Detecting and Classifying Mental Disorders: MAPS of the Territory

CHAPTER 1

A.R. Monko/Shutterstock

Chapter Outline

From the Case of Bill

When Bill contacted the clinician, Dr. Sanjay, he told her that he had been constantly nervous for the past year or so. Dr. Sanjay learned that Bill was a 58-year-old business executive at a computer company. He grew up in a working-class family, the oldest of three brothers. He was an average student through school, except for some behavior problems in the fifth grade, as well as a car accident when he first learned to drive. (Both events are discussed later in this chapter.) Bill also remembered never "having much fun" growing up. He was quiet and overweight as a teenager and always felt slighted by other boys who were more interested in and successful at sports.

Bill married his high-school girlfriend while they both were attending the same college. They have been married for 35 years and have two grown children. Recently, Bill says, his stomach is "always upset," and often he feels he cannot "get his breath." According to his physician, Bill has Crohn's disease, a potentially dangerous intestinal disorder. Bill also says that he feels so agitated he cannot sit still or concentrate at work, and has trouble remembering things. One night he drove out of the parking lot at work and left his briefcase on the pavement where he had parked his car.

After reading this chapter, you will be able to answer the following key questions:

- What are mental disorders?
- How do health professionals detect mental disorders?
- How do health professionals categorize mental disorders?
- How common are mental disorders in the United States and worldwide?
- What are the four guiding principles to keep in mind when studying abnormal psychology/mental disorders?

His success at work has recently begun to decline. He cannot fall asleep until 3 A.M. most nights because his mind is "spinning" with constant worry about work and marital problems. He reports being sexually "impotent," a problem that has caused conflict with his wife. He has been carrying on an affair with a co-worker for over a year and has kept this relationship a secret from everyone, a deception that he recognizes is beginning to take a toll on him.

Bill is also worried because his company is downsizing its workforce. Other mid-level executives have recently been fired, and Bill is sure it is just a matter of time before he gets his pink slip. At his age, he is convinced that no one else will hire him. Increasingly, when he thinks about the future, Bill feels depressed and desperate. In fact, he sometimes wonders whether he should just kill himself and put an end to his insecurity and fear.

Bill's case is familiar to most clinicians. Like many clients, he complains of a mixture of anxiety, depression, physical symptoms, and marital discord. What has caused Bill's problems? Is he suffering from a **mental disorder**, or is he just going through a rough time in his life? Are Bill's problems the cause or the result of his marital difficulties? How could a clinician decide? If Bill does have a mental disorder, which diagnosis would be most accurate? What methods should a clinician use to diagnose Bill? Will his treatment (how we help him) differ depending on his diagnosis? These are some of the questions that mental health professionals try to answer through clinical assessment and diagnostic classification.

mental disorder: A behavioral or psychological syndrome that produces harmful dysfunction in an individual, causing objective impairment and/or subjective harm.

Parts of this chapter are taken with permission from Trost et al., 2014.

Abnormal psychology is the scientific study of mental disorders. In this chapter, we review several definitions of mental disorders, discuss their advantages and disadvantages, and then offer a working definition to be used throughout the book. We will describe how mental health professionals assess and classify mental disorders, how they distinguish disorders from nondisorders, and how they differentiate one disorder from another. We also discuss the frequency with which different mental disorders are diagnosed and how these diagnoses are affected by various real-world considerations, including financial concerns and cultural differences. We then lay out a map of the territory by describing the four guiding principles to keep in mind when studying abnormal psychology that will reappear throughout this textbook. Finally, we return to the case of Bill and see how his clinician assessed and diagnosed his problem(s).

Detecting Mental Disorders: What Are They?

If you decided that Bill (in the chapter-opening case) does indeed have a mental disorder, what was it that led to your decision? Was it because you think it is unusual for someone to have such strong physical symptoms? Was it because Bill seems to be so upset by his anxious thoughts? Perhaps it was because Bill is seeking treatment for his problem. Was it because you disapprove of Bill's behavior? Maybe you concluded that Bill's behavior or emotional state could be harmful to himself and others. Or did you question whether Bill actually had a mental disorder? Each of these views reflects a different perspective on what constitutes a mental disorder.

