity within DOD? Although mixed-agency tensions are common, genuine conflicts—in which obligations to individual clients are utterly incongruent with obligations to the military organization—are quite rare.

Second, there are occasional instances of incongruence between APA and DOD regulations. These may be most notable in regard to APA's (2010) Ethics Code bearing on confidentiality, informed consent, multiple relationships, and competence. On occasion, military psychologists have been censured by ethics committees for abiding by military requirements or, conversely, have been disciplined by DOD for adhering to ethical standards that conflict with DOD regulations (Jeffrey et al., 1992).

A third challenge to ethical practice in military environments relates to the growing phenomenon of embedded duty assignments for psychologists. Johnson, Ralph, and Johnson (2005) defined *embedded psychology* as

> psychological practice in an environment characterized by the intentional deployment of a psychologist as part of a unit or force when the psychologist is simultaneously a member of the unit and legally obligated or otherwise bound to place the unit's mission foremost. (p. 73)

Among the most challenging elements of embedded practice in military units is the fact that psychologists—technically—hold multiple roles with every client. Specifically, the military psychologist is always both care provider and commissioned officer with the obligation to uphold the Uniform Code of Military Justice (2004), to respect rank and military decorum, and (at times) to make decisions that might run counter to a service member's individual best interests (Johnson et al., 2005).

Fourth, military clinical psychologists may have less ability than their civilian counterparts to decide whether to enter or exit clinical relationships with members of the community (Johnson et al., 2005). Particularly in embedded environments or in isolated duty stations, military providers may be required to handle every psychological problem faced by unit members. Regardless of the service member's status, complaint, diagnosis, or preexisting relationship with the psychologist, the psychologist must accept every client. It may be equally difficult to terminate cases when deployed on an aircraft carrier or as the solo mental health provider in a forward-deployed unit. Of course, this lack of decisional autonomy with respect to initiating and terminating clinical relationships exacerbates the risk of multiple relationships. Several authors have cautioned that military psychologists will almost certainly provide services to colleagues, friends, and supervisors—the only question is "when," not "if" (Johnson, 2008; Zur & Gonzalez, 2002).

Boundaries of Competence

APA's (2010) Ethics Code requires psychologists to provide services only within the boundaries of their competence, based on their education, training, supervised experience, consultation, and professional experience. Yet, military psychologists often function in solo duty assignments, far from direct supervision or consultation, as the only mental health provider. During military and other training experiences, these psychologists learn to take some pride in their ability to effectively manage "anything that walks through the door." As solo deployed practitioners, psychologists feel pressure to provide treatment to all service members, regardless of their established competence or the diagnosis, cultural variables, or specialized treatment requirements (Johnson, 2008; Moore & Reger, 2006).

Although APA's Ethics Code allows for provision of services that exceed one's competence in emergency situations, it is often up to the individual military clinician to assess which deployment contexts count as genuine emergencies.

Diagnostic Fidelity

Like psychologists in some other institutional contexts, military psychologists may experience tensions between the ethical mandate to render clinical diagnoses based exclusively on clinical facts and established scientific evidence (APA's, 2010, Ethics Code, Standards 2.04 and 9.01) and competing pressure to achieve specific administrative dispositions with service members. Uniformed psychologists must be cautious about becoming co-opted by commanding officers in achieving expeditious administrative outcomes (Howe, 2003; Jeffrey et al., 1992). Most often, this quandary may appear in the form of pressure to diagnose a troublesome client with a personality disorder to facilitate expeditious separation from the service. However, there have been many instances in which military psychologists have experienced pressure from commanding officers to downplay or even ignore clear evidence of psychopathology (e.g., PTSD, substance abuse, depression) for the purpose of keeping a high-value service member "in the fight" or available for an upcoming combat deployment. Once again, the military psychologist must balance an ethical obligation to base opinions and recommendations on sufficient evidence to support those findings (APA, 2010) with the commissioned obligation to support the military mission.

Risks to Confidentiality

All psychologists are obligated to take reasonable precautions to protect confidential information obtained through or stored in any medium (APA, 2010). Yet, military psychologists will confront a culture that places greater priority on the commanding officer's federally mandated "need to know" privilege when it comes to access to information about any service member that might be critical to making decisions about fitness and deployability (Jeffrey et al., 1992; Johnson, 2008). Military psychologists must provide clients with rigorous informed consent about the risks to confidentiality in military settings while working diligently to protect client privacy and confidentiality to the extent possible. Although this may often be achieved by proactive consultation with military commanders and by helping commanders to shape the information requested, psychologists will nonetheless encounter many threats to client confidentiality—especially in small units and deployed work settings.

Multiple Roles Are Ubiquitous in Military Settings

Although APA's (2010) Ethical Standard 3.05 ("Multiple Relationships") cautions psychologists about entering into a multiple relationship if the multiple relationship could reasonably be expected to impair the psychologist's objectivity, competence, or effectiveness, multiple relationships constitute one of the most persistent mixed-agency dilemmas for military psychologists. By virtue of being a provider and an officer, military psychologists may find themselves confronted with multiple relationships on a regular basis. Not only do military psychologists encounter their clients in a wide variety of work and social contexts but they also are often required to assume administrative, supervisory, or forensic roles with prior, current, or future clients (Johnson, 2008). Although military psychologists use a number of strategies to minimize harm to clients related to multiple roles, many multiple relationships will simply be unavoidable; military clinicians must increase their tolerance for boundary crossings—which may occur daily—while assiduously avoiding boundary violations (Gutheil & Gabbard, 1993).

Serving Lesbian, Gay, and Bisexual (LGB) Service Members

The U.S. military has long excluded LGB persons from openly serving in the military, initially due to the erroneous linkage between homosexuality and psychopathology (Johnson & Buhrke, 2006). When the American Psychiatric Association removed homosexuality from its list of psychiatric disorders, the military was forced to articulate an alternative rationale for continued exclusion of LGB persons from service. The result was Directive 1332.14 (DOD, 1982), which asserted that homosexuality was incompatible with military service because it was likely to (a) impair accomplishment of the military mission and (b) diminish the ability of service members to maintain discipline, good order, and morale. When decades of research evidence failed to support either assertion, DOD policy was modified in the National Defense Authorization Act of 1994, commonly known as "Don't Ask, Don't Tell" (DADT). This statute eliminated the requirement to discharge service members on the basis of sexual orientation alone but maintained the provision for discharge for those members who had engaged in (or had a propensity to engage in) nonheterosexual relationships. For many years, military psychologists encountered conflict between treatment guidelines for LGB persons (APA, 2012) and DOD statutes prohibiting open service by individuals who disclosed same-sex attraction or sexual relationships. Over the years, uniformed psychologists adopted a range of strategies for coping with this conflict, from refusing to discuss sexual orientation with clients to encouraging such disclosure and providing "off the record" LGB-affirmative treatment (Johnson et al., 2015).

In a tipping point for military policy on LGB service, the U.S. Congress formally repealed the federal law prohibiting transparent military service for LGB persons (DADT Repeal Act, 2010). The repeal became effective in 2011. Military psychologists are now free to openly discuss matters related to sexual orientation with clients and to provide services to LGB couples without wrestling with the dilemma of how to provide care in a context that prohibits same-sex sexual behavior (Johnson & Buhrke, 2006). However, the DADT repeal may cause some institutional resistance and may actually heighten certain stressors for LGB service members (Johnson et al., 2015). For instance, sexual stigma and prejudice are likely to persist for some time in both codified and informal ways: LGB service members may face a spike in sexual orientation-based harassment; military psychologists—having relatively less experience—may be unprepared to deliver competent services to openly LGB clients; and decisions about whether to disclose sexual orientation may continue to be anxiety-provoking for service members, particularly those who have remained nondisclosive through most of their military careers.

PRESENT STATUS

There are nearly 500 active duty (uniformed) clinical psychologists currently serving, with hundreds more on reserve status or occupying civilian jobs in military treatment and training centers. Military clinical psychologists frequently provide the following services to uniformed service members: diagnostic evaluations, brief psychotherapy, health psychology and behavioral medicine, neuropsychological evaluations and rehabilitation, suicide risk assessment and prevention, and substance abuse services (Budd & Kennedy, 2006). When serving with deployed combat units, clinical psychologists may be assigned to Navy hospital ships and aircraft carriers, Marine expeditionary strike groups, and Air Force or Army combat stress control units.

One of the most prevalent activities of the military psychologist is fitness-for-duty evaluations. When a commanding officer requests a Command Directed Evaluation, he or she will typically require the psychologist to address the following practical questions:

> Is there a mental health condition that is contributing to the current difficulty? With treatment, will the member be able to return to full duty? Can the member carry a weapon at the current time? Is it appropriate for the member to have access to classified information? Is the member qualified for worldwide deployment? Is the member suitable for continued military service? (Budd & Harvey, 2006, p. 38)

Military psychologists are also asked to make recommendations about a service member's return to full duty following treatment, return to limited duty while treatment continues, and whether the service member should be administratively discharged (e.g., low intelligence, personality disorder, sleepwalking) or referred to a medical evaluation board (e.g., psychotic disorders, major depression, bipolar disorder). Military psychologists are also asked to evaluate service members for submarine duty (how might the person function in confined spaces and close contact with others?), security clearances (is the service member suitable for access to highly sensitive information?), special schools or atypical duty assignments, and even conscientious objector status (Budd & Harvey, 2006).

More recently, military psychologists have applied clinical psychology to the military aviation community (Hoofman & Chappelle, 2013; Kennedy & Kay, 2013). In this role, psychologists are concerned with the safety of individuals as well as the health and safety of the entire aircrew. The unique demands of aviation duty include nighttime flying over dangerous terrain, risk of spatial disorientation, fatigue and diminished alertness, and long-term health effects including chronic pain and elevated blood pressure (Hoofman & Chappelle, 2013). Not only are evaluations for full flight duty considerably more rigorous than other psychological evaluations, service members in the aviation community are often highly guarded around military mental health care professionals for fear of being "grounded."

In concert with the wars in Iraq and Afghanistan, military clinical psychologists have begun to be embedded with military units and to be deployed with increasing frequency to combat zones. The result has been the recent evolution of a new subspecialty within military clinical psychology: *combat clinical psychology* (Williams & Johnson, 2006). Combat clinical psychology occurs when a uniformed psychologist is deployed as part of a combatant unit or with a forward-deployed medical unit charged with combat stress prevention and rapid response to trauma (Moore & Reger, 2006). In combat clinical psychology contexts, the commissioned officer/psychologist must accept responsibility to lead combatants in a war zone. Combat clinical teams are intended to conserve unit fighting strength by stemming the flow of battlefield evacuations.

Perhaps no development in the roles of clinical psychologists in the military has been more momentous than the use of psychological skills to improve a commander's decision making in conducting combat operations (Johnson, 2008). Termed *operational psychology*, psychologists apply their expertise in helping to identify enemy capabilities, personalities, and intentions; supporting intelligence operations; and designing and implementing assessment and selection programs for special populations and high-risk missions (Williams & Johnson, 2006; Williams et al., 2006). Recently, Staal and Stephenson (2013) honed the operational definition of operational psychology:

> Operational psychology is a specialty within the field of psychology that applies behavioral science principles to enable key decision-makers to more effectively understand, develop, target, and/or influence an individual, group, or organization to accomplish tactical, operational, or strategic objectives within the domain of national security or national defense. (p. 97)

Considerably less common are roles in direct intelligence gathering from high-value detainees as a consultant to an interrogation. Although very few military psychologists ever work with detainees, it is essential that those who do first receive appropriate training and develop necessary competence in this operational role. Moreover, work with detainees must align with the principles and standards of APA's (2010) Ethics Code and relevant human rights conventions.

Finally, contemporary military clinical psychologists must be attentive to their own self-care and well-functioning. Survey findings suggest significant levels of psychological distress among military health care providers in Operations Iraqi Freedom and Enduring Freedom, including PTSD symptoms, depression, anxiety, and substance abuse (Hickling et al., 2011). In time of war, military clinical psychology is a high-risk profession—psychologically and sometimes physically (Johnson & Kennedy, 2010). During deployment, military psychologists are likely to be directly and vicariously exposed to traumatic events and disturbing images (Moore & Reger, 2006). In this context, psychologists may be vulnerable to vicarious traumatization, burnout, and diminished empathy with clients. It is incumbent upon military psychologists to engage in available means of social support and self-care and to seek professional consultation and collegial connections when possible.

FUTURE DIRECTIONS

It is difficult to imagine an institution that has been more integral to the evolution and refinement of clinical psychology than the U.S. military. Many of the core elements of the clinical psychologist's current practice originated in the context of the demands of war (e.g., assessment, classification, brief treatment, prescription privileges). Moving forward, psychologists employed in military settings are likely to see several trends in training and practice.

As military clinical psychology moves forward, it is likely that there will be deeper integration of psychologists into the operational or forward-deployed military. Although the history of military psychologists typically found clinicians located in stateside military sites, the tide is changing toward ever more embedded jobs. In addition to the critical roles of uniformed psychologists in Iraq and Afghanistan, the Navy's experience with the "Specialists at Sea" program—launched in 1998—reveals the value of deploying psychologists within military units. For instance, on the U.S. aircraft carrier John F. Kennedy, 28 sailors were medically evacuated from the ship during a routine 6-month deployment to the Mediterranean Sea and Persian Gulf. In the next deployment—following assignment of a Navy clinical psychologist to the ship's crew—not a single sailor required evacuation (Ralph & Sammons, 2006). Medical evacuations are not only costly and risky but they can demoralize the remaining crewmembers.

Of course, a key element in enabling more effective delivery of mental health services near the front line is the ongoing battle to decrease mental health stigma in the military. Strong support from military leaders, the modeling of self-care by military commanders, and the elimination of adverse career consequences for seeking treatment are all key elements to reducing stigma (Zinzow et al., 2013). Framing mental health problems as "injuries" similar to physical injuries (Kraft, 2007) and emphasizing the obligation to take care of each other (Ralph & Sammons, 2006) are promising strategies in the military culture.

