

1

WHAT IS CLINICAL PSYCHOLOGY?

Chapter Preview

In this chapter we introduce the field of clinical psychology. We first outline the requirements for becoming a clinical psychologist and discuss the profession’s popularity. Next we describe how clinical psychology relates to other mental health professions. We describe the work activities of most clinical psychologists and the rewards of the profession, financial and otherwise. Finally, we introduce some of the key issues shaping the field today. These issues include how to (a) strike a balance between science and practice, (b) train new clinicians, (c) combine divergent theoretical approaches, and (d) adapt clinical practice to a changing health care environment.

A Clinical Case

Bonnie, a 15-year-old European American girl in 9th grade, asked her parents to get her some help to deal with her fear and anxiety. They did so, and as part of the intake evaluation at her first appointment, Bonnie was interviewed by a clinical psychologist specializing in treatment of childhood anxiety disorders. At the beginning of the interview, Bonnie said her problem was that she would “get nervous about everything,” particularly about things at school and doing anything new. When asked to give an example, Bonnie mentioned that her father wanted her to go to camp during the coming summer, but she did not want to go to camp because of her “nerves.” It soon became clear that Bonnie’s anxiety stemmed from a persistent fear of social situations in which she might be the focus of other people’s attention. She said she felt very self-conscious in the local mall and constantly worried about what others might be thinking of her. She was also fearful of eating in public, using public restrooms, being in crowded places, and meeting new people. She almost always tried to avoid such situations. She experienced anxiety when talking to her teachers and was even more afraid of talking to store clerks and other unfamiliar adults. Bonnie would not even answer the telephone in her own home.

In most of these situations, Bonnie said that her fear and avoidance related to worry about possibly saying the wrong thing or not knowing what to say or do, which would lead others to think badly of her. Quite often, her fear in these situations became so intense that she experienced a full-blown panic attack, complete with rapid heart rate, chest pain, shortness of breath, hot flashes, sweating, trembling, dizziness, and difficulty swallowing.

To get a clearer picture of the nature of Bonnie’s difficulties, the psychologist conducted a separate interview with Bonnie’s parents. While confirming what their daughter had said, they reported that Bonnie’s social anxiety was even more severe than she had described it. (Based on Brown & Barlow, 2001, pp. 37–38.)

How can we best understand Bonnie’s fears and anxieties? How did her problems develop, and what can be done to help her overcome them? These questions are important to Bonnie, her loved ones, and anyone interested in her condition, but the questions are especially important to clinical psychologists.

In this book you will learn how clinical psychologists address problems such as those faced by Bonnie. You will learn how clinicians assess and treat persons with psychological problems, how they conduct research into the causes and treatments for psychological disorders, and how they are trained. You will learn how clinical psychologists have become key providers of health care in the United States and in other countries, and how clinical psychology continues to evolve and adapt to the social, political, and cultural climate in which it is practiced.

AN OVERVIEW OF CLINICAL PSYCHOLOGY

SECTION PREVIEW

Here we define clinical psychology and identify the essential requirements satisfied by its practitioners. We also discuss the continued appeal of clinical psychology, popular conceptions of clinical psychologists, and how clinical psychology overlaps with, and differs from, other mental health professions.

As its name implies, clinical psychology is a subfield of the larger discipline of psychology. Like all psychologists, clinical psychologists are interested in *behavior and mental processes*. Like some other psychologists, clinical psychologists generate research about human behavior, seek to apply the results of that research, and engage in individual assessment. Like the members of some other professions, clinical psychologists provide assistance to those who need help with psychological problems. It is difficult to capture in a sentence or two the ever-expanding scope and shifting directions of clinical psychology. Nevertheless, we can outline the central features of the discipline as well as its many variations.

Definition of Clinical Psychology

The definition of clinical psychology adopted by the American Psychological Association’s Division of Clinical Psychology reads as follows: “The field of Clinical Psychology integrates science, theory, and practice to understand, predict, and alleviate maladjustment, disability, and discomfort as well to promote human adaptation, adjustment, and personal development. Clinical Psychology focuses on the intellectual, emotional, biological, social, and behavioral aspects of human functioning across the life span, in varying cultures, and at all socioeconomic levels” (American Psychological Association, Division 12, 2012). As you can see, the definition focuses on the *integration* of science and practice, the *application* of this integrated knowledge across diverse human populations, and the *purpose* of alleviating human suffering and promoting health. But what are the requirements to become a clinical psychologist?