What Is a Mental Disorder?

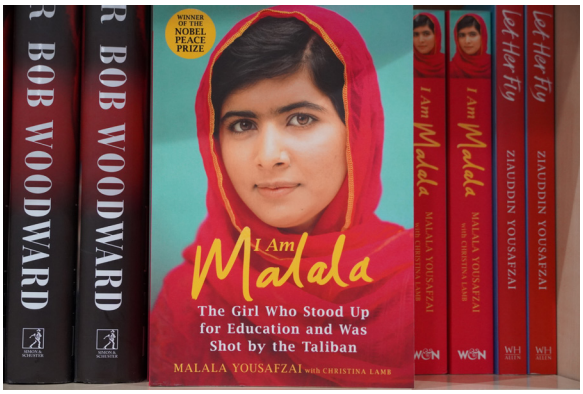
Mental disorder has been defined in five general ways throughout history as:

1. deviation from social expectations,
2. what mental health professionals treat,
3. a label for disliked actions,
4. subjective distress, and/or
5. a dysfunction that causes harm.

We discuss each of those five definitional approaches in more detail next.

Disorder as a Deviation from Social Expectations

Mental disorder can be defined as a negative deviation from social expectations. Usually, a behavior that deviates from social expectations is also statistically rare. In fact, when a formerly unusual behavior becomes too frequent in society, it stops being a sign of nonconformity or a violation of expectations and starts becoming an expected behavior or norm. For example, after James Dean popularized them in the movie *Rebel Without a Cause*, wearing blue jeans became a symbol of youth rebellion during the 1950s. Because of this, jeans were sometimes banned in theaters, restaurants, and schools. Sullivan (2007) wrote an entire book about the history of this iconic garment and traced its ascent from outlier to normative casual wear fashion around the world.



SN040288/Shutterstock

This photo shows a book by Malala Yousafzai, a Pakistani activist for female education and the youngest Nobel Prize laureate (2014). The Nobel Prize has been awarded in recognition of cultural and/or scientific advances since 1895. Many characteristics of these prize winners—such as high intelligence and creativity or fierce courage—are extremely rare, but because they lead to new discoveries or help move the world forward, these characteristics are not signs of a mental disorder.

However, we cannot simply rely on a social-deviation definition of abnormality. First, it ignores characteristics that are not rare but are still problematic and require treatment, such as alcohol use disorder and attention-deficit/hyperactivity disorder (ADHD), each of which affects up to 10% of American adults. Further, deviation-based definitions imply that conformity to social expectations is synonymous with mental health, but this is not necessarily the case. Not everyone who meets a society's expectations is mentally healthy, nor are people—such as jean-wearers in the 1950s or today's modern artists—who challenge those expectations necessarily mentally disordered. Thinking about Bill (chapter-opening case), is it a deviation from social expectations today to have an extramarital affair? Or stomach issues? Finally, this definition neglects the role of varied cultural norms. Some researchers note that the current disorders (as defined by the *DSM-5*) are culturally bound and do not adequately account for cultural differences in norms and expectations (Hwang et al., 2008). For example, although hearing voices may be an atypical experience for many in Western culture, many cultures and spiritual traditions may deem voices as a normal part of spiritual growth or connection. Ignoring the role of culture may lead a clinician to misdiagnose a person.

Disorder as What Mental Health Professionals Treat

A second, pragmatic definition is that mental disorders are whatever problems or symptoms clinicians treat. This definition is occasionally used in **epidemiology**, the scientific study of the onset and frequency of disorders in certain populations. The greatest strength of this definition is its simplicity, but it has several disadvantages. First, not everyone who consults a clinician is suffering symptoms. Many people consult mental health professionals because they want to learn how to communicate better with their partners, to be more effective parents, or to be happier in their jobs. Obviously, people can pursue such goals without having a mental disorder. Second, this definition assumes that everyone—regardless of the disorder they suffer, the availability of treatment, or their ability to pay for it—is equally likely to seek professional treatment. However, this assumption is incorrect, so the definition of disorder on which it is based would be misleading. It would underestimate, for example, the frequency of disorders among those of low socioeconomic status, who are least likely to receive treatment. Bill has the financial resources to pay for psychotherapy, but as a male working in a tech field, he may be less likely to go talk to someone about his problems.

epidemiology: The scientific study of the onset and frequency of disorders in certain populations.