In response to the reality of more deployments and greater exposure to combat operations, military accession for clinical psychologists will be more focused on preparing trainees for the vicissitudes of trauma exposure. Senior military psychologists with experience in combat contexts will assist interns and residents with the emotional and cognitive preparation and inoculation necessary to manage extreme stress effectively (Johnson & Kennedy, 2010; Kraft, 2007). Specifically, psychologists should be thoroughly prepared for deployments with predeployment training targeting physical, psychological, emotional, and social fitness. Moreover, these psychologists must be supported throughout the deployment cycle and monitored, assessed, and supported during the process of reintegrating when they return. It is particularly important that military psychology develop a stronger sense of community—including regular engagement among members such that psychologists stationed in isolated and high-risk locations maintain emotional well-being and clinical competence (Johnson et al., 2013).

In the future, military clinical psychology leaders must continue advocacy for policy change in the area of ethics. Psychology leaders will likely collaborate with DOD leaders to craft policies that are in line with APA's (2010) Ethics Code. For instance, DOD statutes related to the confidentiality and safekeeping of client records and the right of the uniformed psychologist to withhold elements of a medical record from a commanding officer must be refined to reduce instances of legal–ethical conflict for military psychologists. It seems likely that the military will develop an active process for providing all military psychologists with immediate ethics consultation—regardless of their deployed location.

In the future, military psychologists are likely to become fully integrated across branches of the military. Historically, uniformed psychologists have been commissioned into the Air Force, Army, or Navy and have received training in branch-specific hospitals and have used their skills exclusively within a single branch of service (Air Force, Army, Navy). At present, there is a trend toward "tri-service" integration of medical services in the military. Most recently, Walter Reed Army Medical Center was fully integrated with Bethesda Naval Hospital to create the Walter Reed National Medical Center in Bethesda, Maryland. Increasingly, psychology interns and residents will receive training that crosses traditional branches of service, and increasingly, military psychologists will work in joint-service contexts in which they provide services to military members regardless of branch of service. Because the work of military psychologists is nearly identical across the three services—particularly in combat settings—it is even feasible that military psychology will become a single entity, de-identified with any specific service branch.

Military clinical psychologists will also continue to lead the way in the areas of psychiatric triage, rapid diagnosis, brief psychotherapies, neuropsychological evaluation, and psychopharmacology. Under most circumstances, military psychologists must be generalists. In solo duty stations, they function as the "family practice" professional for all things mental health related. However, they must always be prepared to adjust to the sudden requirements of combat stress control experts in time of war (Kraft, 2007).

Finally, the roles of military psychologists have already begun a shift from largely clinical or "interventionist" efforts to increasingly prevention-focused "resiliency" efforts. The Comprehensive Soldier Fitness Program in the Army offers one current example of this evolution (Cornum, Matthews, & Seligman, 2011). In the future, military clinical psychologists will be on the forefront of program development—largely psychoeducational—aimed at preventing the emergence of clinical syndromes among service members.

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CHAPTER 29

PHYSICAL REHABILITATION FACILITIES

Timothy R. Elliott and Erin E. Andrews

Many professions are involved in the rehabilitation process of persons who incur significant physical disabilities. Physical rehabilitation facilities feature multidisciplinary teams that rely on interdisciplinary knowledge to inform clinical practice. These teams typically include physiatrists (physicians specializing in rehabilitation medicine), nurses, physical therapists, occupational therapists, speech pathologists, audiologists, vocational counselors, recreational therapists, social workers, and psychologists, depending on the particular setting. Throughout its long involvement in rehabilitation, clinical psychology brings unique expertise in theory, research, and skill that benefit rehabilitation.

In this chapter, we provide a brief history of clinical psychology in physical medicine and rehabilitation (PMR) settings, and we describe influential events, individuals, and developments that shaped the role of clinical psychology in physical rehabilitation facilities. We summarize the unique contributions and activities of psychologists in these settings and the competencies that constitute best practice. We conclude with an overview of the present status and future directions of psychologists in rehabilitation.

DEFINITION AND PREVALENCE

Physical rehabilitation facilities are associated with medical rehabilitation programs. Ideally, rehabilitation consists of comprehensive, integrated care for individuals who acquire significantly disabling conditions, such as spinal cord injuries (SCIs), traumatic brain injuries (TBIs), stroke, chronic pain syndromes, amputations, and burns. Interdisciplinary care is offered in inpatient and outpatient programs. Facilities accredited by the Commission on the Accreditation of Rehabilitation Facilities provide individualized, patient-centered, and goal-oriented services including appropriate medical care, education and training for the patient and family, vocational services, ancillary services to promote functioning, and linkages to appropriate community services and care options. In general, these accredited medical rehabilitation programs—including 1,430 in the United States and 229 in Canada—aspire to minimize the impact of physical impairments, reduce activity limitations and environmental barriers, promote maximum participation (including wellness, quality of life, and community integration), and facilitate self-advocacy.

Notable physical rehabilitation facilities in the United States include the institutions funded by the National Institute of Disability and Rehabilitation Research as “model systems of care.” Institutions receiving the model system designation are renowned for their excellent clinical care and their systematic study of innovative service and clinical outcomes. Four institutions in the United States participate in the model systems of care for burn injuries, 14 institutions in the model systems of care for SCI, and 16 institutions participate in the TBI model systems of care.

The Veterans Health Administration (VHA) in the United States is the largest single provider of SCI rehabilitation services in the world. The VHA has

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25 SCI centers throughout the United States serving approximately 42,000 veterans with SCI and related spinal disorders. The VHA also has seven facilities designated as Level I Regional Amputation Centers that provide specialized amputation rehabilitation, and an additional 18 sites are designated as Level II Polytrauma/Amputation Network sites. In response to the high rate of TBIs—and concomitant conditions including posttraumatic stress disorder (PTSD), limb loss, burns, sensory impairments, and chronic pain—among veterans returning from Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and Operation New Dawn (OND), the VHA and the U.S. Department of Defense (DoD) established five major Polytrauma Rehabilitation Centers and 18 facilities as Polytrauma Network sites.

The number of psychologists working in physical rehabilitation facilities is unknown. Recent workplace surveys conducted by the American Psychological Association (APA) do not list “physical rehabilitation facility” as a possible worksite. Psychologists in the VHA may have positions in a mental health service line and be assigned to a rehabilitation service, and others may have positions in geriatrics or extended care and be similarly matrixed to a rehabilitation service. This obfuscates the ability to determine the actual number of psychologists in Veterans Affairs physical rehabilitation facilities, and it does not account for psychologists whose positions are split between or among units. Many rehabilitation psychologists and neuropsychologists participate in all of the model systems of care, and VHA requires that both be represented in the Polytrauma Centers and Network sites. The VHA also assigns psychologists to each SCI center, making it the largest single employer of psychologists in SCI rehabilitation.

CONDENSED HISTORY

Psychologists’ involvement in physical rehabilitation followed federal policies enacted to meet the needs of injured workers and military service personnel during the early and mid-20th century. Pioneering initiatives first advanced vocational rehabilitation as a general enterprise to return injured workers to the labor force. However, more aggressive public policies were required to meet the needs of veterans disabled during wartime. The physical health of these individuals was an immediate concern as the nature of the disabling injuries during World War II and the lack of medical expertise to attend to these conditions compelled policy initiatives to innovate interventions.

These initiatives brought together two related but distinct groups of physicians. One group identified with “physical medicine” emerged from the leadership of John Stanley Coulter at Northwestern University. Coulter had served during World War I after which the use of “physical methods” had benefited veterans with wartime injuries. With support from the American Medical Association and collaboration with physical therapists and physicians interested in the emerging field of radiology, a professional association in physical medicine was formed. Coulter developed a training program at Northwestern. Frank Krusen, another proponent of physical medicine, developed a similar training program at the Mayo Clinic. During the throes of World War II, many military physicians were assigned to an intensive, 3-month training course in physical medicine developed by Krusen to prepare them for working with injured personnel (Dillingham, 2002).

The second influence emerged directly from the uniformed ranks. An astute internist (and lieutenant colonel) in the Army Air Corps assigned to the convalescent and rehabilitation service at Jefferson Barracks in Missouri noticed the boredom, fatigue, and physical deconditioning of soldiers convalescing on site. Howard A. Rusk prescribed systematic, progressive activities and therapies to condition the soldiers to help them return to active duty (Blum & Fee, 2008; Dillingham, 2002). With supportive data from an evaluative, quasi-experimental study and a marked increase in the number of soldiers returning to duty, the practice of “rehabilitation medicine” was recognized by the Medical War Manpower Board, and rehabilitation programs were established throughout the military. Interestingly, during this same time period, Ludwig Guttman, a neurologic surgeon (and German refugee) in charge of the Spinal Injuries Centre at Stoke Mandeville, England, prescribed physical therapies, range of motion exercises, and recreational therapies to promote the adjustment of wounded British soldiers at the center (Dillingham, 2002; Sherwin, 2012).

Following the war, "physical medicine" and "rehabilitation medicine" were combined, and the American Medical Association recognized its designated board specialty, physiatry, in 1947 (Materson, 2000). Krusen coined the term and pronounced it as "fizz-ee-at'-tree" in an apparent attempt to avoid confusion with the term "psychiatrist." In the years following World War II, the Veterans Administration (VA) established the prototypical PMR service in which a physician—typically, a physiatrist—headed a team of colleagues from nursing, physical therapy, and occupational therapy to meet the needs of veterans on the rehabilitation unit.

The integration of clinical psychology into VA physical rehabilitation programs followed a more circuitous path. The VA created the counseling psychologist position in 1952 to address the vocational rehabilitation needs of veterans. For some time, counseling psychology was separately associated with vocational efforts in VA, whereas clinical psychology was affiliated with psychiatry. Eventually, PMR programs in the VA subsumed most vocational services, and counseling psychologists were integrated into clinical psychology positions under a psychology or mental health leadership structure.

The demand for psychological services was greater following the war than at any other time in the history of the United States, and the need exceeded available supply. Individuals from other psychological specialties took on various clinical duties. Beatrice A. Wright, a social psychologist and protégé of Kurt Lewin at the University of Iowa, worked as a counselor with the U.S. Employment Service helping veterans return to work. In time, Wright and others with similar backgrounds in social psychology would exert a tremendous influence on the eventual field of rehabilitation psychology.

The work and contributions of psychologists in the contemporary physical rehabilitation enterprise can be directly traced to precedents set by clinical psychology during the postwar years. To illustrate, we describe the evolution of clinical psychology in physical rehabilitation facilities in three distinct settings in the postwar era: at the Rusk Institute for Rehabilitation Medicine at New York University (NYU), in the Department of Rehabilitation Medicine at the University of Washington School of Medicine, and in the VHA.

Rusk Institute of Rehabilitation Medicine at NYU

Following the war, Rusk accepted a faculty position with the NYU Medical Center and established the Institute of Rehabilitation Medicine (later renamed in his honor). On the basis of available accounts, Rusk hired the first psychologist to hold a position (faculty and staff) in an academic physical rehabilitation setting, James F. Garrett. As chief psychologist, Garrett developed the psychology staff and was also in charge of social work and vocational rehabilitation. Polio and SCIs were the conditions most frequently served by the hospital. In 1952, Leonard Diller was hired to head a division for children at the institute. With Rusk's support and encouragement, Garrett left NYU to assume a position with a division of the Department of Health, Education, and Welfare (Larson & Sachs, 2000). In the Office of Vocational Rehabilitation (and later with the Rehabilitation Services Administration), Garrett was instrumental in developing federal initiatives to provide grants to stimulate and sustain research in high-priority areas; to support the training of psychologists, counselors, and physicians to work in rehabilitation; and to sponsor training conferences for similar purposes including the Princeton (1958) and Miami (1959) conferences that were instrumental in establishing the rehabilitation psychology specialty (Elliott & Rath, 2011). In time, the National Institute on Disability and Rehabilitation Research evolved from these agencies.

Diller became the psychology director at the Rusk Institute in 1953. An internship program for psychology doctoral students was developed; it was the second internship site approved by APA. A postdoctoral training program was also created. In 1960, the department was one of the first four federally funded research and training centers.

Working with the multidisciplinary team, psychologists at the Rusk Institute for Rehabilitation Medicine developed empirically driven, individually tailored programs to improve learning, memory, planning, organization, emotional self-regulation, and other executive skills of patients with brain injuries, including wounded veterans returning from the Korean War (1950–1953). Their individualized approach to cognitive remediation remains a cornerstone in contemporary brain injury rehabilitation. The reputation of the neuropsychological rehabilitation program at the institute spread internationally in part because of the premium the institute placed on empirical research for faculty and trainees and, in part, because of Rusk's involvement with the World Rehabilitation Fund and its many publications and their international distribution. Thus, psychologists at the institute were consulted to assist in the development of rehabilitation facilities abroad. Following the Yom Kippur War in 1973, Yehuda Ben-Yishay and Diller assisted the Israeli government in applying the therapeutic, holistic approach to rehabilitation developed at the Rusk Institute for Rehabilitation Medicine to treat Israeli personnel who had sustained TBIs in combat.

Psychologists at the Rusk Institute for Rehabilitation Medicine and in the Department of Rehabilitation Medicine at NYU were also involved in developing innovative psychological treatments for patients with cancer and in applying classical and operant conditioning to visceral, reflex, and motor responses to alleviate a variety of somatic symptoms and physical complaints. This latter research eventually established biofeedback as an evidence-based technique for use with persons with disabilities, and to condition responses previously thought to be autonomic. Psychologists at the Rusk Institute for Rehabilitation Medicine displayed considerable influence in assuming leadership roles with national associations in the field. Diller, for example, served as president of the American Congress of Rehabilitation Medicine (ACRM) and the Division of Rehabilitation Psychology (within the APA).

Department of Rehabilitation Medicine at the University of Washington School of Medicine

The Department of Rehabilitation Medicine at the University of Washington School of Medicine was established in 1957. The first psychologist, Wilbert E. Fordyce, joined the department in 1959. With the lack of rehabilitative services in the Pacific Northwest, the department grew quickly from their beginnings with outpatient clinics to a comprehensive inpatient hospital in 1959 and to an inpatient rehabilitation program at the Seattle VA Medical Center in 1961.

The need for psychological expertise grew accordingly, and to meet these clinical challenges, psychologists on staff had a generalist approach, relied on broad theoretical perspectives, and adapted established measures and practices to address an array of disabling conditions ranging from stroke and head injury to SCIs and chronic pain. For example, Fordyce used the predominant personality instrument at the time—the Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1942)—to study differences in the cause of injury among men with SCIs. Fordyce's (1964) study was among the first to demonstrate the utility of clinical assessment instruments in rehabilitation and the value of normative data in the process.