Personal Requirements to Be a Clinical Psychologist

Certain requirements for those wishing to be clinical psychologists have more to do with attitudes and character than with training and credentialing. Perhaps the most notable distinguishing feature of clinical psychologists has been called the *clinical attitude* or the *clinical approach* (Korchin, 1976), which is the tendency to combine knowledge from research on human behavior and mental processes with efforts at individual assessment in order to understand and help a particular

Clinical psychology’s purpose is to alleviate human suffering and promote health. Those wishing to become clinical psychologists must satisfy rigorous personal, legal, and educational requirements. *Source:* Alina Solovyova-Vincent/E+/Getty Images.



person. The clinical attitude sets clinicians apart from other psychologists who search for general principles that apply to human behavior problems in general. Clinical psychologists are interested in research of this kind, but they also want to know how general principles shape lives, problems, and treatments on an individual level.

Because clinical psychology is both rigorously scientific and deeply personal, it requires that people entering the field have a strong and compassionate interest in human beings. Clinical training programs' admissions committees look for a number of characteristics as they make decisions about which applicants to admit to graduate study in clinical psychology. Personality variables such as an interest in people, integrity in dealing with others, emotional stability, and intellectual curiosity are of particular importance in selecting candidates (Johnson & Campbell, 2004; Prideaux et al., 2011; Swaminathan, 2012). These traits are important in many jobs, but they are crucial in clinical psychology because clinicians regularly work in situations that can have significant and lasting personal and interpersonal consequences. Even those clinical researchers who don't themselves offer psychotherapy may still make decisions about matters of personal consequence to participants, so integrity, emotional stability, and sound judgment are required for them, too.

The potential impact that clinical psychologists can have helps explain why, when considering candidates for admission to graduate training in clinical psychology, many psychology departments tend to rank letters of recommendations, personal statements, and interviews as slightly more important than more standardized academic indicators such as grade point averages or Graduate Record Exam (GRE) scores (Norcross, Kohout, & Wicherski, 2005). Nevertheless, as noted in Chapter 16, "Getting into Graduate School in Clinical Psychology," those standardized academic admission requirements for clinical psychology programs are typically quite high and predictive of success on the national licensing examination required to practice as a clinical psychologist (Sharpless & Barber, 2013).

Legal, Educational, and Ethical Requirements to Be a Clinical Psychologist

As one of psychology's *health service provider* subfields, clinical psychology requires its practitioners to receive specific training. In addition to having a degree from an accredited institution, those who practice clinical psychology must be licensed or certified to do so by state and national agencies. In the United States and Canada, each state or province establishes the requirements for licensure in clinical psychology, awards licenses to those who qualify, and retains the power to penalize or revoke the licenses of those who violate licensing laws. In other words, clinical psychology, like medicine, pharmacy, law, and dentistry, is a legally regulated profession.

Legal requirements vary not only by state but also by levels of training. For instance, in most states a *full license* in clinical psychology allows one to practice independently, to "hang out a shingle." Fully licensed clinicians can rent or own their own offices, set fees, establish work hours, bill insurance companies or other third parties, consult, testify in court, and engage in a number of other activities characteristic of independent private practice. These privileges usually come after a trainee has completed a doctoral-level degree that includes course work, research training, and the additional requirements listed below.

EDUCATION How much additional education beyond the bachelor's is required? An earned doctorate from an accredited program is the basic educational requirement for clinical psychology licensure (American Psychological Association, Division 12, 2012). Students complete substantial advanced coursework in psychopathology, assessment, and intervention strategies, and they become involved in conducting clinical research. Most states also require continuing education training for the periodic renewal of licenses.

Doctoral-level degrees for fully licensed clinical psychologists are typically either the *PhD* or the *PsyD*, though they occasionally include others (e.g., the *EdD*, or Doctor of Education). The PhD and PsyD degrees both stress intensive clinical training in preparation for clinical practice, but they differ in the extent to which science and research are stressed. Later in this chapter and in subsequent chapters, we explain the differences in these two models of training and describe the debates about the advantages and disadvantages of each. For now, just be aware that the number of doctoral-level psychologists produced by the two models has shifted; PsyD programs now accept and graduate more doctoral-level clinical psychologists than PhD programs do (Sayette, Norcross, & Dimoff, 2011).