Connections

Is schizophrenia rare in all cultures? To learn about the frequency of this disorder in different countries, see Chapter 4.

Disorder as a Label for Disliked Actions

Might it be that some mental disorders represent labels bestowed by mental health professionals on people whose behavior is disturbing to others? Thomas Szasz (1961) argued that mental illness should refer only to those relatively few behavioral problems that are clearly traceable to organic causes. Skeptics such as Szasz believe that labeling people who fall outside this category as mentally ill harms them by stigmatizing them. In

addition, the labels might lead to the imposition of treatment, which invades people's privacy and limits their freedom.

This skeptical view has a declining influence today, mainly because it appears to trivialize the problems of people in whom no specific biological deficit has been found but whose troubles are nevertheless very real. It also fails to account for the fact that behavior problems often do not go away and sometimes worsen if unlabeled, and they often improve when treated. However, this definition, along with the two other definitional approaches already discussed—deviation from social expectations and what mental health professionals treat—serves to remind us of the importance of cultural factors in mental disorders. Would it help you to know Bill's ethnic or cultural background?

Disorder as Subjective Distress or Unhappiness

Personal distress and unhappiness often accompany mental disorders; indeed, these feelings frequently lead people to seek treatment. Bill is clearly distressed about various aspects of his situation, so much so that he even had thoughts of suicide. Although subjective distress is a symptom of some mental disorders, distress alone cannot define disorder. People feel unhappy over many events in their lives. They worry about finances, become jealous of lovers, and get angry at bosses. In fact, *not* feeling emotionally upset in the face of a devastating loss or a callous insult might be interpreted as a sign of disorder. In addition, this definition does not distinguish between the temporary upset that often accompanies adverse events and a distress that may be more chronic, intense, or unrelated to external stressors. Finally, certain patterns of behavior, such as some of the personality disorders described in Chapter 16, cause little or no distress for individuals displaying them, although they create problems for other people around them.

Disorder as Dysfunction That Causes Harm

A useful definition is provided by Jerome Wakefield (1992), who said that mental disorders are dysfunctions that cause harm. *Dysfunction* refers to the failure of a biological or psychological mechanism to operate as it should; there is a breakdown in the way a person thinks, feels, or perceives the world. When Bill (from the chapter-opening case) experiences problems in concentration and memory, he is experiencing cognitive dysfunctions. The concept of *harm* in this definition refers to the consequences of dysfunction that a society or an individual considers to be negative. Because not every dysfunction produces harm, not every dysfunction would be considered a disorder by this definition. Bill's cognitive lapses produced harm because they led to growing problems at work.

Defining mental disorders as harmful dysfunctions is not always entirely clear (Lilienfeld & Marino, 1995). For example, how much impairment must appear before it becomes a "dysfunction"? Are some psychological conditions dysfunctional in one culture, but functional in others? And when do the consequences of dysfunction cease to be merely annoying and become harmful? One parent, for example, might tolerate a child's misbehavior as "just a phase" of rambunctiousness, whereas another might see the same behavior as a symptom of a disorder requiring medication. Clearly, there is room for bias to creep into the definition. And, like all other definitions, this one can be misused and misapplied. *Still, defining mental disorder as harmful dysfunction appears to be the most workable, least arbitrary definition, and the one that best captures both the objective impairment and the subjective harm that is usually associated with the concept of mental disorders.*

The *DSM* Definition

The *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-5*; American Psychiatric Association, 2013a) is a widely used compendium that lists all known mental disorders and that is discussed in detail later in this chapter. The *DSM-5* introduced an updated definition of a *mental disorder* when it was published in May 2013. The new definition retained the ideas of cultural context, distress/disability, and individual dysfunction found in the *DSM-IV* (American Psychiatric Association, 1994), but added the concepts of emotion regulation and developmental processes:

> A mental disorder is a syndrome characterized by clinically significant disturbance in an individual's cognition, *emotion regulation*, or behavior that reflects a dysfunction in the psychological, biological, or *developmental processes* underlying mental functioning. Mental disorders are usually associated with significant distress or disability in social, occupational, or other important activities. An expectable or culturally approved response to a common stressor or loss, such as the death of a loved one, is not a mental disorder. Socially deviant behavior (e.g., political, religious, or sexual) and conflicts that are primarily between the individual and society are not mental disorders unless the deviance or conflict results from a dysfunction in the individual, as described above. (American Psychiatric Association, 2013a, p. 20)

You can see that the *DSM* uses mainly prongs 4 (distress) and 5 (dysfunction) of the definitions we discussed previously. By including "emotion regulation" in its revised definition, the *DSM-5* affirms that mental health does not arise so much from reducing certain emotions but, rather, from adaptively managing the range of human emotions; this reflects our rapidly growing understanding of the deep primary roles played by our affective systems (Sander, 2013; Davidson et al., 2000). For instance, think about particular emotions that you find challenging when you feel them and reflect upon how long it takes you to get "unstuck" from different emotions, as well as strategies you might use to cope with them.

The inclusion of "developmental processes" as a potential area of dysfunction emphasizes the *DSM-5*'s use of a lifespan developmental approach to classification (Klott, 2012), which you will see reflected throughout this textbook. A person's age and developmental trajectory affect the expression of mental disorders. For example, how might mood disturbances be reflected differently in childhood and adulthood? When do childhood tantrums become a symptom of a disorder? How does a trauma occurring when a child is 3 years old manifest differently than a similar trauma experienced when a person is 25 years old?

Once you understand how mental disorders are defined, you can then think about how to detect and categorize them, as discussed in the remainder of this chapter.

Section Review

Mental disorders have been defined as:

- deviations from social expectations,
- conditions that clinicians treat,
- labels applied to unpopular behavior,
- conditions causing subjective distress and unhappiness, and
- dysfunctions or breakdowns in a biological or psychological process that lead to harm.

The main diagnostic manual defines disorder using mainly distress and dysfunction, and also considers emotion regulation and developmental processes.

Assessment and Diagnosis

Imagine that nothing happens when you turn on your television (or computer) screen to watch your favorite show (obviously, a program about psychology). You check to see whether it has been unplugged. If it has not, has a circuit breaker been tripped? Are all the connection cables secure? If the answer to all these questions is no, you check whether other electrical devices in the house are working, whether your neighbors have power, and so on. These steps are all part of **assessment**, the collection of information for the purpose of making an informed decision. In the case of the malfunctioning TV, you are assessing the situation to classify or to make a **diagnosis** of the problem. Unless you can classify the problem with your TV, understanding or fixing it (to watch your psychology show) will be hard. The relationship between assessment and diagnosis is the same when trying to understand mental disorders. Clinical assessment is the foundation upon which accurate diagnosis of mental disorders rests.

assessment: The collection of information for the purpose of making an informed decision.

diagnosis: The classification of mental disorders by determining which of several possible descriptions best fits the nature of the problem(s).

Assessment typically proceeds in three steps. Clinicians first gather information from the person they are assessing. Next, they organize and process this information into a description or understanding of the person. Finally, they compare this description with what is known about various disorders to arrive at a diagnosis of the problem. This last step in diagnosis is guided by a **nosology**, a classification system containing a set of categories of disorder and rules for categorizing disorders based on the signs and symptoms that appear (Millon, 1991). The *DSM-5* (discussed earlier) is the main diagnostic nosology in North America; clinicians in other parts of the world might instead use the World Health Organization's *International Classification of Diseases (ICD-11)*.

nosology: A classification system containing categories of disorders and rules for categorizing disorders depending on observable signs and symptoms.

Clinicians use a variety of sources to gather assessment information—from interviews and observations to psychological tests and personal diaries. The quality of assessment sources and the information they provide is evaluated on two dimensions: reliability and validity.