Fordyce's lasting contributions evolved from collaborations with the interdisciplinary team in strategic efforts to rehabilitation patients with chronic pain syndromes. With fellow psychologist Roy S. Fowler, he developed an operant model of pain behavior and systematically implemented it in an interdisciplinary pain rehabilitation program (Fordyce, 1976). In time, the benefits of managing overt pain behavior—and reinforcing active "well" behaviors—influenced clinical practices and policies across health care for decades. Fordyce's scholarship and his students and collaborators heavily influenced the nascent fields of behavioral medicine and health psychology. He was a founding member of the International Association for the Study of Pain and the American Pain Society; he served as president of the American Pain Society and of the ACRM.

A departmental colleague, Roberta Trieschmann, integrated learning models to design psychological services to patients on the SCI unit. Adding this element to the Lewinian $b = f(p \times e)$ perspective advocated by Wright (1960) for rehabilitation psychology provided considerable direction for a generation of psychologists working in SCI rehabilitation. Trieschmann's (1980) book on SCI was perhaps the first comprehensive statement on psychosocial approaches to SCI rehabilitation.

Fordyce's values of critical thinking and collegial collaboration had other lasting contributions. When a junior colleague presented him with the conundrums of working with pain associated with burn trauma and its treatment, Fordyce asked the colleague if hypnosis might be a promising albeit untested treatment option. Following his mentor's advice, David R. Patterson (2005) applied and studied the utility of hypnosis in the treatment of burn pain in the rehabilitation setting. In this work and in demonstrating its effectiveness, Patterson has recently collaborated with others to develop virtual reality technologies to use self-hypnotic and imagery techniques to alleviate patient pain and suffering (Patterson et al., 2010).

An empirical thread runs through all of these clinical applications and activities. Psychologists in the department developed a reputation for scholarship and collaborated with those at other institutions in high-impact, policy-relevant research projects. This included a collaborative project with colleagues at the Rusk Institute for Rehabilitation Medicine in 1979 to develop rehabilitation outcome measures. The department was one of first participants in the federally funded model systems of care in SCI, and it was one of the first in the model systems of care in burn rehabilitation (which placed considerable emphasis on pain management). The department now participates in the model systems of care in TBI.

VHA

Many VHA policies and initiatives over the past several decades integrated clinical psychology into physical rehabilitation settings. The Vocational Rehabilitation Amendments of 1943 expanded vocational rehabilitation for combat and noncombat veterans. In response to this policy, the Topeka, Kansas, VA Medical Center developed a rehabilitation program that included individual and group psychotherapy, physical therapy, occupational therapy, and recreational activities for hospitalized veterans. "Industrial therapy," in which veterans worked in and around the hospital, was an early effort at vocational rehabilitation, or what today is called "compensated work therapy" in VA Medical Centers. Some veterans even performed psychology technician duties as part of their vocational rehabilitation.

Specialized interdisciplinary medical care for SCI was not readily available in the civilian sector during the World War II years. George Hohmann, the chief of the psychology service at the Tucson VA, was instrumental in promoting psychological perspectives and expertise in VA SCI units. Hohmann was a World War II combat veteran with a SCI who used a wheelchair; he obtained his graduate degrees with the GI Bill. Similarly, the Palo Alto VA psychology service started the first inpatient brain injury program in the VA under the leadership of psychologist Nancy Scott, who served as the program director (Baker, 2007). This program reportedly housed 8–10 residents and offered cognitive rehabilitation and remediation.

Other individuals, such as Frederick Elton Ash, a psychologist and Navy veteran who worked as consulting psychologist for VA Central Office, were instrumental in ensuring clinical psychology service in programs that served veterans with other physical disabilities and chronic medical conditions (Baker & Pickren, 2007). Consequently, clinical psychologists are active in neuropsychology clinics, SCI units, and chronic pain management programs throughout the VHA and in all of the physical rehabilitation programs developed over the past decade for veterans who incurred disabling injuries during OEF/OIF/OND.

UNIQUENESS OF PROFESSIONAL ACTIVITIES

The preceding history illustrates the varied and unique contributions of clinical psychology in physical rehabilitation facilities. All of the functional competencies established by the American Board of Professional Psychology for the Rehabilitation Psychology specialty displayed in Exhibit 29.1 can be seen in the evolution of clinical psychologists described in the previous section (Hibbard & Cox, 2010). Psychologists in physical rehabilitation facilities rely on a scholarly and scientific knowledge base to provide services across three broad categories:

assessment (e.g., psychological, neuropsychological, psychosocial), intervention (e.g., counseling/psychotherapy, psychoeducation, behavioral management, family interventions, sexual counseling, cognitive remediation), and consultation (e.g., with interdisciplinary teams, primary caregivers, third-party payers, family members, regulatory systems). Most of these competencies are consonant with practice in other settings, but the physical rehabilitation setting necessitates an understandable depth of knowledge (about a specific disability and of the services provided by other team members) that is complemented with a flexible yet informed skill set to meet the unique needs of the individual patient. Certain modifications must also be made to provide professional services in the physical rehabilitation setting. Providers should have a strong knowledge of the diversity implications of disability—including awareness of disability culture and an understanding of the processes of disability identity development—and awareness of the roles of intersecting diverse identities (Gill, 1995, 1997).

As previously discussed, rehabilitation is an interdisciplinary enterprise. Therefore, psychological practice serves the best efforts of the team and the patient in providing individualized treatments and activities that meet the unique needs and goals for each patient. Time during the inpatient stay is a precious commodity, and it is unlikely that a patient would be released from scheduled rehabilitation therapies to see a psychologist without prior team approval. These factors influence the degree to which a psychologist will be involved in each individual case. For example, in chronic pain management programs, it is standard practice to conduct a comprehensive psychological assessment. Similarly, a comprehensive neuropsychological assessment is common practice in TBI rehabilitation programs. In the former, traditional measures of intellectual abilities and instruments, such as the Minnesota Multiphasic Personality Inventory and the Minnesota Multiphasic Personality Inventory—2 (Butcher et al., 1989), will be administered. In the latter, measures of neuropsychological functions and deficits will be administered, and the assessment of personality and behavioral patterns will vary, depending on clinical judgment and characteristics of the individual case. In both scenarios, the clinical assessment is time intensive, conducted under fairly routine conditions, and both serve to identify unique issues and concerns that will be addressed in prescribed therapies.

However, in other inpatient rehabilitation programs, there is no standard “battery.” Clinical assessment in inpatient programs for persons with recent-onset SCI or severe burns requires an appreciation of the factors associated with optimal adjustment and performance in rigorous rehabilitation therapies. These assessments may occur under routine conditions, but usually a psychologist is compelled to interview a patient at bedside to briefly evaluate cognitive abilities and awareness, current distress (and symptoms indicative of a possible mood or anxiety disorder), alcohol and substance abuse (as contributing or complicating factors), the presence of acute or persistent pain, legal and work history, and family support and involvement in rehabilitation (including relationship issues and possible need for family caregiver support). The psychologist may determine that further assessment is warranted at a later time, but access to the patient depends on the consent of patient and the team (to permit time away from prescribed therapies).

In other situations, the team may request a psychological opinion of specific behavioral issues that occur. For example, a psychologist may be asked to evaluate a patient with SCI who has been readmitted for surgical repair of severe pressure sores or to evaluate issues presented by a vascular amputee patient who refuses to stop smoking. Issues of nonadherence to self-care and therapeutic regimens following acquired disability are frequent concerns postdischarge. In any of these assessment scenarios, psychologists may have to make accommodations to a patient’s functional limitations and, in the process, deviate from standardized testing procedures. Psychologists are expected to report any nonstandardized procedures in scoring or administration.

Psychological recommendations must be effectively communicated to the interdisciplinary team. Interdisciplinary team members are often intolerant of the jargon and nuances that typify contemporary psychological theories; these are seen as professionally serving and often irrelevant.

EXHIBIT 29.1

Functional Competencies for Board Certification in Rehabilitation Psychology

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SCIENTIFIC BASE AND APPLICATIONS

Knowledge of scientific and evidence-based theory and research that informs practice.

Critically evaluate scientific and evidenced-based theory and research and implications for practice.

Coherent and comprehensive explanation of clinical practice based on relevant research and theory of client behavior and abilities.

Awareness of theories and research on interpersonal interactions, individual and cultural diversity, special populations, professional identification, as well as ethics and legal foundations.

ASSESSMENT

Appropriately select, administer, modify (as indicated), and interpret standardized tests, behavioral observations, and clinical interviews, given the needs of the client.

Recommendations are made and communicated to promote useful outcomes in the following assessment competencies:

- Adjustment to disability: patient
- Adjustment to disability: family
- Extent of extent and nature of disability and preserved abilities
- Educational and vocational capacities
- Personality assessment
- Mood assessment
- Cognitive abilities
- Decision-making capacity
- Sexual functioning
- Pain
- Substance use/abuse identification
- Social and behavioral functioning

INTERVENTION

Appropriately use treatment modalities for the needs of the client, and conduct interventions with skill and sensitivity.

Use a relevant knowledge base to promote useful outcomes with the following interventions:

- Individual therapeutic interventions as related to adjustment to disability
- Family/couples therapeutic intervention as related to adjustment to disability
- Behavioral management
- Sexual counseling with persons with disabilities and their partners as appropriate

CONSULTATION

Effectively consult with other professionals appropriate to the needs of the client in ways that will promote useful outcomes in the following consultation competencies:

- Behavioral functioning improvement
- Cognitive functioning
- Vocational and/or education planning
- Personality assessment
- Mood assessment
- Substance abuse identification and management
- Sexual functioning and disability

CONSUMER PROTECTION

Effective advocate in the following consumer protection competency areas:

Laws related to and including the Americans With Disabilities Act

Awareness and sensitivity to multicultural and diversity factors

Note. Competencies are available at http://www.abpp.org/i4a/pages/index.cfm?pageid=3361.

The physician typically operates as the "head" of the team and as such will oversee the infusion of psychological expertise in a rehabilitation program or may choose to ignore or dismiss it entirely. A working knowledge of team and group dynamics can facilitate team functioning, especially in managing patients who present behavioral difficulties or therapeutic nonadherence.

Although psychological assessments are commonplace in rehabilitation facilities, traditional psychological interventions are not, particularly in the civilian sector. Psychologists have excelled in developing and refining several important rehabilitation treatments but are often not the "front line" provider of them. Specifically, nondoctoral-level colleagues from other disciplines provide cognitive remediation training to patients with TBI, guided imagery with virtual reality during skin debridement (Hoffman et al., 2011), and constraint-induced movement therapies in stroke rehabilitation (Taub, Uswatte, & Pidikiti, 1999). These therapies focus on the overall needs, health, and functioning of the patient. Traditional face-to-face psychological interventions for specific behavioral and mental health issues depend on the needs, availability, and consent of the patient. Quite often a patient with a traumatic limb loss or in SCI rehabilitation refuses any "psychological" attention. When patients consent to individual therapy and the time is permitted, psychologists must be prepared to provide education, support, and evidence-based interventions for patients (and their families) who experience clinically significant adjustment problems (e.g., depression, anxiety) and behavioral issues (e.g., interpersonal conflict, pain management, substance abuse). Psychologists use a variety of techniques including cognitive–behavioral interventions for patient and caregiver depression, motivational interviewing for alcohol abuse problems, and biofeedback and hypnosis for pain management.

Mental health care is a priority in the VHA, and mental health expertise is promoted and integrated throughout their rehabilitation programs. Several evidence-based psychotherapies have been selected by the VHA Office of Mental Health Services for "rollout" training to licensed mental health providers including psychologists, social workers, psychiatrists, and (in some cases) nurses. Rollout training in selected therapies usually consists of an approximately 3-day intensive training workshop followed by 6 months of consultation with a trainer with expertise in the therapeutic modality. These therapies are then applied directly in the setting where the provider is placed, including physical rehabilitation units. This program includes training in cognitive–behavioral therapy for chronic pain, cognitive–behavioral therapy for insomnia, acceptance and commitment therapy for depression, motivational interviewing, and problem-solving training, among others. This is in stark contrast to rehabilitation programs in the civilian sector in which mental health interventions are often construed as tangential to the inpatient rehabilitation enterprise and are often not reimbursed.

Clinical psychologists observe confidentiality and comply with Health Insurance Portability and Accountability Act of 1996 regulations about patient privacy. However, practice in physical rehabilitation requires a working knowledge of the Americans With Disabilities Act of 1990 (ADA) and the Americans With Disabilities Amendment Act of 2008. The ADA affirms accommodation, equal opportunity, as well as access and protections from individuals and public and private institutions. It is within the scope of practice to inform patients and families about the legal rights granted by the ADA. It is also within the scope of practice to consult with other entities and agencies about the rights and protections granted by the ADA to a client. There are other important supplemental competencies in patient protection. These include skills in (a) advance directives and "wish to die" situations, (b) assessing abuse and exploitation (e.g., sexual, financial, physical, emotional), and (c) establishing and implementing standards of care and best rehabilitation practice. These competencies require vigilant attention to policy and ethical practice that is realized in ongoing, routine clinical practice.

PRESENT STATUS

Like many other health care professions, clinical psychology experiences interesting challenges and opportunities in the wake of changing demographics and health care financing. Data from the U.S. Census Bureau reveal that the number of persons with a disability increased from 36.1 million in 2008 to 38.4 million in 2012 (approximately 12.3% of the nation's population; Houtenville, 2013). The increase may be attributed to the occurrence of disabling features and sequelae of chronic diseases (e.g., diabetes, hypertension) and to the aging of the nation's population (the rate of disability increases for men and women as they age; Institute of Medicine, 2007). Adults 75 years of age and older have the highest rates of TBI-related hospitalizations, and the increases in fall-related TBI among persons 65 years of age and older is one of the reasons why falls are now the primary cause of TBI in the United States (surpassing motor vehicle and other high-impact accidents). Finally, veterans from OEF/OIF/OND with some form of polytrauma—including PTSD, TBI, limb loss, or chronic pain—also contribute to the overall increase in the number of persons with disabling conditions. These changing demographics contribute to the increase in the number of positions opening for clinical psychologists in the VHA, in particular.