At the subdoctoral level, practitioners have titles such as *limited license psychologist*, *marriage and family therapist*, *psychological assistant*, *mental health counselor*, and similar terms. To obtain a limited license, one usually needs a master's degree and a specific period of postgraduate supervised experience. Some states regulate the limited license much as they regulate the doctoral-level license, but other states provide less oversight, or no oversight, for subdoctoral practitioners (Sales, Miller, & Hall, 2005). Many states place limits on the practice of clinicians who are not fully licensed. An example would be requiring that the subdoctoral-level clinician always practices under the supervision of a fully licensed psychologist. Unfortunately, subdoctoral degrees are too often accompanied by restricted or lesser levels of reimbursement from insurance companies, lower salaries, and higher job turnover (Rajecki & Borden, 2011). This is not to say that qualified master's-level clinicians provide inferior services—well-trained masters level clinicians have helped millions of people—but rather, as in medicine, law, or any other profession, higher levels of training are usually associated with higher levels of skill in those areas and greater financial rewards. Given that clinical psychology is such a popular and competitive field, the best advice for students contemplating entry into this field is to resolve to work very hard and to seek the highest levels of training available.

EXPERIENCE Some term of supervised practice in the field, often embodied in successful completion of an approved practicum, internship, or period of supervision is also a critical part of a clinical psychologist's required training. The duration of supervised practice varies, but one-year and two-year internships are common. Students are typically paid a modest stipend during their internships. As the number of persons applying for internships has recently outpaced the number available in a given year, internship placement has become more competitive (Vasquez, 2011). The APA annually publishes a list of accredited clinical psychology programs and approved internship sites in its flagship journal, the *American Psychologist*.

TESTING OF COMPETENCE To be licensed as a clinical psychologist, candidates must declare to licensing boards their areas of competence, and they must pass a comprehensive examination, often called a *licensing board exam*, which may include both written and oral components. The written national licensing test used in the United States and Canada is called the *Examination for Professional Practice in Psychology* (EPPP). Passing this examination also makes it easier for clinicians to have their licenses recognized in a state other than the one where they were first licensed, a process called *reciprocity*. Some states require other examinations, particularly if candidates want to declare certain areas of competency.

GOOD CHARACTER Prospective clinical psychologists must show the physical, mental, and moral capability to engage in the competent practice of the profession. This characteristic is often denoted by letters of recommendations and by the absence of ethical or legal violations. Practitioners of clinical psychology should also know the *ethical codes* that guide practice: the American Psychological Association's *Ethical Principles of Psychologists and Code of Conduct* (2010). Referred to hereafter as the *Ethics Code*, this publication offers guidance on ethical concerns related to competence, human relations, privacy and confidentiality, record keeping, education and training, therapy, and many other situations. It is especially useful in navigating the gray areas that invariably come up in the practice of clinical psychology. Of course, all practitioners should know the obligations, freedoms, and limitations that go with practice under their level of licensure and in their state. Familiarity with the Ethics Code, as well as with state and federal laws, is necessary for these psychologists to be effective and to avoid professional mistakes that could have serious consequences.

Most clinical psychologists hold professional licenses and provide psychotherapy treatment, but as suggested earlier, not all do. Rather than specialize in assessment and treatment, some choose to engage primarily in some combination of teaching, research, consulting, or administration, while doing little or no direct service delivery. But non practicing clinical psychologists, too, must complete formal educational requirements and follow professional codes of conduct and regulations. For instance, clinical researchers must follow sections of the Ethics Code dealing with research in psychology, and their studies are overseen by *Institutional Review Boards*, which are established under federal guidelines to protect the rights and well-being of human participants in research.

Popularity of Clinical Psychology

Clinical psychology is the largest subfield of psychology. Graduate programs in clinical psychology attract more applicants than do graduate programs in any other area of psychology (see Figure 1.1), and far more doctoral-level degrees are awarded in clinical and related health service provider areas than in other areas of psychology (Kohout & Wicherski, 2011). The prominence of clinical psychology helps explain why the terms *psychologist* and *clinical psychologist* are practically synonymous in public discourse.