Reliability and Validity

Reliability, which refers to consistency or agreement among assessment data, can be measured in several ways. If an assessment is repeated at different times with essentially the same results, the assessment instrument is said to have high *test-retest reliability*. Another form of reliability that is especially important for diagnosis is interrater reliability. High *interrater reliability* means that different clinicians typically reach the same diagnosis, description, or conclusion about a person after using the same assessment tools. As a teenager, one of our friends was shooting cans with a BB gun with a boy she had a crush on and wanted to impress. She was an excellent shooter but kept hitting just to the left side of the can without hitting the can itself. Then she realized the sight on the BB gun was off. So initially she was consistent (reliability), but not accurate (validity, as discussed next). Once she adjusted the sight, "Bam!" [Alas, she did not impress her crush, who was intimidated by someone who could shoot like that, which means he was not for her anyway!]

reliability: Consistency or agreement among assessment data; includes test-retest and interrater reliability.

The **validity** of an assessment instrument reflects the degree to which the instrument measures what it is supposed to measure. It provides an estimate of an instrument's accuracy or meaning. There are several types of validity. *Content validity* refers to the extent to which a tool measures all aspects of the domain it is supposed to measure. For example, an intelligence test that measures only math skills would be low in content validity because intelligence involves more than mathematical ability. If an assessment procedure accurately forecasts a person's behavior (e.g., grade-point average, suicide attempts), it is said to have high *predictive validity*. When the results of one procedure agree closely with the results of another assessment method, the two methods have high *concurrent validity*.

validity: The degree to which an assessment instrument measures what it is supposed to measure, thereby providing an estimate of accuracy or meaning.

A final form of validity is construct validity (Cronbach & Meehl, 1955). An assessment method has high *construct validity* when its results coincide with what a theory about some construct would predict. For example, theories of anxiety predict that people's anxiety levels will increase under stressful circumstances. Thus, an anxiety assessment tool would have construct validity if it yields higher scores when people are in situations they fear, such as speaking in public. Construct validity cannot usually be established with a single experiment or demonstration; it requires a series of studies. The availability of assessment devices with good construct validity is important for identifying factors that place a person at risk for certain disorders and, in turn, for guiding the development of prevention programs, as discussed in the "Prevention" feature in this chapter. (Many chapters in this book have a "Prevention" feature covering the application of scientific methodology [see Chapter 2] that seeks to prevent or moderate mental disorders before they occur.)

The reliability and validity of assessments are typically expressed as **correlation coefficients**, which summarize the relationship between two variables. The size of a correlation, noted by the symbol *r*, ranges from 0.00 to +1.00 or –1.00. As Figure 1.1 illustrates, an *r* of 0.00 means that there is no relationship between two variables. A correlation of +1.00 or –1.00 is a perfect correlation, which means that if you know the value of

correlation coefficient: A number that quantifies the size of a relationship between two variables, noted by the symbol *r*, and ranging from +1.00 to –1.00. The larger the absolute value of the correlation, the stronger the relationship between the variables.