However, this increase also strains health care systems and institutions that provide rehabilitation and subsequent outpatient care. This is true for the VHA and for the civilian sector as well. In the federal fiscal year 2010, 43.5% of Medicaid payments were to people with disabilities (Houtenville, 2013). Individuals with disabilities are at risk to develop secondary health complications that often have behavioral and social pathways, including disparities in access to care, treatments, and community and institutional barriers that impede health. For example, individuals with disability are more likely than nondisabled peers to have lower rates of preventive care and health screenings, forego physical activity (often for lack of access), report poor to fair health status, develop chronic diseases (e.g., diabetes, obesity), and be unemployed (Iezzoni, 2011). Individuals with disability are more likely than others to experience severe psychological distress, and increasing levels of distress are associated with higher rates of chronic disease and health conditions and decreased access to health care and prevention services (Okoro, Dhingra, & Li, 2014), and these disparities may be particularly pronounced among those with multiple limitations that restrict their mobility (Horner-Johnson et al., 2014). The financial costs associated with chronic and disabling health conditions over time have resulted in cost-containment efforts that include cuts in support for disability services and insurance coverage. Consequently, resources are allocated away from traditional acute and postacute inpatient rehabilitation programs (resulting in shorter rehabilitation stays) to outpatient and community-based programs.

Shifts in reimbursement policies also compel a critical evaluation of all rehabilitation practices. The prevailing medical model of practice favors specialty services for diagnostic conditions. Not surprisingly, psychologists who perform neuropsychological assessments and services are more likely to be reimbursed for inpatient services than generalists, particularly for clinical assessments. Neuropsychological practice has grown tremendously in physical rehabilitation over the past 25 years. Stroke and brain injury are among the most frequent disabilities treated with inpatient programs, so this expertise is needed. In fact, data from APA (2013) reveal that more than 50% of the members of the Division of Rehabilitation Psychology in 2012 were also members of the Division of Clinical Neuropsychology (Division 40). This is one of the highest percentages of comembership among APA divisions.

The evidence base for many rehabilitation therapies, generally, and psychological interventions, specifically, receives intense scrutiny. Support for psychological interventions in rehabilitation has not followed the linear path usually found in the research supporting evidence-based treatments in traditional areas of practice. Rehabilitation interventions, generally, are individualized to the unique needs, functional limitations, and goals determined in an interdisciplinary assessment of each patient, rather than a specific mental health concern. External funding for psychological intervention research has been sparse. Although problems such as depression are observed among a significant minority of patients with acquired disabilities, the difficulties obtaining adequate, representative samples for study and devising acceptable control or "treatment as usual" conditions undermine attempts to study specific intervention strategies in randomized clinical trials. Quite often the available clinical intervention research is characterized by small sample sizes and single case designs. An evidence-based review found no randomized clinical trials of psychological interventions (or of antidepressant effects, for that matter) in the peer-reviewed literature for depression following SCI despite a long-standing recognition of the problems posed by depression in this population (Elliott & Kennedy, 2004). More recent meta-analytic studies of the available work to date found small to large effect sizes of cognitive–behavioral therapies for depression, anxiety, coping, assertiveness, and elements of quality of life post-SCI (Dorstyn, Mathias, & Denson, 2011; Mehta et al., 2011).

A greater blow, perhaps, to the evidence base occurred recently when the Institute of Medicine found in their review of cognitive rehabilitation therapy (CRT) "limited, and in some cases modest, support for the efficacy of CRT interventions" (Koehler, Wilhelm, & Shoulson, 2011, p. 257) for individuals with TBI. The report acknowledged that moderate evidence existed for some forms of CRT and alluded to the problems that exist in conducting high-quality clinical intervention research in the rehabilitation setting. Conclusions about cognitive rehabilitation were mixed in a meta-analysis conducted by colleagues (Rohling et al., 2009) and in in-house reviews conducted by insurance companies. At the present time, Cigna, for example, does not cover cognitive rehabilitation for academic or work performance because, according to the company's standards, it is not medically necessary; furthermore, Cigna also does not cover cognitive rehabilitation for mild TBI (including concussion and postconcussion syndromes) because it is considered to be experimental, investigational, or unproven.

Clinical psychologists maintain prominent roles in policy-relevant research vital to rehabilitation. Currently, psychologists with academic appointments in rehabilitation medicine serve as editors or coeditors of leading multidisciplinary journals in the field, including the *Journal of Head Trauma Rehabilitation*, *Archives of Physical Medicine and Rehabilitation*, *Brain Injury*, and *Rehabilitation Psychology*. Psychologists are active in developing measures of important rehabilitation outcomes for inclusion in the Patient-Reported Outcomes Measurement System (Heinemann et al., 2015). Clinical psychologists also work on behalf of professional associations—the ACRM, in particular—to conduct ongoing, systematic reviews of the empirical evidence for traditional inpatient therapies (such as cognitive rehabilitation; Cicerone et al., 2011) and studies of TBI rehabilitation program outcomes for veterans and active duty personnel (Vanderploeg et al., 2008) as well as the effectiveness of antidepressants on depression among persons with SCI (Bombardier et al., 2014).

Consistent with the shifting emphasis away from inpatient to community-based services, interest in psychological interventions that promote quality of life postdischarge has increased. A recently completed multisite randomized clinical trial found that a supported employment program had significant effects in placing veterans with SCI into competitive employment over the course of a year (Ottomanelli et al., 2012). Other studies support the use of long-distance technologies to treat depression among persons with multiple sclerosis (Bombardier et al., 2013) and with TBI (Bombardier et al., 2009). Evidence also indicates that problem-solving training provided in videoconferencing (Elliott et al., 2008) and telephone sessions (Berry et al., 2012) can lower depression reported by family caregivers, and it appears to benefit their family member with severe disability as well. Similar effects for problem-solving training provided in web-based sessions to parents of children and adolescents with TBI have been found (Wade, Carey, & Wolfe, 2006a, 2006b). All of these interventions demonstrate the utility of behavioral interventions that can be effectively administered by nondoctoral-level providers, potentially suitable for inclusion in packaged, capitated service plans for individuals in the community.

The evidence base is also being shaped by current changes at the agencies that fund clinical rehabilitation research. The combined research budget for rehabilitation research in the DoD and the VHA far exceeds the funds dispersed to the National Institute on Disability and Rehabilitation Research and the National Center for Medical Rehabilitation Research at the National Institutes of Health. Another source of grant support for rehabilitation research—the National Center for Injury and Violence Prevention and Control at the Centers for Disease Control—recently dropped all disabilities but TBI from its research portfolio in response to budget cuts and mandated restructuring of its mission. The DoD and the VHA now fund the first longitudinal studies of the natural history of mild (and repeated) TBI as well as the effectiveness of interventions for TBI and pain, for TBI and PTSD, and for returning veterans with various disabilities to gainful employment.

FUTURE OPPORTUNITIES

Clinical psychologists conceptualize disability from a biopsychosocial perspective. Physical rehabilitation facilities are embedded in a medical model of disability: A patient must have a diagnosis, and specialized services for that condition are provided. Rehabilitation programs (and their corresponding literature base) are organized around these conditions (e.g., SCI, TBI, multiple sclerosis). However, an alternative model of disability—one promoted by disability rights and advocacy groups—is shaping the future of rehabilitation policies and practices. Delineated in the International Classification of Functioning (ICF) by the World Health Organization (2001), the social model of disability deemphasizes the importance of the physical disability diagnosis and conceptualizes disability as it is defined by the physical, social, structural, and attitudinal barriers in the environment that impede a person's full participation in society. The diagnosis of a physical disability is insufficient to explain, anticipate, understand, or address any aspect of the lived disability experience. "Disability" is construed as any limitation in activity or participation. This perspective underscores the value of competencies in advocacy and scholarship in identifying, mitigating, and eliminating societal and environmental barriers to participation. The implications for rehabilitation are immense: Functional health and well-being is more important than a single medical diagnosis, and health care policies, planning, and supports should direct services that promote independent living, functioning, and full participation in society (rather than to basic and clinical services; Institute of Medicine, 2007; Peterson, 2011).

McCarthy (2014) has observed that this "new paradigm" is a modern reconceptualization of person–environment interaction articulated by Wright (1960) for psychologists working in rehabilitation settings. The ICF framework explicates the need to promote the health and actual functioning of the individual in the community and in the home, and it explicates the need to reduce barriers to health and functioning that exist in the lived environment. Thus, a higher premium is now placed on attending to the environmental context (to reduce barriers and promote access) and the ability of the individual to participate in routine and desired activities in the home and community. Indeed, these aims echo many of the traditional "value-laden principles" of rehabilitation (Wright, 1972).

The effects of adopting the ICF model are occurring at the highest levels of policy: To comply with the Workforce Innovation and Opportunity Act enacted in July 2014, the National Institute on Disability and Rehabilitation Research will be moved out of the Department of Education and into the Administration on Community Living in the Department of Health and Human Services. It will be renamed the National Institute on Disability, Independent Living, and Rehabilitation Research to reflect its emphasis on independent living, as stipulated by the Workforce Innovation and Opportunity Act. The Interagency Committee on Disability Research will also be transferred to the Department of Health and Human Services. These changes are described as consonant with the mission and long-range plan of National Institute on Disability and Rehabilitation Research and other federal agencies with similar interests in the health and function, employment, and community living of individuals with disabilities (Tschida, 2014). At this time, it is assumed that ongoing support for the model systems of care will continue, but more resources will be allocated to home-based and community programs.

The attention to independent living and community participation runs parallel with shifting emphasis to outpatient and community-based programs. Third-party payers will continue to expect inpatient medical rehabilitation programs to demonstrate their effectiveness in increasing patient functional abilities (which, in turn, reduce impairments and facilitate participation). Doctoral-level services that can be reliably and predictably reimbursed will likely continue in the inpatient setting. In this event, psychologists with neuropsychological expertise will probably remain active in inpatient rehabilitation programs.

The Level I trauma center is an emerging area of practice for clinical psychologists with rehabilitation expertise. Level I trauma centers are mandated to provide the highest quality care to patients with severe injuries and to have active educational, research, injury prevention, and public outreach programs (Warren, Stucky, & Sherman, 2013). Warren et al. (2013) have argued that psychologists with rehabilitation experience assist trauma teams in providing a continuing of care, staff support, efficient solution-focused assessments, and solution-focused treatments (including short-term therapy, psychoeducation, behavioral methods for pain management, and self-management skills, generally). Many individuals with little or no health insurance are admitted to Level I trauma centers with disabling injuries, and they are subsequently discharged to the community without an opportunity for inpatient medical rehabilitation. Psychologists can be instrumental in identifying individuals at risk for complications and potential readmission following discharge (including PTSD; Powers et al., 2014).

The ICF social model of disability will benefit psychologists who "like their counterparts in public health, orient themselves toward person–environment interactions, so central to the Lewinian tradition" in rehabilitation (Meyerson, 1988, pp. 186–187). Psychologists with rehabilitation expertise can assume influential roles in developing, administering, and evaluating innovative community and home-based services that promote the health, function, and participation of individuals with disabilities. These services will include the use of telerehabilitation to provide rigorous therapies in the home (e.g., Lum et al., 2006), training in the home to facilitate quality of life and personal health (Bombardier et al., 2013), and refining assessment protocols to facilitate the strategic provision of personal care services to persons with severe disabilities (Elliott et al., 2011). These psychologists may also be active in developing innovative programs at the state level: Provisions in the Patient Protection and Affordable Care Act of 2010 and specific Medicaid waiver programs allow states to explore novel home and community-based services and resources for persons with disabling conditions (Reinhard, Kassner, & Houser, 2011). The unique skill sets required to interact and negotiate with other interdisciplinary stakeholders at the state level are quite different from the traditional consultative and therapeutic skills familiar to clinical psychology. Additional training and experience in policy formation with state agencies may be required.

Consistent with its legacy, rehabilitation science and practice advances in response to national needs during and following international conflicts. The increases in the number of clinical positions and in available research funds in the VHA, in particular, will have subtle and obvious effects on the field. For many psychologists, the VHA provides the first and potentially long-lasting training experiences in rehabilitation facilities during the internship year. Psychologists who previously had little interest in or exposure to physical disability now work with interdisciplinary teams to further the understanding of, and treatments for, polytrauma (Brenner, Vanderploeg, & Terrio, 2009). The assessment and treatment of mild TBI was not a feature of the TBI model systems of care in the civilian sector; however, it is a major focus of clinical research and practice in the DoD and the VHA, given the prevalence of mild TBI among returning service members and veterans (Vasterling, Bryant, & Keane, 2012).

With the explicit value on mental health services and the expectation for evidence-based interventions, we expect to see impressive gains in the evidence base for psychological treatments for patients served in rehabilitation programs from the current and ongoing research sponsored by the DoD and the VHA. For example, psychologists in the VHA may produce more psychological intervention research for mental health issues (e.g., depression, PTSD) for persons with various disabilities during inpatient rehabilitation and following discharge, as these colleagues may have greater latitude and institutional support to study these topics than colleagues in traditional PMR settings. Furthermore, psychologists trained in the VHA model will have experiences and expectations about the primacy of psychological expertise and involvement in rehabilitation programs at variance with the standard models existing in the PMR departments in the civilian sector. Although psychologists in traditional PMR settings have critical roles in serving the best interests of the interdisciplinary team in practice and in research, they operate in an organizational structure that limits their independence in practice and scholarship, unlike psychologists in the VHA. It is unlikely that the differences between these two models will be resolved, and these differences may eventually affect professional collaborations and cross-fertilization across the two settings.

The relative independence of professions in rehabilitation from the oversight of physiatry is a long-standing challenge (Gritzer & Arluke, 1985). New organizational configurations could provide opportunities to develop and provide innovative programs to address behavioral concerns of persons with disability, commensurate with the ICF social model. Indeed, in a promising example in the public sector, the Department of Health Psychology at the University of Missouri was started by psychologists leaving the Department of Physical Medicine and Rehabilitation so that they could conduct their own professional affairs, evaluations, and policies. They have privileges at the rehabilitation hospital, and they provide neuropsychological and rehabilitation services throughout medical departments in the Health Sciences Center. Perhaps the next iteration of psychologists will follow a similar path to establish independence and to affirm greater control for psychological practice and research to benefit persons with disabilities.

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CHAPTER 30

ADDICTION TREATMENT SETTINGS

Mark D. Schenker

The addiction treatment system has evolved from several disparate influences. Grass-roots recovery movements, medicine, psychiatry, social work, religion, and psychology have all contributed to this field. Psychology has not always been as prominent in this area as it has become. Miller (2002) wrote, “Thirty years ago, the addiction field was regarded largely as a scientific and professional Siberia into which few psychologists ventured” (p. 292). However, in the last few decades, psychologists have become primary contributors to the understanding of addiction and the development of addiction treatment centers.