The appeal of clinical psychology is also reflected in the composition of the largest organization of psychologists in the United States: the American Psychological Association. Of the 56 divisions in APA, the largest divisions relate to clinical psychology (Division 12—Clinical Psychology, Division 40—Clinical Neuropsychology, and Division 42—Psychologists in Independent Practice). Of course, for students interested in clinical psychology, popularity means competition, especially for spots in graduate schools. Indeed, the stronger, research-oriented PhD programs, whose students typically score the highest on the Examination for Professional Practice in Psychology, accept as few as 7% of applicants, while some freestanding PsyD programs accept closer to 50% (Norcross, Ellis, & Sayette, 2010). Despite the competition, the outlook for clinical psychologists looks promising. The U.S. Department of Labor’s Occupational Outlook Handbook (2011) projects that job prospects for doctoral-level applied psychologists are best, while master’s degree holders will face keen competition and bachelor’s degree holders will find limited opportunities. CNN’s Money.com (2012) rates clinical psychologist as 23rd among the top 50 jobs in America, with personal satisfaction, job security, future growth, and benefit to society at high levels.

The field’s popularity is also shown by the numerous portrayals of clinical psychologists and their distressed clients in movies, television, and other media. This kind of popularity is a double-edged sword. On the one hand, accurate portrayals can contribute to the public’s *mental health literacy*—accurate understanding of psychological disorders and their treatments (Jorm, 2000). On the other hand, inaccurate portrayals can decrease mental health literacy and create inaccurate, stereotyped views of the profession. Unfortunately, the latter outcome seems to be more common. Clinical psychologists are often portrayed as oracles, agents of social compliance, or wounded healers, and the techniques by which they help clients are seldom portrayed accurately (Orchowski, Spickard, & McNamara, 2006). Inaccurate portrayals might make for good drama, but they don’t reveal what clinical psychology is really like. We hope that this book does a much better job.

Clinical Psychology and the Related Mental Health Professions

As noted earlier, clinical psychologists are considered *health service providers*. Other subfields within psychology belonging to this category include behavioral and cognitive psychology, clinical psychology, clinical child psychology, clinical health psychology, clinical neuropsychology, counseling psychology, family psychology, forensic psychology, professional geropsychology, psychoanalytic psychology, and school psychology (Nelson, 2013). Clinical services are also offered by professionals trained outside psychology in professions such as social work, psychiatry, and nursing. Like clinical

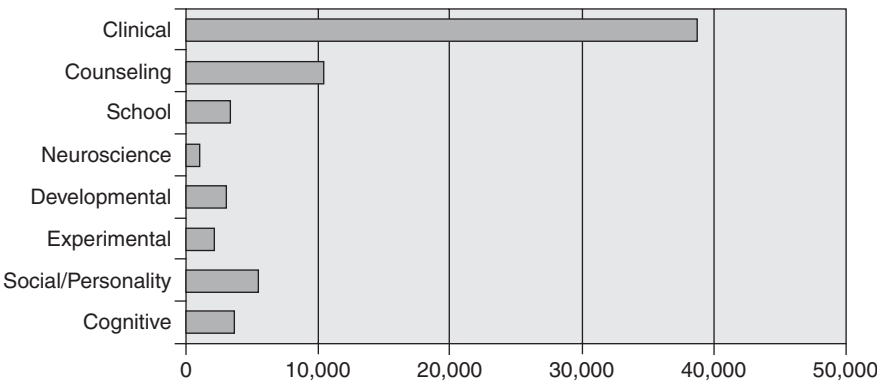


FIGURE 1.1 Applicants to U.S. Psychology Programs, 2009–2010. Source: Adapted from Kohout and Wicherski (2011).

psychology, each of the professions mentioned above has one or more national or international organizations, networks of accredited training programs, well-established research traditions, and specific licensing or certification requirements. Each group also has its own unique history and traditions. Practitioners from each group offer mental health services in one form or another. How then are clinical psychologists similar to, and different from, these other professionals?

COUNSELING PSYCHOLOGY Counseling psychologists are the most similar to clinical psychologists in their training and in the types of services that they offer. Much of their course work and supervised training overlaps with that of clinical psychologists—practitioners are trained in psychopathology, interviewing, assessment, counseling and psychotherapy, research, and the like. Students in the two fields apply to the same list of accredited internship sites, and graduates from the two subfields are eligible for the same licensure, practice opportunities, and insurance reimbursement. These two subfields are similar enough in their training, research interests, professional activities, and licensure requirements that calls to merge the two fields are often heard (Norcross, 2011). Nevertheless, there are a few salient differences between clinical and counseling psychology.