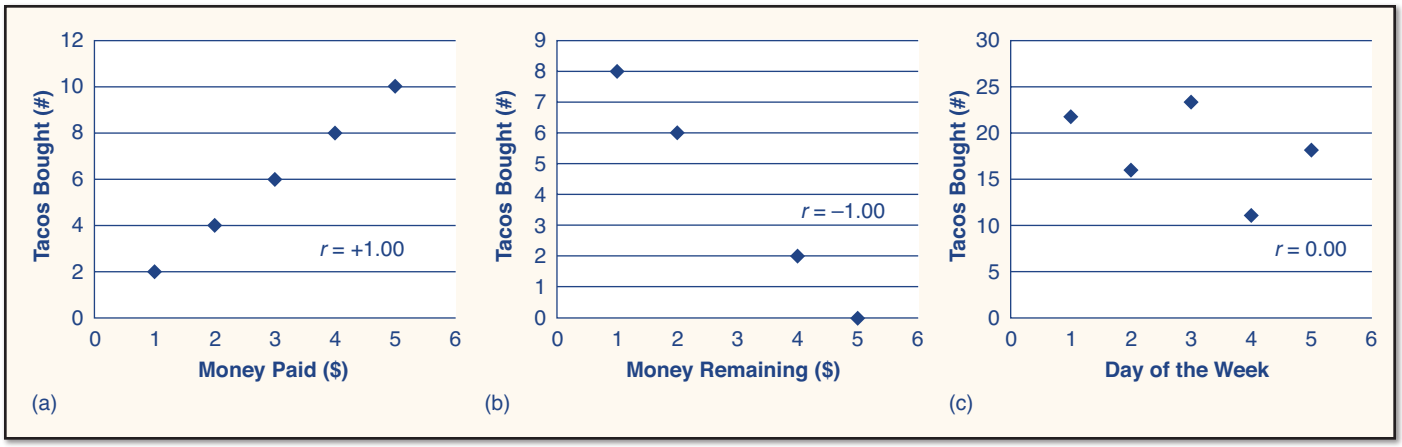


FIGURE 1.1 Correlations Showing Different Relationships Between Two Variables

(a) The cost of a taco purchase shows a *perfect positive correlation* (+1.00) with the number of tacos purchased; the more 50-cent tacos you buy, the more you pay. (b) The amount of money remaining in your wallet shows a *perfect negative correlation* (–1.00) with your purchase; the more you buy, the less cash you have left. (c) This graph illustrates a *zero correlation* in which the number of tacos purchased is unrelated to day of the week on which the purchase is made. (This last graph might change, of course, if your local taqueria has two-for-one taco Tuesdays!)

one variable, you can predict the value of the second one with certainty. The larger the correlation (whether positive or negative), the stronger the relationship is between the two variables. In psychological assessment, adequate reliability is usually indicated by correlation coefficients in the .70 to .90 range. In most psychological research, validity correlations are in the .20 to .60 range, indicating that two variables are related to some less-than-perfect degree.

The validity of an assessment device can be no higher than its reliability, but it can be lower, sometimes much lower. In other words, high reliability does not guarantee validity. Consider the example provided by the popular *Harry Potter* series in literature and film. One of the main characters in the series, Professor Severus Snape, typically appears angry and mean. Most readers initially judge Snape to be evil, and this assessment would have high interrater reliability—that is, most readers (or film viewers) would have agreed. Spoiler alert: This high reliability did not ultimately make their assessment correct or valid.

Diagnostic Errors

It is fun to be fooled in the context of entertainment, but there is nothing funny about diagnostic errors in real life. Because people's lives can be drastically affected by clinicians' diagnostic judgments, the validity of those judgments is crucial. A clinician can reach two kinds of correct diagnostic conclusions: true positives and true negatives. In the case of a *true positive*, the clinician correctly concludes that a condition is present. This is also called the **sensitivity** of diagnosis, which is the probability that a person with a mental disorder will be diagnosed as having that disorder. Conversely, a *true negative* conclusion occurs when the clinician correctly states that the person does not have the condition. This is called the **specificity** of the diagnosis, the probability that a person without any mental disorder will indeed be seen not to have one.

sensitivity: The probability that a person with a mental disorder is diagnosed as having that disorder.

specificity: The probability that a person without any mental disorder will be diagnosed as having no disorder.

Unfortunately, clinicians can also make two kinds of diagnostic errors: false positives and false negatives. A *false positive* occurs when the clinician concludes that the person suffers a mental disorder when no disorder is, in fact, present. A *false negative* occurs when the clinician diagnoses no mental disorder when the person actually has one. Both kinds of errors can have severe consequences. False positives can lead to unnecessarily labeling and possibly stigmatizing people with no disorders. False negatives can keep troubled people from receiving the professional help they need. As you will see, scholars have argued that the *DSM-5* is much more concerned with avoiding false negatives and

PREVENTION

The Role of Early Detection

Juvenile delinquency and crime have long been a pressing problem in our society. In the United States, the rate at which juveniles committed serious violent crimes changed little between 1973 and 1989, peaked in 1993, and then declined steadily throughout the 2000s (MST Services, 2018; Snyder & Sickmund, 1999). According to the Children's Defense Fund (2020, p. 28), "a child or teen was arrested every 43 seconds despite a 63% reduction in child arrests between 2009 and 2018. Although the number of children in the juvenile justice system has been cut in half since 2007, 43,580 children and youth were held in residential placement on a given night in 2017 . . . [and] another 935 children were incarcerated in adult prisons on any given night in 2017—down from 2,283 in 2007." In 2019, children of color were nearly twice as likely to be arrested as white children; Black children were two and a half times more likely to be arrested (U.S. Department of Justice, 2020).