DEFINITION AND PREVALENCE

The term *addiction* did not appear in the *Diagnostic and Statistical Manual of Mental Disorders* until the fifth edition (American Psychiatric Association, 2013). The concept of addiction has expanded to include behavioral or “process” addictions in addition to chemical dependency (Shaffer, 2012) due, in part, to the recognition of similarities in behavioral manifestation and in underlying neural mechanisms (Frascella et al., 2010). Although there is a consensus for including chemical dependencies within this rubric, there remains controversy about the inclusion of process addictions such as compulsive gambling or sexual behaviors. This chapter focuses on settings that primarily address the treatment of drug and alcohol dependencies.

The treatment of substance use disorders (SUDs) most frequently has been provided by a specialty system of care, which to a large measure arose independent from medicine or psychology. The integration of psychological innovations into this setting has been, and remains, an ongoing process.

As of 2012, the Substance Abuse and Mental Health Services Administration (SAMHSA) identified 14,311 programs providing substance abuse treatment, serving 1,238,905 clients (SAMHSA, 2013). The majority of these programs (11,650) provided varied levels of outpatient services, serving almost 90% of clients. Residential programs served 8.9% of clients. (Of course, many patients will participate in several different levels of care in any given year.) Large numbers of patients are also treated in free-standing methadone or buprenorphine programs, licensed separately from other outpatient programs.

Unfortunately, it is estimated that only about 10% of those needing treatment actually receive care (SAMHSA, 2005). There may be some who are treated by other clinicians and programs (e.g., general practitioners, individual psychological practices, nonlicensed programs), but that number is difficult to estimate.

It is also difficult to determine the total number of psychologists working in addictions, generally, or in addiction centers, specifically. A search of the American Psychological Association (APA)

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membership reveals that of those on the roster (79,304 of a membership of 90,400), only 466 list alcoholism and alcohol abuse as an area of interest, and only 249 list drug abuse. (These figures contrast with 6,241 members with an interest in psychotherapy and 3,128 with an interest in clinical psychology.)

A survey of the National Association for Alcoholism and Drug Abuse Counselors (2014) indicates that only 10% of those working in the addiction treatment field have doctorates, but the number of psychologists within this is not specified. An additional 57% hold master's degrees, but the discipline and licensure statures of those individuals are not indicated.

A recent workforce survey found that only 5% of those in the field who held a license (already less than half of the total workforce) were licensed as psychologists (Rieckmann et al., 2011). Those with master's or doctoral degrees were more commonly found in supervisory positions and in outpatient settings.

Utilizing 1997 data, another study compared practitioners in various fields who had specialized certification in addiction treatment (Ryan, Murphy, & Krom, 2012). At that point, 950 psychologists held the APA Certificate of Proficiency in the Psychological Treatment of Alcohol and Other Psychoactive Substance Use Disorders, representing 1.4% of the APA membership of 69,800. This compares with 3.5% of psychiatrists certified by the American Society of Addiction Medicine (ASAM). In the same article, Ryan et al. (2012) presented data on a survey of 487 treatment facilities. Only 2% of direct care staff held a doctoral degree, compared with 8% of clinical directors. However, these figures may underrepresent the actual number of psychologists in the field, as many practitioners do not hold this certificate. Also, many psychologists in other settings may regularly treat patients with addiction problems and yet not consider themselves as addiction therapists.

HISTORICAL PICTURE OF THE SETTING

Clinical psychologists began to show an interest in addiction in the 1960s and 1970s. There had been references to alcoholism in earlier texts, but a PsycINFO review reveals few publications in this area until the 1960s, with significant growth every decade thereafter.

Multiple forms of addiction treatment preceded the entry of psychology into this area. The late 18th century saw the creation of inebriate asylums, where specialized care could be provided. Treatments at the time included temperance counseling, structured daily activities, and physical remedies, including various tonics and preparations (some quite mysterious), but "treatment" at that time was largely custodial. In 1870, when the American Association for the Cure of Inebriates was founded, six asylums existed; by 1902, there were 100 asylums (White, 2014b). However, the number of asylums declined in the early 20th century, and the care of alcoholics and addicts was largely returned to psychiatric and correctional facilities.

Although not involving psychological professionals, probably the first program to use psychological methods was the Emmanuel Clinic, founded in Boston in 1906 (Peabody, 1930; White, 2014b). This clinic used the word "psychotherapy" to describe its combination of counseling (both group and individual), spiritual encouragement, and structured living. The goal of treatment was abstinence. The work of this clinic anticipated many of the techniques used a century later; such strategies as behavioral analysis of drinking situations, development of coping strategies for emotional distress, and thought-control techniques anticipated the practices of relapse prevention and cognitive–behavioral treatment.

Early psychological approaches to the treatment of alcoholism were advocated by Walsh (1912) and Durfee (1938). The work of these two anticipated several later developments in treatment. Walsh stressed the role of moral reeducation in treatment and rejected a genetic role in the disorder, but he also described the need for a continuum of care, the value of peer support, the importance of empathy in the therapeutic relationship, and the need for regeneration of hope. Durfee founded an "alcoholic farm" that provided residential rehabilitation (Durfee, 1938; White, 2014a). He argued for recognition of alcoholics as ill, not morally deficient, and proposed client-centered methods that are similar to such later innovations as motivational interviewing and relapse prevention.

Review of the PsycINFO database (McCrady et al., 2014) provides insight into the shifting focus of psychological research. Early psychological approaches emphasized psychoanalytic therapy. As this approach declined, aversion therapies, then Alcoholics Anonymous (AA), and later family models became foci of study. Beginning in the 1940s, behavioral approaches became more common, eventually leading to the use of cognitive–behavioral treatments, which have come to rival AA in utilization.

The founding of AA in 1935 was a watershed in the evolution of treatment programs, an influence that is profoundly felt to this day. AA was founded by two alcoholics who discovered the value of mutual support in maintaining abstinence. One of the founders was clear in acknowledging his debt to William James, and he later corresponded with Carl Jung (AA, 1990). The movement was initially snubbed by the medical and psychological establishment (Kurtz, 1989) and developed as a grass-roots organization. Attempts to "professionalize" AA, via offers from several hospitals to create "AA hospitals" or "AA clinics" (Kurtz, 1989; White, 2014b), were rejected by the membership. For example, at High Watch Farms, one of the first AA retreats, the hiring of a "lay psychologist" in 1940 led to resignations on the board and a restructuring of the program away from professionalism. (High Watch Recovery Center now features a psychiatrist and master's-level counselors on staff.)

AA inspired the development of the 28-day residential Minnesota Model of treatment, a dominant modality in treatment to this day. This model originated in the late 1940s in Minneapolis, in a synergy among Pioneer House, Hazelden, and Willmar State Hospital (Anderson, 1981; White, 2014b). Pioneer House, in 1948, was the first full-scale attempt to utilize AA principles in a residential treatment program. In 1949, the Hazelden Foundation was established; Hazelden has become one of the most influential treatment centers in the country. Programming for alcoholics at Willmar State Hospital, beginning in 1954, was significant for inclusion of both recovering alcoholics and professionals on staff, a key element of the model.

Given the emphasis on mutual support, the role of psychologists in the early Minnesota Model was limited. One critical exception was Dan Anderson (1981) at Hazelden. Anderson began his career at Willmar Hospital in a nonprofessional capacity, eventually earning his doctorate and becoming president of Hazelden and a primary architect of the model.

The development of therapeutic communities (TCs; DeLeon, 2000) also stressed the primacy of mutual aid over professional intervention. Treatment at these long-term residential programs relied on the participation of more senior members and could include harsh confrontation about characterological problems presumably underlying addicts' behavior. Despite an antiprofessional bias in the TC movement, psychologist David Deitch helped develop the TC model as a cofounder of Daytop Village and later as chief clinical officer at Phoenix House. George DeLeon has served as the president of the National Institute on Drug Abuse (NIDA)-funded Center for Therapeutic Community Research and is a leading expert on TCs.

Three factors contributed to the increase in the number of psychologists working in addictions in the 1960s and 1970s (Hanbury, Tucker, & Vuchinich, 2000). These entailed (a) the growth of community mental health centers in the early 1960s, often introducing psychologists to substance abuse programs within these centers; (b) the rise of residential rehabilitation programs in the 1970s and 1980s, on the basis of favorable reimbursement policies; and (c) the creation of the National Institute on Alcohol and Alcohol Abuse and NIDA, which provided funding. The role of the Veterans Administration, which began providing addiction treatment in the early 1970s, also cannot be underestimated, especially given the large numbers of psychologists who have been trained in that system.

As the number of psychologists working within the field grew, in 1975 a small group organized the Society of Psychologists in Substance Abuse. Now known as the Society of Addiction Psychology, it was recognized as Division 50 of the APA in 1993, and it now has 840 members. A Certificate of Proficiency in the Psychological Treatment of Alcohol and Other Psychoactive Substance Use Disorders was issued in

1996 through the APA College of Professional Psychology; as of 2014, 830 psychologists held this certification. The Society of Addiction Psychology also publishes a journal, *Psychology of Addictive Behaviors*, and a newsletter, *The Addictions Newsletter*.

EVOLUTION OF ACTIVITIES

One of the earliest roles of psychologists in addiction settings was providing psychological assessment. Early attempts at assessment focused on the identification of personality traits thought to be associated with substance abuse, including testing with the Minnesota Multiphasic Personality Inventory (MMPI; Hathaway & McKinley, 1942) and the Rorschach technique. One of the earliest efforts to identify alcoholics using the MMPI was the MacAndrew Alcoholism subscale (MacAndrew, 1965), which attempted to identify alcoholics by "covert variables"; significantly, the construction of this scale explicitly excluded two items directly relating to alcohol consumption, consistent with the then-prevailing concept of alcoholism as a personality disorder (American Psychiatric Association, 1968). The validity of the MacAndrew scale has been challenged (Gottesman & Prescott, 1989), and several alternative MMPI scales have been developed (e.g., Rostami, Nosratabadi, & Mohammadi, 2007). The MMPI remains utilized in research and clinical practice (e.g., Mattson et al., 2012), often in the assessment of comorbid disorders.

More recent efforts to provide assessment have focused on the detection or diagnosis of addiction based on direct behaviors. Widely used scales include the Alcohol Use Disorders Identification Test (Saunders et al., 1993) and the Michigan Alcohol Screening Test (Selzer, 1971). The Addiction Severity Index (McLellan et al., 1980) was developed as a tool for assessment and treatment planning of patients with SUDs. It identifies six areas of relevance for treatment planning: chemical abuse, medical problems, psychological problems, legal, family/social, and employment/support. This has become a widely used tool in both research and clinical settings. It is now in its 6th edition (Cacciola et al., 2011), with a briefer "Lite" version available (Cacciola et al., 2007) as well as a computerized, self-administered one (Bultler et al., 2001).

Psychologists provide treatment in addiction settings; however, they still compose a relatively small portion of the workforce, as noted earlier. In residential programs there is a reliance on addictions counselors as primary clinicians, largely deriving from the AA emphasis on personal recovery as a therapeutic tool. The role of psychologists in such settings is often centered on supervision, administration, and managing co-occurring mental disorders. In recent years, a few programs have emerged featuring psychologists as primary clinicians (Fletcher, 2013; Foote et al., 2014). Of course, university-based settings typically employ psychologists in clinical trials and in counseling centers.

Because of these separate traditions, a tension often exists in these settings, with those espousing an AA approach suspicious of professional psychologists, and vice versa (Kessler & Honer, 2004). AA's emphasis on "one alcoholic talking to another" has often led to a rejection of professional intervention. This can be a challenge facing psychologists entering the addiction treatment world and dealing with many counselors who are personally steeped in the 12-step program (McGovern et al., 2004; Ryan et al., 2012). The evidence attests that the recovery status of the therapist contributes little to treatment outcome (Machell, 1991; Project MATCH Research Group, 1998), but the perception has a long history and endures.

Psychologists have played prominent roles in public policy and advocacy. Thomas McLellan served as the Deputy Director of the Office of National Drug Control Policy from 2009 to 2012, advocating for the importance of treatment in an overall strategy for addressing substance abuse. Arthur Evans, as the Commissioner of Philadelphia's Department of Behavioral Health and Intellectual disAbility Services, has championed a "recovery" perspective in the transformation of the service structure and philosophy of the city's behavioral health system (Davidson et al., 2007).

One of the most significant contributions of psychology has been research into the effectiveness of addictive treatments and identifying their active components. A body of work comparing the efficacy of various interventions has been amassed, and several interventions have garnered empirical validation (Miller & Wilbourne, 2002; see Volume 4, Chapter 11, this handbook, for a discussion of specific treatments).

A common critique of current treatment lies in offering a "one-size-fits-all" approach (Fletcher, 2013). Patients in early Minnesota Model programs were virtually all White American males. In recent years, there has been a significant increase in research on women, adolescents, ethnic minorities, and college students (McCrady et al., 2014). A few areas of specialty treatment are outlined next.

Adolescents

Teenagers in residential treatment have often been treated in a "rehab-lite" fashion, with services slightly modified from adult programs. This is especially problematic in a 12-step oriented setting, where an acknowledgment of one's "powerlessness" contrasts with the developmental need of adolescents for individuation and independence. In residential care, it is now common practice to provide separate programming for adolescents rather than mix them with an adult population. Twenty-eight percent of all treatment programs offer specialized services for adolescents (Center for Behavioral Health Statistics and Quality, 2011).

Family involvement is a critical component of all adolescent intervention (Waldron & Turner, 2008). Several models of family therapy for substance abuse have been developed and assessed. In adolescent treatment, perhaps even more than in adult treatment, a focus on related risky behaviors (e.g., sexual safety, gambling, criminal activities) is needed.

Women

Hazelden was one of the first to establish a separate residential program for women, the Dia Linn House, in 1956, but the addiction treatment profession has been slow to develop such specialized programming. Programs for addicted mothers and pregnant women can now be found in many outpatient settings, providing health and prenatal care for women and their children, in addition to addiction treatment.