Clinical psychology programs are invariably housed in psychology departments, while counseling psychology programs are sometimes housed in psychology departments, but are often located in education departments or other departments or divisions. Counseling psychologists can earn a PhD, PsyD, or EdD degree, all doctoral-level degrees but differing in emphasis (discussed later in this chapter and in Chapter 15).

Counseling psychology was founded to promote personal, educational, vocational, and group adjustment (American Psychological Association Division 17, 2012). Accordingly, counseling psychologists are more likely to deal also with normal transitions and adjustments that people may face. Besides offering psychotherapy, counseling psychologists might, for instance, do career counseling or other forms of counseling related to life changes or developmental problems. Clinical psychology, on the other hand, was founded primarily to assess and treat persons with psychological disorders (see Chapter 2). Therefore, clinical psychologists focus more specifically on prevention, diagnosis, and treatment of psychological problems and on research related to these issues, and they generally deal with more severe pathology than counseling psychologists do. So the differences between clinical psychology and counseling psychology are largely a matter of emphasis. Despite these differences, there is considerable overlap between the professions.

SCHOOL PSYCHOLOGY School psychologists also have much in common with clinical and counseling psychologists: they generally share a scientist-practitioner model of training, move through similar internship and licensure requirements, conduct assessments, design interventions at the individual and system levels, and evaluate programs. The obvious difference is that school psychologists typically receive more training in education and child development, and they focus their interventions on children, adolescents, adults, and their families in school and other educational settings. Despite the differences in emphasis, the similarities to clinical, especially to clinical child psychology, and to counseling psychology are greater than the differences (American Psychological Association Division 16, 2012; Cobb et al., 2004).

SOCIAL WORK As the nation's largest group of mental health service providers, social workers are employed in a variety of settings, including hospitals, businesses, community mental health centers, courts, schools, prisons, and family service agencies. Students in social work programs may choose to specialize in direct services to clients, or they may specialize in community services (Ambrosino, Heffernan, Shuttlesworth, & Ambrosino, 2012). About half of the National Association of Social Workers members are engaged in offering direct clinical services, including various forms of therapy; the rest work in areas such as administration, public policy, research, and community organizing.

Social workers can earn a bachelor's degree (Bachelor of Social Work, or BSW), master's degree (Master of Social Work, or MSW), or doctoral degree (Doctorate in Social Work, or DSW or PhD). As in clinical psychology, licensing and certification laws vary by state. Typically, the minimum degree required to provide psychotherapy services is an MSW (National Association of Social Workers, 2012). Social workers may be trained in various psychotherapy techniques, but as a general rule, they focus more on how social/situational variables, rather than intrapersonal and interpersonal variables, affect functioning. Social workers, like clinical psychologists, spend much of their time in direct client contact, helping clients cope with problems and navigate a world that has become complex and difficult because of those problems.

PSYCHIATRY One of the first questions students ask when they begin studying psychology is “What’s the difference between a psychologist and a psychiatrist?” The most entertaining answer is: “about \$80,000 per year,” but the more comprehensive answer involves the differences in training and practice between the two professions. Psychiatry is a specialty within the medical field. So, just as pediatrics focuses on children, ophthalmologists specialize in eyes, and neurologists focus on the brain and nervous system, psychiatrists are medical doctors who specialize in treating psychological disorders. Persons training to be psychiatrists typically complete a psychiatric residency in which they take course work in psychology and undergo supervision by qualified psychiatrists as they work with patients. This residency often occurs in a hospital setting and therefore generally involves exposure to more serious psychopathology, but it may also occur in outpatient settings. Many psychiatrists offer psychotherapy, but not all do. According to recent surveys, the majority see patients for less than 25 minutes at a time, often for medication reviews (Kane, 2011). In addition to doing therapy and prescribing medication, psychiatrists order or conduct other medical tests, teach, do research, work in administration, and perform other tasks commensurate with their level of training. Though psychiatrists generally have more medical training than clinical psychologists, clinical psychologists typically have more formal training in psychological assessment and a broader exposure to a variety of approaches to psychology.