Outpatient programs for women often include a recognition of the need for ancillary services, such as child care, to allow women with children to engage in treatment. Awareness of the presence of traumatic experiences among women requires modification of more confrontational techniques, which are all-too-frequently used in many treatment centers. Specific interventions for women who have suffered abuse, such as the Seeking Safety program (Najavits, 2002), have been widely adopted.

Theoretically, a need for alternative models for women has been recognized, given a similar discomfort with the notion of "powerlessness" in the face of institutionalized sexism. The vast majority of early studies were conducted on men, and unique needs of women were largely ignored. Contemporary approaches (e.g., Covington, 2002) provide all-women groups, integration of services, establishment of safety, and a focus on competence. Specific needs of women in the correctional system have also been considered.

The development of Women for Sobriety, an alternative to the 12-step model, is another distinct approach to women's recovery. Founded by Jeanne Kirkpatrick, Women for Sobriety adheres to an abstinence-based model but relies on a model of empowerment rather than powerlessness. Unfortunately, this group is not widely known and has more of an online presence.

Racial Minorities

Cultural sensitivity has been identified as one of the core competencies of addictions professionals (Center for Substance Abuse Treatment, 2006). However, sensitivity to cultural issues has been generally relegated to a supervisory matter, and it has not been systematically implemented in programming.

Outside of formal treatment, grass-roots recovery movements have reflected specific cultural traditions. William White and associates have been proponents of studying natural recovery processes, and they have documented recovery in Native American and African American communities (Evans et al., 2012). In contrast to a commonly held belief that traditionally oppressed people would not accept a program based on "powerlessness," these authors documented a widespread acceptance of 12-step programs in minority communities.

Sexual Minorities

There has been recognition of the needs of lesbian, gay, bisexual, and transgender (LGBT) patients in the recovery world, but this has been reflected less in formal treatment settings (Center for Substance Abuse Treatment, 2001). Some LGBT-oriented treatment programs have been established, but this area has not been pursued rigorously. Common practices for LGBT patients in residential treatment are the inclusion of specialty groups and attendance at external gay and lesbian AA meetings. Although there are publications oriented toward recovery in the gay community (including pamphlets published by AA), there has been little transfer into specialized programming.

Dual Diagnosis Treatment

A significant role of psychologists in addiction treatment settings is the identification and management of comorbid mental disorders. In many settings, these two domains are divided administratively, and treatment is provided in separate units. There is a consensus that the ideal program provides integrated (rather than parallel or sequential) treatment for both disorders (Mueser et al., 2003), but this has not been consistently implemented.

The diagnosis of mental disorders in an addictions treatment center is fraught with difficulty. The effects of many substances may mimic psychiatric symptoms, and patients are often distraught and shameful at entering treatment. Patient self-reports of symptom history are unreliable, especially at the time of admission. A definitive diagnosis is difficult, if not impossible, at that stage; what may appear at first contact to be a major depression may clarify as an adjustment disorder in a few weeks of sobriety. There is also a wide range of dual diagnosis patients, from the mildly depressed alcoholic to the schizophrenic medicating himself with caffeine, tobacco, and alcohol. Differential interventions are necessary for these different clinical presentations.

In most substance abuse programs, treatment of mental disorders is considered secondary. The primary goal of treatment is on stabilization of the substance abuse and an orientation to ongoing sobriety. Psychiatric issues are primarily viewed as obstacles to full engagement in that process.

The ASAM criteria recognize that the presence of co-occurring psychiatric conditions is “an expectation, not an exception” (Mee-Lee et al., 2013, p. 22) and advocate that all addiction treatment programs be prepared to address psychiatric concerns. In many residential treatment centers, the responsibility of managing mental conditions falls to ancillary psychology or psychiatry staff. This creates a special niche for the psychologist yet maintains an artificial divide between mental health and substance abuse.

International Perspectives

Although the influence of AA and abstinence-based treatment is found throughout the world, treatment outside the United States often involves other models, including harm reduction and moderation management. For example, in the United Kingdom, opiate substitution programs and harm reduction strategies were the norm for many years, but more recently government policy has shifted toward an abstinence-based orientation (McKeganey, 2006).

International efforts by American psychologists have emphasized workforce and program development and the introduction of evidence-based practices. David Powell devoted years to set up training and supervision programs in other nations. He took supervision protocols first developed in the U.S. Navy (Powell & Brodsky, 2004) and worked with clinicians in more than 80 nations, including the Soviet Union, China, Vietnam, and Turkey, to assess staff training needs and to create ongoing systems of supervision for addiction training. He also worked to set up standards and certification boards for addiction counselors in both Asia and the Middle East.

Other psychologists have helped train clinicians and set up service systems in the Middle East. Keith Humphreys (Aqrawi & Humphreys, 2009) and John Kelly (personal communication, September 10, 2014) have helped train clinicians in Iraq, Kuwait, and Qatar.

Community psychologist Leonard Jason has been an advocate of, and researcher on, the use of Oxford Houses, a network of self-maintained sober living homes. He has demonstrated the value of these programs in promoting long-term sobriety and has documented their implementation in multiple countries (e.g., Legler & Jason, 2010; Majer, Beers, & Jason, 2014).

UNIQUE CONTRIBUTIONS OF THE SETTING

Perhaps the most important role played by psychologists in addiction settings has been the development of innovative, evidence-based treatments. Virtually all of the major approaches to addiction treatment (other than pharmacological interventions) have been developed by psychological scientists–practitioners. Such interventions include the following:

- relapse prevention (Marlatt & Donovan, 2007),
- motivational interviewing (Miller & Rollnick, 2002),
- transtheoretical approach/stages of change (Prochaska, DiClemente, & Norcross, 1992),
- 12-step facilitation (Nowinski & Baker, 1992),
- community reinforcement (Smith, Meyers, & Milford, 2003),
- harm reduction (Marlatt, Larimer, & Witkiewitz, 2012), and
- moderation management (Rotgers, Kern, & Hoeltzel, 2002).

Many of these innovations have found applications outside the realm of SUDs. Motivational interviewing, the transtheoretical model, and harm reduction, in particular, have been applied to psychotherapy and general health care.

In contrast to the nonprofessional origins of AA, several psychologists, including Tom Horvath, Michler Bishop, and Jeff Shaler, made significant contributions to the development of SMART Recovery. It is an alternative program for abstinence from substance use. Horvath currently serves as president of SMART Recovery (http://www.smartrecovery.org).

PRESENT STATUS

Addiction treatment is provided within a continuum of care, ranging from individual outpatient treatment through medical detoxification. ASAM has identified five levels of care for the treatment of SUD (Mee-Lee et al., 2013):

- early intervention,
- outpatient,
- intensive outpatient/partial hospital,
- residential/inpatient, and
- medically managed inpatient services.

ASAM has developed a set of criteria to determine the appropriate level of care for individuals, on the basis of six dimensions. A brief recap of these levels of care will be helpful in describing the roles and opportunities for psychologists.

Work on prevention and early intervention has centered on the effort to provide screening, brief intervention, referral, and treatment (SBIRT). Brief interventions can be effective in early intervention for substance abuse (SAMHSA, 2011) in a variety of settings. SBIRT involves brief assessment of substance abuse, feedback and advice, and possibly referral to specialty care. The SBIRT model has been extended to other public health problems as well.

Prevention programs have been controversial, in that many of the best known programs (e.g., DARE) have poor track records (Kumpfer, 2002). Many of the effective programs target variables that mediate substance use and that promote protective factors: social skills training, family and parent training, and anger management have an indirect impact on substance use. Community organization and public policy interventions have been shown to influence substance use: increased taxes on tobacco and alcohol and raising the minimum drinking age have helped reduce consumption of these substances. Coordination of community resources is valuable, primarily as an influence on changing public policy (see Volume 3, Chapter 26, this handbook, for a thorough review of prevention of substance abuse).

Outpatient treatment is the most commonly used therapy format and is provided in a variety of settings, including specialty addiction treatment programs, clinics within community mental health centers, programs within hospitals, and in private practice offices. Outpatient care may be the only treatment provided or may be used as aftercare to a residential episode. The majority of psychologists working within addiction treatment are employed in the outpatient setting (Rieckmann et al., 2011). Outpatient care may consist of individual therapy, group therapy, family therapy, and substance abuse education.

Methadone maintenance programs are now considered by ASAM to be an outpatient service.

Methadone, a medication which reduces opiate craving and withdrawal, has been highly regulated by "a set of regulatory requirements unmatched by anything in medicine" (Martin, Zweben, & Payte, 2014, p. 759). Some of these barriers are predicated by an ideological resistance to using "one drug to treat another." Although patients in methadone maintenance programs may not be formally considered drug free, use of this modality has been demonstrated to reduce use of illicit drugs, rates of HIV infection, and criminal behavior.

Intensive outpatient programs (IOPs) began to flourish in the late 1980s and early 1990s as the need for residential treatment was challenged, as the cost/benefit ratio of inpatient versus outpatient treatment was called into question (Miller & Hester, 1986) and through the influence of managed care. Approximately 12% of treated addiction patients receive this level of care (Center for Behavioral Health Statistics and Quality, 2011). Participation in an IOP presumes some social stability (residence, employment) in the lives of the patient. Typically, such programs provide 9 hr of treatment per week. Group-based interventions are a primary modality in this setting, and the role of psychologists as primary clinicians or consultants on dual-diagnoses is more common. An attractive feature of IOPs is the ability to smoothly titrate services as the patient progresses.

IOPs and outpatient treatment have become the default option of the treatment delivery system and are favored as the primary points of intervention by many insurance carriers. Often, a managed care entity will restrict access to higher levels of care unless a patient has "failed" an IOP; there has been significant clinical and grass-roots opposition to determining care on this basis.

Like their more familiar counterpart in mental health, partial hospitalization programs (PHPs) are hybrids between outpatient and residential-based services. Although providing a level of service comparable to a residential or hospital program, PHPs rely on the patient's ability to return to a relatively stable living situation. PHPs are especially suited for patients with dual diagnoses, who typically require greater structure and intensity of services. ASAM specifies a minimum of 20 hr of treatment services at this level of care. Staffing patterns can be variable, and psychological or psychiatric consultation is quite common.

Residential treatment is indicated when attempts to achieve sobriety on an outpatient basis have not been successful, when medical or psychiatric complications are present, when there is a high level of resistance to change, and when a stable living environment is not available (Mee-Lee et al., 2013). As mentioned, the most familiar form of residential treatment is the 28-day Minnesota Model rehabilitation center. The Minnesota Model provides a structured community living experience for the patient, based around AA principles. The daily structure typically includes lectures on alcoholism, addiction, and recovery; group therapy; 12-step meetings; meditation and reflection; and individual counseling. AA conceptualizes alcoholism as an illness, and ongoing AA participation is intended to arrest the progression of this illness; treatment focuses on "caring, not curing" (Anderson, 1981, p. 15).

Another influential form of residential treatment is the TC. Such programs are based on a conception of addiction as an underlying personality disorder and that strict adherence to a structured program of living is necessary to achieve recovery from addiction. Treatment involves a demand for rigorous honesty and self-disclosure, is often highly confrontational, and is provided by more senior residents of the program, not by professionals. Such well-known programs such as Synanon, Phoenix House, and Daytop Village are examples of TCs (DeLeon, 2000). Programs utilizing similar methods continue to function, although the confrontational excesses of the original programs have usually been excised. Treatment stays in TCs are generally long term (as long as 1 year), but shorter stays have become more common (White, 2014b). TCs remain a significant component within the criminal justice system.

In recent years, growing discomfort with TC and 12-step approaches has led to the development of alternative programs in both residential and outpatient settings (Fletcher, 2013; Foote et al., 2014). Many of these programs favor cognitive–behavioral or community reinforcement approaches in treatment and utilize SMART Recovery. Such programs often include a higher representation of psychologists as direct care staff. However, as of this writing, no standard model for these programs has emerged, and they form a small, but growing, segment of the treatment continuum.

Patients presenting with addictive disorders frequently require *detoxification* when physical dependence is present or imminent. In such cases, medical attention is primary. Medication can be provided to ameliorate the effects of withdrawal or to provide symptomatic relief. Psychosocial intervention at this level of care is usually quite minimal and is focused on the generation of hope and the diffusion of shame. Similarly, some patients may manifest acute psychiatric symptoms at the time of initial contact with the treatment system, including psychosis or suicidality. In such cases, psychiatric hospitalization may be necessary, and the medical detoxification must begin in that setting. When the psychiatric symptoms are resolved, a transfer to a substance abuse facility can be arranged.

Substance abuse is highly prevalent in the correctional system, to some degree due to the criminalization of the drug problem (Humphreys & Rappaport, 1993). Within prisons, treatment is often provided in programs separated from the rest of the population, often based on the TC model. Maintaining segregation is important, as relapse occurs rapidly when leaving the structure of the program. However, it does appear that this treatment is significant in reducing drug use and recidivism—two key measures of outcome. The cost offset of $7 savings for every dollar spent on treatment (Hora, 2014) is due largely to reduced rates of recidivism.

Drug courts are an innovative way of dealing with addicted patients in the criminal justice system (Hora, 2014). These are voluntary programs that divert addicted offenders from incarceration. It utilizes a team approach, involving legal, correctional, and treatment personnel, with the judge at the center. The team prescribes and monitors the client's treatment plan closely, utilizing urine screens and other techniques, and programming can be modified as the client progresses.

The ability to provide adequate follow-up is a challenge with this population. Patients suffering with substance abuse are notoriously difficult to keep track of and are often lost to follow-up. Studies of improvement while in treatment, or at 3- or 6-month follow-up, have minimal generalizability to real-world practice. Validity of patient self-report has been questioned, and the ability to secure biometric measures can be difficult. There are also problems comparing randomized trials with naturalistic studies.

The relative benefit of residential versus outpatient treatment has been debated. A research review (Miller & Hester, 1986) indicated that there were no clinical advantages to residential treatment and that there were significant fiscal benefits of outpatient care. Subsequent studies have suggested that residential treatment may be indicated in the presence of psychiatric comorbidity, severity of addiction, and lower social stability (Finney, Moos, & Wilbourne, 2014; Rychtarik et al., 2000).

There is mixed evidence of the benefit of the duration of treatment on outcomes, with naturalistic studies providing more support for longer stays than randomized trials (Finney et al., 2014). This may reflect a real-world phenomenon of patients intuitively seeking an appropriate level of care.