The historical distinction between psychiatrists and clinical psychologists has been understood as reflecting the difference between a more biological (psychiatrists) and a more psychological (clinical psychologists) view of the causes of mental disorders. Recent years, however, have seen increased collaboration between the professions. Much of the change can be attributed to the growing realization that psychological disorders are seldom *either* biological or psychological in origin but typically a complex interaction of both. As a result, clinical psychologists are increasingly employed in medical settings, where their psychological and research expertise are valued. Psychiatrists and psychologists often work cooperatively on task forces devoted to issues of valid diagnoses and effective treatments. This is consistent with a broader shift toward psychology becoming a health profession rather than strictly a mental health profession (Rozensky, 2011).

OTHER SPECIALTIES RELATED TO CLINICAL PSYCHOLOGY Mental health services are also offered by a variety of other *specialists* and *caregivers*. We have already mentioned counseling psychology and school psychology as two subfields that are closely related to clinical psychology. In Chapters 11–14, we detail four other specialties related to clinical psychology: clinical child psychology, health psychology, clinical neuropsychology, and forensic psychology. Other psychology programs that train *health service providers* include sport psychology, rehabilitation psychology, marriage and family therapy, humanistic psychology, and community counseling.

Still other specialists are trained outside psychology in programs specifically devoted to that specialty. For instance, as specialists within the nursing profession, psychiatric nurses usually work in hospital settings and operate as part of a treatment team that is headed by a psychiatrist and includes one or more clinical psychologists. They may be trained in some forms of therapy, often those specific to the populations they encounter. Pastoral counselors typically get training in counseling from a faith-based perspective. For clients whose religious faith is central to their identity and outlook on life, the availability of a counselor who affirms this faith can be important.

Paraprofessionals, psychological assistants, and others who go by similar names, are usually bachelor’s-level or associate-level personnel trained to administer a specific form of treatment to a specific population. They generally work as part of a treatment team, and their activities are supervised by professionals. Their training varies, but many come from disciplines that have some or all of the following indicators of professional quality: well-articulated standards of practice, national organizations that promote and oversee the profession, course offerings in colleges and universities, empirical research traditions, and peer-reviewed journals.

Others specialties, such as aromatherapy, reflexology, homeopathy, and spiritual healing techniques, have few or none of the indicators of professional quality just listed and might be described as further from the mainstream of mental health treatment. Often classified as *alternative treatments* or *alternative medicine*, many of these further-from-the-mainstream treatments combine somatic or sensual experiences with variants on psychological, social, or spiritual intervention. Some of these practices derive from ancient traditions; some are new inventions. Persons who practice alternative treatments often describe their work as falling within a *holistic* tradition that emphasizes the integration of mind, body, and spirit (Feltham, 2000).

SECTION SUMMARY

Clinical psychology involves the application of principles, methods, and procedures to reduce or alleviate maladjustment, disability, and discomfort in a wide range of client populations. Its title and practices are regulated by professional organizations and by state licensing boards. Specific kinds of training are required for the different types of licensure, and certain personal traits, such as a clinical attitude, sound judgment, and emotional stability, are needed to practice the profession effectively. As one of the health service provider professions, clinical psychology overlaps with other mental health professions but is distinguished by psychological training that is both research oriented and practical. It remains the most popular specialty within psychology, one of the most popular majors among undergraduates, and a profession, the practice of which is a source of considerable curiosity and interest in the public.

CLINICAL PSYCHOLOGISTS AT WORK

SECTION PREVIEW

Here we describe the various professional activities of clinical psychologists and how clinicians distribute their work time among those activities. We also describe the various employment settings and general salary ranges of clinical psychologists.

Activities of Clinical Psychologists

Let’s consider in more detail some of the activities that clinical psychologists pursue, the variety of places in which they are employed, the array of clients and problems on which they focus their attention, and the rewards of the job. Not all clinicians are equally involved with all the activities we will describe, but our review should provide a better understanding of the wide range of options open to those who enter the field. It might also help explain why the field remains attractive to so many students.

About 95% of all clinical psychologists spend their working lives engaged in some combination of six activities: assessment, treatment, research, teaching (including supervision), consultation, and administration. Figure 1.2 shows the results of surveys taken over the last few decades examining how clinical psychologists spend their time. Keep in mind that the percentages vary considerably across work settings—psychologists in university settings will spend more time engaged in teaching and research, and those in private practice will spend more time conducting psychotherapy and assessment.

ASSESSMENT Assessment involves collecting information about people: their behavior, problems, unique characteristics, abilities, and intellectual functioning. This information may be used to diagnose problematic behavior, to guide a client toward an optimal vocational choice, to facilitate selection of job candidates, to describe a client’s personality characteristics, to select treatment techniques, to guide legal decisions regarding the commitment of individuals to institutions, to provide a more complete picture of a client’s problems, to screen potential participants

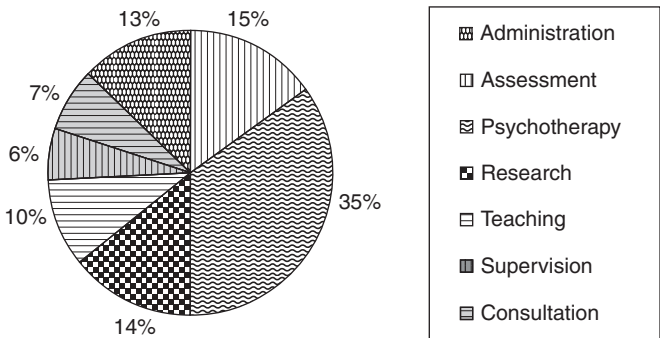


FIGURE 1.2 Percentage of Time Licensed Psychologists Spend in Professional Activities. Source: Based on Norcross, J. C., Karpiak, C. P., & Santoro, S. O. (2005). Clinical psychologists across the years: The Division of Clinical Psychology from 1960 to 2003. *Journal of Clinical Psychology*, 61, 1467–1483.

in psychological research projects, to establish pretreatment baseline levels of behavior against which to measure posttreatment improvement, and for literally hundreds of other purposes. Most clinical assessment instruments fall into one of three categories: tests, interviews, and observations. We cover each of these in detail in the chapters devoted to assessment.

Clinicians today have an array of assessment options not formerly available to them. For instance, computers can administer assessment items, analyze results, and generate entire written reports. Another frontier of psychological assessment is developing from research on a variety of biological factors associated with human functioning. During the last two decades, research focusing on genetic, neurochemical, hormonal, and neurological factors in the brain has led to the development of new neurobiological assessments. These changes, too, have the potential to greatly enhance the assessment efforts of clinicians, but as with computer-based assessment, they raise a number of procedural, practical, and ethical questions (Gazzaniga, 2011; Popma & Raine, 2006).

TREATMENT Clinical psychologists offer treatments designed to help people better understand and solve distressing psychological problems. These interventions are known as psychotherapy, behavior modification, psychological counseling, or other terms, depending on the theoretical orientation of the clinician. Treatment sessions may include client or therapist monologues, painstaking construction of new behavioral skills, episodes of intense emotional drama, or many other activities that range from the highly structured to the utterly spontaneous.

Individual psychotherapy has long been the single most frequent activity of clinicians (Kazdin, 2011), but psychologists may also treat two or more clients together in couple, family, or group therapy. Sometimes, two or more clinicians work in therapy teams to help their clients. Treatment may be as brief as one session or may extend over several years. Some psychologists, known as community psychologists, focus on preventing psychological problems by altering the institutions, environmental stressors, or behavioral skills of people at risk for disorder (e.g., teenage parents) or of an entire community. The results of psychological treatments are usually positive, though in some cases the change may be small, nonexistent, or even negative (Castonguay, Boswell, Constantino, Goldfried, & Hill, 2010; Lilienfeld, 2007). Of course, increasing the effectiveness of treatments offered to the public is a key goal of research. (Treatment outcomes are discussed in several later chapters, especially Chapter 10, “Research on Clinical Intervention.”)

RESEARCH By training and by tradition, clinical psychologists are research oriented. For most of the first half of its existence, the field was strongly dominated by research rather than by application (see Chapter 2). Although that balance has changed, research continues to play a vital role in clinical psychology.

Research activity makes clinicians stand out among other helping professions, and we believe it is in this area that they may make their greatest contribution. In the realm of psychotherapy, for example, theory and practice were once based mainly on case study evidence, subjective impressions of treatment efficacy, and rather poorly designed research. This “prescientific” era (Paul, 1969) in the history of psychotherapy research has evolved into an “experimental” era in which the quality of research has improved greatly and the conclusions we can draw about the effects of therapy are much stronger. This development is due in large measure to the research of clinical psychologists.

Clinical research varies greatly with respect to its setting and scope. Some studies are conducted in research laboratories, while others are conducted in the more natural, but less controllable, conditions outside the lab. Some projects are supported by governmental or private grants that pay for research assistants, computers and other costs, but a great deal of clinical research is performed by investigators whose budgets are limited and who depend on volunteer help and their own ability to obtain space, equipment, and participants.