FUTURE OPPORTUNITIES

One of the most pressing challenges facing the next generation of psychologists will be fostering the implementation of evidence-based addiction interventions. The Addiction Technology Transfer Center Network (http://attcnetwork.org/home) coordinates resources to enhance the skills of the addiction treatment workforce. Other examples of technology transfer include NIDA's biannual Blending Conference, which brings scientists and practitioners together as part of a broader NIDA/SAMHSA Blending Initiative (http://www.drugabuse.gov/nidasamhsa-blending-initiative), and the publication of treatment improvement protocols and technical assistance publications—clinical guides to specific areas of treatment.

Unfortunately, training in addiction treatment is relatively rare in clinical psychology training programs, and when it is offered, it is often on an elective basis (Corbin et al., 2013; Harwood, Kowalski, & Ameen, 2004). The development of a curriculum for the psychological treatment of addictive disorders has been attempted, but is still a work in progress. In the future, graduate training and treatment guidelines on addiction will probably become a more visible reality for psychology.

With the emerging acknowledgment of addiction as a chronic condition (McLellan et al., 2000) has come an interest in continuing care, rather than reliance on brief self-contained episodes of acute care (Dennis, Scott, & Funk, 2003). This shift has generated an interest in developing novel continuing care interventions (Kelly & White, 2011; White, Kurtz, & Sanders, 2006). Researchers have explored the use of innovative techniques to provide ongoing recovery support, including integration of new technologies such as Internet and cell-phone monitoring and contact (e.g., Gainsbury & Blaszczynski, 2011; McKay, 2009). This is a promising area for future practice and research.

Specific treatments to address specific populations are an ongoing need. Rather than the "one size fits all" approach (Fletcher, 2013) of traditional treatment, specialized services will be developed and refined. The aforementioned innovations to addressing SUDs among women and adolescents provide a model for dealing with older adults, college students, minority groups, and immigrant populations.

The impact of the Patient Protection and Affordable Care Act of 2010 has yet to be determined, but there is expected to be a significant impact on addiction treatment. Treatment for SUDs is to be given parity with other behavioral health disorders, but the emphasis on cost-effectiveness will also be felt, and the ongoing movement to outpatient care is likely to persist.

SUDs have often been treated in a specialty system of care, divorced from the mainstream of primary health care or behavioral health. Pressure for the integration of SUD treatment into these areas, typically SBIRT, is a likely and a promising area. Similarly, the development of online interventions such as the Drinker's Check Up (http://www.drinkerscheckup.com), which provides feedback and self-directed activities, will prove valuable (Hester, Squires, & Delaney, 2005).

The future status of APA's Certificate of Proficiency in the Psychological Treatment of Alcohol and Other Psychoactive Substance Use Disorders is of serious concern to psychologists. The addiction field has been dominated by recovering paraprofessionals, who have developed a separate set of credentials (and who often have a resistance to the role of professionals in the field). Only a few states presently recognize the Certificate of Proficiency as an equivalent credential. The effort of psychologists to achieve this recognition will require a concerted effort on the state and national level, involving both professional and political forces.

Finally, psychology will gradually incorporate SUDs into the mainstream of psychological practice (Miller & Brown, 1997). In many ways, psychologists are uniquely qualified to address these addictive problems and will undoubtedly make further significant contributions to research, treatment, and policy in addiction treatment settings.

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CHAPTER 31

CORRECTIONAL SETTINGS

Philip R. Magaletta, Patti Butterfield, and Marc W. Patry

Early in the 20th century, prison wardens opened their institution doors and established practice and training opportunities for psychologists (Glueck & Glueck, 1930). By the middle of the 20th century, offender populations began being researched more commonly. Furthermore, by the end of the century, psychologists were the most frequently employed mental health professionals in correctional settings (Camp & Camp, 2003). Now, in the 21st century, corrections practica and internship opportunities are numerous, employment of early career correctional psychologists is common, and the number of psychologists evaluating and treating individuals in the criminal justice system is growing (Magaletta, Patry, & Norcross, 2012).

Clinical psychologists deliver a wide range of services to a broad array of offenders in the correction setting. They also handle administrative duties and supervisory responsibilities of the correctional facility (Boothby & Clements, 2000). The roots of clinical psychology in corrections are now deep and wide. They nourish numerous branches that support the safe and humane administration of correctional institutions around the globe.

DEFINITION AND PREVALENCE

Defining clinical practice in corrections requires an understanding of what clinical psychologists do and do not do in the correctional setting. To describe what clinical practice in corrections is not, we contrast it with forensic psychology—a specialization with which it is often confused. There are many definitions of forensic psychology, but if one anchors oneself in the literature, three points are clear. First, articles suggesting that the terms forensics and corrections are similar only describe corrections as an employer and do not explore competencies that are basic to corrections practice. Second, leading scholars in psychology and law argue that forensic psychology stands apart from work in correctional settings (Heilbrun & Brooks, 2010). Third, the literature is replete with calls for a more comprehensive understanding that parses work in correctional settings from forensics (Ax & Morgan, 2002; Helmus et al., 2011; Simourd & Wormith, 1995).

Thus, a definition of clinical psychology in correctional settings is needed. The definition chosen for this chapter is adapted from the first systematic, empirical description of the way that doctoral psychology programs introduce training opportunities for corrections practice (Magaletta et al., 2013). Psychology practice in corrections refers to treatment, assessment, training, research, and management work with offenders who are in the custody of a jail, detention center, prison, or correctional system. Unlike forensic psychology, which includes practice at the interface of psychology and law, clinical practice in a correctional setting concerns the provision of services to individuals emerging after

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APA Handbook of Clinical Psychology: Vol. 1. Roots and Branches, J. C. Norcross, G. R. VandenBos, and D. K. Freedheim (Editors-in-Chief)

APA Handbook of Clinical Psychology: Roots and Branches, edited by J. C. Norcross, G. R. VandenBos, D. K. Freedheim, and M. M. Domenech Rodríguez

that intersection has occurred—within correctional settings.

The most recent national survey reveals that more than 11,500 mental health and counseling staff members are working in corrections (Camp & Camp, 2003). Although these figures are somewhat dated, they are still informative. For example, for the average institution in this sample, the mental health and counseling staff members represent 2.9% of the institution's workforce. When national correctional mental health workforce data are disaggregated by specific mental health discipline, psychologists represent 18% of the correctional mental health workforce.

This is an important finding, as psychologists bring deep professional skill and training for both administration (including evaluation, coordination, and supervision of treatment staff) and direct clinical services (screening, assessing, and treating offenders across a range of problems; Magaletta & Verdeyen, 2005; Towl & Crighton, 2008). At the doctoral level, clinical psychologists represent the most versatile mental health practitioners in contemporary corrections. Many studies illustrate this reality by exploring and elucidating the duties of psychologists practicing in corrections.

HISTORICAL PROFILE

> Betterment in penology, as elsewhere, is a slow, week to week, month to month, year to year progression. The very nature of prisons demands that changes be evolutionary rather than revolutionary.
>
> —J. C. Taylor, warden of the U.S. Penitentiary in Leavenworth, Kansas (Cope & Cuthbertson, 1963, p. 1)

Early History (1900–1940)

Clinical psychology research and practice entered correctional settings on the rising tide of psychometrics. Under the rubric of classification, the need to properly quantify, assess, and predict offender behavior in corrections and upon reentry to the community has remained bedrock for the entire evolution of clinical psychology in custodial settings (VanVoorhis & Salisbury, 2012). When Lightner Witmer first introduced clinical psychology as a distinct discipline in 1896, he was conducting evaluation and treatment of children with learning and school-related problems. It is therefore not surprising that prior to 1910, the first custodial settings to engage the assessment skills of psychologists were juvenile courts and psychopathic clinics (Megargee, 1982).

It did not take long, however, for clinical psychology to emerge in adult correctional settings. In 1913, the first classification study of adult offenders was published by Eleanor Harris Rowland, a former student of William James. Her study was conducted with female offenders at the New York Reformatory for Women in Bedford, New York, and she sought to determine whether

> it would be possible to frame a practical set of tests which would, upon application to a given girl, determine whether she represented the grade of normality necessary to receive benefit from the educational work of the institution, or to be safely set free to earn her living after her terms was over. (Rowland, 1913, p. 245)

Rowland (1913) concluded that the assessment battery "accomplished the purpose by classifying eleven subnormal girls by an objective standard in a relatively short space of time . . . a resident psychologist has since been installed at Bedford" (p. 249).

From that point forward, interest in assessment and classification for custody classification, correctional programming assignments, and preparing offenders for community reentry flourished. For example, the New Jersey State Department of Corrections, with the assistance of a psychologist, established the first comprehensive classification program in the country. In 1918, Edgar Arnold Doll began administering the Army Alpha and Beta Tests to offenders upon admission to the state correctional reception center. Testing results were used to recommend work details and educational programs as well as to address problems of discipline and morale among offenders. Indicative of the zeitgeist, psychological testing in correctional settings was simultaneously emerging in London, England; Brussels, Belgium; and Buenos Aires, Brazil (cf. Ax, 2008; Sellin, 1926).

In recording this evolution of correctional classification in New Jersey, Jackson (1934) noted that "During the fiscal year 1920–1921 all admission and parole cases were individually examined by Mr. Ellis and Dr. Doll and reports were presented to the institutional authorities" (p. 53). This probably represents the first instance of interdisciplinary communication being highlighted as a competency among these psychologists. Of note, "interdisciplinary" in this context is used to describe communication with the executive staff and correctional officers who operated the correctional facility. In expanding their communication beyond other health professionals, clinical psychologists were learning to enhance their impact upon the correctional setting.

Clinical psychology training was the next activity to evolve in correctional settings. In 1923, Professor William Thomas Root of the education and psychology department at University of Pittsburgh and his students began a research survey with offenders at the Western State Penitentiary, Pittsburgh, Pennsylvania. Two years later when his research concluded, Root's students were invited back to the penitentiary several days a week for a year or more, and they earned credit at the university. They received a cash stipend for performing clinical psychology duties, which included "psychometrics, interviewing, preparation of case histories, field investigations, research, and attendance at seminars and courses" (Morrow, 1946, p. 169). Thus, Western State Penitentiary came to host the first correctional psychology internship program and became the sixth internship training site for clinical psychology graduate students nationally (Routh, 2000). At that moment in time, three of the six internship programs in the United States either involved correctional settings or work with antisocial and offender populations (Magaletta et al., 2012).

A final development in the early history of clinical psychology in correctional settings involved treatment. The stage was being set for clinical psychology to address the need for psychological treatment, behavioral management, and rehabilitation for offenders during incarceration and upon community reentry (Glueck & Glueck, 1930; Jackson, 1934). This trajectory was set on course by Stanford Bates, first director of the Federal Bureau of Prisons. Bates (1936) wrote,

> The psychologists and psychiatrists are becoming a valuable addition to the staff of every up-to-date-penal institution . . . . No approach can be made to the solution of the problem of individual rehabilitation without his insight and assistance. He must not content himself, however, with diagnosis. He has been too prone in the past to tell us what was wrong with our offenders without going into the necessary details of what should be done to correct and cure those defects. (pp. 121, 125)

Middle History (1941–1971)

Two themes characterize the middle history of clinical psychology in correctional settings. The first was the widening application of clinical psychologist skills coupled with increasing interest from wardens in how psychologists could contribute to the safe running of the prison. The second characteristic was the extremely slow growth in the number of clinical psychologists employed in the correctional setting.

Numerous reports from this era document that with their versatile, generalist skill set, the few clinical psychologists practicing in correctional settings were asked to contribute to the management and treatment of offenders. They began delivering a broad array of mental health and substance abuse treatments. At the same time, through interdisciplinary communication, they were exerting a critical influence upon the orderly operation of the institution. Wardens became increasingly likely to ask clinical psychologists at their sites to solve problems concerning offender self-harm, suicide, and assaultive behavior. This development was documented in a series of studies starting in the 1940s. It was then that work began to delineate the job duties of correctional psychologists by focusing upon their frequency of various duties (Corsini, 1945; Shartle, 1946).

This scholarship continued through the 1960s and revealed the steady development of core, generalist skills in delivering psychological services. Collectively, these studies suggest that psychologists were providing screening, assessment, and direct individual and group treatment to a wide range of offenders on a daily basis. Furthermore, such studies document the growth of psychologists' involvement in administrative tasks, consultation, and communication with various departmental staff members who formed the correctional system. As a partial response to the need for developing a workforce to provide such services, the Center for Correctional Psychology was created in 1971 at the University of Alabama, via a grant from the Law Enforcement Assistance Administration (Brodsky, 1973). With an exceptional ability to integrate clinical psychology practice, training, and research, the Center for Correctional Psychology both concluded the middle history and ushered in the next.

Recent History (1972–2001)

One of the first acts of the Center for Correctional Psychology was to convene, with assistance from the organization that was to become the International Association of Correctional and Forensic Psychology, a 2-day conference on correctional psychology. Proceedings from this conference were published in a volume edited by Brodsky (1973). Importantly, this volume established the need for specific training and hiring of psychologists in correctional settings and essentially legitimized their role. One of the key chapters, "Graduate Education" (Speilberger, Megargee, & Ingram, 1973), is still relevant today as it proffers a clear, concise, and cogent message about the need for better preparing clinical psychologists to deliver services to offenders in correctional settings. The authors stressed the importance of starting this process early in psychology graduate training.

Subsequent scholarship in this area began to flourish. Many articles highlighted the need to consider the student training experiences required for effective service delivery to offenders. The training methods suggested ranged from coursework, faculty research, internships, and practica to the development of entire academic programs including correctional psychology majors or minors (Fowler & Brodsky, 1978; Wicks, 1974).

The early 1970s also witnessed the first transition of individuals with severe mental illness from inpatient psychiatric centers into community mental health settings. This change in social policy is often linked to the significant increase of offenders with mental illness at the turn of the century. Another important event was the renewed emphasis on clinical psychology research in correctional settings. In his presidential address to the American Society of Criminology, famed criminologist Francis T. Cullen (2005) summarized the momentum and strength of this movement by describing the 12 people who effectively "saved rehabilitation" during this era. Nine of the 12 were psychologists, many of whom were clinical psychologists, thus reinforcing the notion that crime is a behavior and to change this behavior one must rely upon scientists who study the process of change (Cullen, 2005).

During this phase, it was clear that American clinical psychology had no monopoly on progress. In fact, it was the so-called Canadian school of clinical psychologists that initiated empirically supported change and evaluation programs of offenders. One reason for their success in developing strong evidence-based rehabilitation programming (e.g., Cullen, 2012) was that Canadian correctional administrators chose to staff their research and evaluation offices with clinical psychologists who had worked with offenders in correctional settings.

Canadian scholars including Paul Gendreau, Don Andrews, and James Bonta, beginning in the late 1970s, published reviews that effectively refuted the era's "nothing works" belief. They and others illustrated that correctional rehabilitation could indeed work, and they provided instruments to assist with that objective, such as the Level of Service Inventory and the Correctional Program Assessment Inventory (Cullen & Gendreau, 2000). The Canadian school provided the basis for contemporary evidence-based correctional programming: the risk-need-responsivity (RNR) paradigm (e.g., Andrews, Bonta, & Wormith, 2011).

The RNR paradigm is built on several foundations: Correctional rehabilitation programming should be targeted toward high-risk offenders, not low-risk offenders (the risk principle); programs should focus on changing criminogenic needs, which are dynamic aspects of the offender's risk profile amenable to treatment (the need principle);

and correctional programming should be flexible, responding to the specifically targeted criminogenic needs presented by offenders (the responsivity principle; Andrews, Bonta, & Hoge, 1990). Canadian scholars provided rigorous empirical evidence, often in the form of meta-analyses, to expand the knowledge base of the RNR paradigm (Gendreau & Smith, 2007).

The treatments espoused within the RNR paradigm include cognitive–behavioral therapy, radical behavioral therapy, and therapies based on social learning theory. Interestingly, it was the U.S. clinical psychologist Stanton E. Samenow who, along with his mentor, Samuel Yochelson, would begin codifying criminal thinking errors and patterns in the late 1960s and early 1970s (Samenow, 1984). This literature was later developed and integrated within offender programs as targets for change (Walters, 1990). The RNR paradigm of the Canadian school plus the scholarship on criminal thinking errors and lifestyle patterns remain the hallmark of contemporary correctional psychology.

Concurrent with clinical psychology research developing during this time, a set of important social factors and policy changes was taking place in the 1980s. These included the initiation of the “war on drugs,” full-scale deinstitutionalization of individuals with mental illness from psychiatric facilities, and legal opinions for offenders that bolstered constitutional rights to access credentialed health care professionals and services. These all created a confluence of support for increasing the number of clinical psychologists in correctional settings. It was a need that was met (Varghese & Cummings, 2013).

The tradition of researching the job functions of clinical psychologists progressed in the United States and expanded to Canada and Great Britain. On the basis of numerous studies (e.g., Crighton & Towl, 2008; Olver et al., 2011), the following job duties were consistently found among clinical psychologists in correctional settings: assessment and diagnosis, treatments, interdisciplinary communication and consultation, ethics and professional development, scholarly inquiry, cultural sensitivity, and management and administration of psychological services. These are largely congruent with the professional competencies suggested for all health care psychologists, although the application, measurement, and benchmarking of these objectives remain specific to the correctional environment. For example, interdisciplinary communication extends far beyond the confines of other health care professionals. Effective communication includes discussing clinical realities with the managers who operate the prison as well as communicating with (a) corrections staff who monitor offenders on suicide watch, (b) unit and case managers who coordinate services for releasing offenders with mental illness, (c) work supervisors who need guidance on how to best work with an offender, (d) education staff who develop a learning plan for an inmate who recently suffered a traumatic brain injury, and, since 2001, (e) other government agencies on counterintelligence initiatives.

PRESENT STATUS AND UNIQUE CONTRIBUTIONS

The history of clinical psychology in correctional settings has been marked by a widening range of professional responsibilities. Today, psychology practice in corrections includes a series of intertwining activities, from treating the offender with suicidal tendencies and/or mental illness, to conceptualizing and implementing organizational responses to staff assaults, and to engineering the seamless transition of offenders from corrections to the community. The present responsibilities and increasing demand for clinical psychologists’ expertise have been fueled by significant growth in the number of individuals under correctional supervision. This increase has been particularly dramatic in the United States, with incarceration rates steadily rising from 133 per 100,000 in 1979 to 504 per 100,000 in 2008 (Sabol, West, & Cooper, 2009). In fact, many have observed that the correctional system in the United States constitutes the largest mental health system in the country. The obvious challenge of the future is meeting the demand for psychological services without additional resources of money or staff.

Technology

Clinical psychology and technology in correctional settings consistently yield unique service configurations that make positive impacts on the quality of life and continuity of care for offenders. Technology has enhanced consultation, research, program development, and evaluation. In fact, clinical psychology had initially championed technology as a method for expediting the work of clinical practitioners and researchers. It is mentioned in the 1950s as a record-keeping aspiration in the *Manual of Applied Correctional Psychology* (Sell, 1955), and by the 1980s, the Bureau of Prisons had begun using an electronic psychology data system for storing psychology service contacts with offenders (Scheckenback & Pape, 1992).

The current use of technology lies primarily in telehealth technologies that allow psychologists to extend the amount of or increase the access to services that offenders require. Over secure video conferencing networks, offenders with mental illness may receive psychiatric services, sexual offenders may receive risk assessments, and general population offenders may receive individual and group therapies as well as family visits (Morgan, Patrick, & Magaletta, 2008). Some state departments of correction and community corrections centers have been exploring the use of technology kiosks for data collection and clinical research as well as the use of MP3 players for delivering treatments in restricted housing settings. In the future, clinical psychologists may use telehealth technologies to receive requisite supervision in pursuing prescriptive authority, allowing a further extension of the services they offer in the correctional setting.

Supervision of Psychological Services and Administration of Prisons

The sheer number of necessary psychological services and the proliferation of treatment programs have required psychologists to develop their skills as program managers and supervisors. The management and supervision of direct services to inmates, particularly in substance abuse and sexual offender programs, remain a core component of psychology services (Mobley, 2008).

In addition to supervising mental health staff, clinical psychologists extend their supervision to nonmental health staff and programs. Given their understanding of human behavior and skills in management, psychologists tend to be quite successful in assuming posts of increasing and broader administrative responsibility. As an example, they may enter into the ranks of executive staff members who, as chief executive officers or wardens, are tasked with the daily operation of the correctional facility (Hawk, 1997). Others have entered into administrative positions that match the correctional setting needs to their psychology background. Examples here include program development, clinical research, unit management, personnel selection, workforce research, professional training, and internal affairs (Carlson & Garrett, 2008).

Development of Staff Services

The development and organization of staff services in correctional settings remain a unique area in which psychologists continue to contribute. The need for such services can stem from the stressors inherit in public safety work. Staff may battle the effects of boredom experienced through effective, daily correctional routines. Then, during the course of any of those routines and days, they may also face offender aggression or violence and the subsequent stress reactions this causes. Services such as employee assistance and drug-free workplace programs have become the norm in many correctional settings. Such programs and the psychologists that organize them may be called upon to deliver even more structured responses for adverse events such as dealing with staff assault, homicide, or suicide. The emerging family and crisis support services have been organized and operated by psychologists and are now part and parcel of many effective correctional systems.

In a similar vein, psychologists may be found assisting correctional staff responding to riot and hostage situations. They play unique roles in preventing riots and in negotiating hostage incidents. They may be asked to fulfill specific mental health consultative roles, and sometimes they take a role in training negotiation teams or command center staff. Behind the scenes, these psychologists formulate and develop action steps to achieve a coordinated, strategic response in actual operations as well as in the training of staff conducting such operations (Augustin & Fagan, 2011; Fagan, 2003).

FUTURE OPPORTUNITIES

The demand for clinical psychologists in correctional settings is high, and for more than 100 years psychologists have been responsive to this call (Bartol & Bartol, 2011; Watkins, 1992). Psychologists' ability to positively affect correctional facilities and the criminal justice system as a whole is unquestionable. The previous century was characterized by tremendous growth in clinical psychologists' roles in correctional settings, and the next century will certainly be marked by a refinement of these roles, capitalizing on the varied skill sets of clinical psychologists.

Economic realities and behavioral research on the effectiveness of incarceration as a crime solution have begun to influence the future. Recently, a slight downward shift in incarceration rates has been noted, with decreases in the number of individuals under correctional supervision in 2009, 2010, and 2011 (Carson & Sabol, 2011). This shift, albeit slight, is expected to continue as criminal justice stakeholders advocate for a reexamination of the value of incarceration, particularly for nonviolent, low-risk offenders. This paradigm shift presents clinical psychologists and correctional administrators with a unique opportunity to reevaluate the practice of clinical psychology in a correctional setting. Several new opportunities are emerging.

Expertise in Correctional Psychology

Clinical practice in corrections has often failed to keep pace with the need for applied clinical research in corrections. Although practicum and internship programs in correctional settings have a lengthy history, academic coursework and empirical research in correctional psychology are often lacking. Despite this reality, two recent trends bode well for the development of increased expertise in correctional psychology. First, the focus on evidence-based practices is affecting correctional settings. Increasingly, clinical psychologists practicing in corrections are tasked with delivering cost-effective services supported by empirical research (Norcross, Hogan, & Koocher, 2008). A solid base of research is developing in the reduction of recidivism, but the effectiveness of psychological treatments is often untested in a correctional environment. Second, the growing interest in correctional practicum and internship programs has highlighted the gap between academic programs and clinical practice. As more graduate students choose careers in correctional psychology, the demand for relevant coursework will compel graduate programs to revise their curricula. If programs are to remain relevant, increasingly they will offer elective coursework aimed at critical correctional skills, such as suicide risk assessment, substance abuse and sex offender treatment, behavioral management, and criminality.

It is here that international partnerships are expected to flourish. The expert researchers from Canada may well be partners of choice among those in the United States who are studying how to implement evidence-based practices that facilitate offender change. One of the more successful examples of partnership has been the North American Correctional and Criminal Justice Psychology Conference. The conference was developed by the Criminal Justice section of the Canadian Psychological Association and is cosponsored by the Criminal Justice section of the American Psychological Association's Division 18, Psychologists in Public Service. The conference is held every 4 years in conjunction with the annual conference of the Canadian Psychological Association. Another example of international partnerships is the International Association for Correctional and Forensic Psychology, which sponsors the journal *Criminal Justice and Behavior*. Of the more than 250 manuscripts submitted per year in the last 2 years, the international submissions composed roughly 40% of the journal's initial submissions (E. Salisbury, personal communication, October 24, 2013). Collaboration will require corrections administrators to understand and support the value of clinical research in corrections. That research will include experimental designs in correctional program evaluations and an ability to establish contracts with independent agencies for evaluations (Farabee, 2005).

Emerging Populations

Declining incarceration rates, however rapid, will not eliminate the demand for psychological services for special populations. In fact, we expect special population psychological services trends to increase in the future. For example, laws aimed at the illegal drug trade, undocumented immigrants, and sex offenders have all created demands for services in correctional settings. These include drug treatment, bilingual mental health professionals, and sex offender treatments. As the pipeline of students available in graduate programs becomes increasingly diverse, it will become important for correctional mental health workforce planners to incentivize the recruitment of these young clinicians. Prisons have always provided services to an incredibly diverse population, and with an increasingly diverse workforce generally available, attention will be turned to delivering more culturally competent services.

In other instances, legislation itself is used to raise awareness of service needs among particular populations. For example, the Prison Rape Elimination Act of 2003 underscored the need for mental health services for victims of sexual abuse in prison. Although the treatment needs of female victims of sexual abuse are well-documented, the needs of male victims of sexual abuse in a correctional setting are less well understood. Transgender inmates represent another emerging special population; although relatively small in percentage of inmates, the challenges of managing and treating this population in a correctional setting require significant attention (Marks, 2009). As society's awareness of and support for the needs of transgender individuals increases, clinical psychologists working in corrections will be called upon to meet these needs.

Special populations also emerge in conjunction with changes in the criminal justice setting. For example, the natural aging of the prison population creates a demand for services specific to older adult offenders, as chronic health conditions, age-related cognitive declines, and end-of-life issues become more relevant (McLearen & Magaletta, 2011). Recently, criminal justice agencies, advocacy groups, and legislative authorities have directed their attention to the use of restricted housing units, other known as segregation units. Although empirical data on the impact of segregation are limited, criminal justice agencies are increasingly taking steps to reduce the number of offenders housed in long-term segregation. As agencies attempt to minimize the use of segregation, two special populations run counter to these efforts—offenders who engage in highly violent acts while incarcerated and offenders who actively seek segregation placement. Clinical psychologists have the opportunity to play a major role in the management of these two challenging populations. Through risk assessments and targeted treatments, psychologists can contribute significantly to the safety and security of the correctional institutions housing these populations.

All these emerging populations will change the landscape of assessment and treatment in correctional settings, forcing clinical psychologists to develop specialized expertise, building on the generalist model that has been the bedrock of correctional psychology. A shrinking correctional population may create an environment in which psychologists can develop and refine specialized expertise. In large, correctional systems that manage numerous offenders in institutions across large distances, new and established technologies, such as telehealth, may play a role in the delivery of services, allowing a single subject matter expert to provide psychological services.

Increased Interdisciplinary Collaboration

In community settings, collaboration between law enforcement officers and mental health professionals has been on the rise for a number of years. More recently, these collaborative efforts have extended into the correctional setting, yielding better outcomes for offenders with mental illness. One such example is crisis intervention teams, which actively engage correctional officers, administrators, and mental health professionals to effectively care for offenders with mental illness. This collaboration includes specialized mental health training for correctional officers, aimed at helping officers respond effectively to mental health crises.

However, mental health training for correctional officers is not restricted to crisis intervention teams. Several domestic and international correctional agencies have incorporated mental health training for their custodial staff. Correctional agencies that use a "correctional worker first" model have seen this approach foster increased teamwork across the organization (Hawk, 1997). In the future, a "we are all mental health workers" model may further enhance team work and improve care for offenders with mental illness (Appelbaum, Hickey, & Packer, 2001).

Reducing the Criminal Justice Population

The cultural shift away from incarceration and toward prevention and diversion is underway. Clinical psychologists can play a major role in this shift by offering evidence-based strategies to prevent criminal activity and by diverting low-risk offenders into treatment programs that reduce the likelihood of continued criminal conduct. Our understanding of the complex interplay of criminality, mental disorders, and substance abuse is also advancing, such that criminal justice experts now recognize the need to assess and treat offenders in all three domains to ensure successful outcomes.

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