Clinical psychology’s tradition of research is reflected in graduate school admission criteria, which often emphasize applicants’ grades in statistics or research methods over grades in abnormal psychology or personality theory. Many graduate departments in psychology in the United States regard research experience as among the three most important criteria for admission, and graduates of research-oriented clinical psychology programs typically outperform graduates of programs that don’t emphasize research as much (Norcross, Ellis, & Sayette, 2010; Pate, 2001). Even though most clinical psychologists do not end up pursuing a research career—many never publish a single piece of research—most graduate programs in clinical psychology still devote a significant amount of time to training in empirical research. Why?

There are at least four reasons. First, it is important that all clinicians be able to critically evaluate published research so that they can determine which assessment procedures and therapeutic interventions are likely to be effective. Second, clinicians who work in academia must often supervise and evaluate research projects conducted by their students. Third, when psychologists who work in community mental health centers or other service agencies are asked to assist administrators in evaluating the effectiveness of the agency's programs, their research training can be very valuable. Finally, research training can help clinicians objectively evaluate the effectiveness of their own clinical work. Tracking client change can signal the need to change treatment plans, reveal the need for additional clinical training, and contribute to third party (e.g., insurance companies, clinical researchers) efforts to document and understand factors affecting clinical effectiveness (Hatfield & Ogles, 2004).

TEACHING A considerable portion of many clinical psychologists' time is spent in educational activities. Clinicians who hold full- or part-time academic positions typically teach undergraduate and graduate courses in areas such as personality, abnormal psychology, introductory clinical psychology, psychotherapy, behavior modification, interviewing, psychological testing, research design, and clinical assessment. They conduct specialized graduate seminars on advanced topics, and they supervise the work of graduate students who are learning assessment and therapy skills in practicum courses.

A good deal of clinical psychologists' teaching takes the form of research supervision. This kind of teaching begins when students and professors discuss research topics of mutual interest that are within the professor's area of expertise. Most research supervisors help the student frame appropriate research questions, apply basic principles of research design to address those questions, and introduce the student to the research skills relevant to the problem at hand.

Clinical psychologists also do a lot of teaching in the context of in-service (i.e., on-the-job) training of psychological, medical, or other interns, social workers, nurses, institutional aides, ministers, police officers, prison guards, teachers, administrators, business executives, day-care workers, lawyers, probation officers, and many other groups whose vocational skills might be enhanced by increased psychological sophistication. Clinicians even teach while doing therapy—particularly if they adopt a behavioral approach in which treatment includes helping people learn more adaptive ways of behaving (see Chapter 8). Finally, many full-time clinicians teach part time in colleges, universities, and professional schools. Working as an adjunct faculty member provides another source of income, but clinicians often teach because it offers an enjoyable way to share their professional expertise and to remain abreast of new developments in their field.

CONSULTATION Clinical psychologists often provide advice to organizations about a variety of problems. This activity, known as consultation, combines aspects of research, assessment, treatment, and teaching. Perhaps this combination of activities is why some clinicians find consultation satisfying and lucrative enough that they engage in it full time. Organizations that benefit from consultants' expertise range in size and scope from one-person medical or law practices to huge government agencies and multinational corporations. The consultant may also work with neighborhood associations, walk-in treatment centers, and many other community-based organizations. Consultants perform many kinds of tasks, including education (e.g., familiarizing staff with research relevant to their work), advice (e.g., about cases or programs), direct service (e.g., assessment, treatment, and evaluation), and reduction of intraorganizational conflict (e.g., eliminating sources of trouble by altering personnel assignments).

When consulting is *case* oriented, the clinician focuses attention on a particular client or organizational problem and either deals with it directly or offers advice on how it might best be handled. When consultation is *program* or *administration* oriented, the clinician focuses on those aspects of organizational function or structure that are causing trouble. For example, the consultant may suggest and develop new procedures for screening candidates for various jobs within an organization, set up criteria for identifying promotable personnel, or reduce staff turnover rates by increasing administrators' awareness of the psychological impact of their decisions on employees.

ADMINISTRATION Many clinical psychologists find themselves engaged in managing or running the daily operations of organizations. Examples of the administrative posts held by clinical psychologists include head of a college or university psychology department, director of a graduate training program in clinical psychology, director of a student counseling center, head