The costs of these crimes is enormous, as is their contribution to (lack of) social justice in our society, but the declining rates in the past several decades suggest that juvenile delinquency can be prevented. An approach to further reducing juvenile crime depends, first, on whether we can:

- pinpoint early risk factors that lead to delinquency,
- assess which children actually possess or have been exposed to these risk factors, and
- design preventive interventions to reduce these risks.

Research by behavioral scientists has uncovered a valid set of early childhood risk factors for later aggression and chronic delinquency (Tolan et al., 995). Children at greatest risk are those who (1) have a difficult temperament; (2) are subject to abusive, hostile, or inconsistent parental discipline; (3) experience family adversity or other negative life events, including exposure to peer violent victimization; (4) lack self-control and do poorly at school; and (5) come from a low socioeconomic background (Yoshikawa, 1994; Jackson et al., 2013). Further, family disruption and deviant behavior of friends have more influence on delinquent behavior of females, whereas the lack of self-control is more strongly related to delinquency among males (Steketee et al., 2013).

Several of these risk factors can be detected during the preschool or elementary school years with special assessment techniques. These assessments include scales that measure antisocial behavior, family risk, and socioeconomic status to yield reliable and valid information about the early risk factors preceding juvenile delinquency (Zara & Farrington, 2013).

Kathy Hutchins/Shutterstock

Kenan Thompson has been a cast member of the NBC sketch comedy series *Saturday Night Live* since 2003, making him the longest-tenured cast member in the show's history. In 2008 he created the recurring character Lorenzo McIntosh, an inmate who humorously yelled at teenagers to scare them away from a life of crime.

Early detection, in turn, allows interventions to be put in place before problems become entrenched. The newest delinquency (crime) prevention programs recognize that early aggression and later delinquency are caused by multiple factors arising in homes, schools, and peer systems and that changes must be achieved in each of these settings for prevention to be successful (Borduin et al., 1995; Tremblay et al., 1995). The prevention programs that have proved most successful with early-aggression children combine extra educational assistance (such as Head Start) to improve commitment to school with training of parents to use more consistent and nurturing child-rearing methods (Yoshikawa, 1994; Zigler et al., 1992).

Head Start programs began in 1965 as part of the Johnson administration's War on Poverty efforts to help reduce the gap in achievement between children from low-income families and their more advantaged peers (Resnick, 2010); they alone have resulted in improvement of about a quarter of a standard deviation across all cognitive and achievement outcomes (Shager et al., 2013). Often used together with Head Start, the Incredible Years is an evidence-based program that trains parents to relate to and discipline their children more effectively, and it has shown improvements in children's negative behaviors of anywhere from half to one-and-a-half standard deviations (Hurlburt et al., 2013).

Despite these research-backed prevention programs, juvenile awareness programs based on confrontation, fear, and threat rather than empirically validated risk factors remain in operation. For instance, "Scared

PREVENTION

The Role of Early Detection *(Continued)*

Straight," parodied on *Saturday Night Live* by Kenan Thompson, typically involves adult inmates describing the extremely brutal, harsh, and unpleasant conditions associated with jail or prison incarceration to at-risk youth in a secure setting. These programs have no statistically significant effect and in fact may even increase the likelihood of future offending (Klenowski et al., 2010). This highlights the need—emphasized throughout this textbook—for making policy decisions based on science rather than any intuitive sense of what interventions might work.

therefore raises the number of false positives—that is, people diagnosed with mental disorders that they do not actually have (Paris, 2015).

Section Review

The three major steps in assessment and diagnosis are:

- gathering information,
- organizing the information into a clinical description of the person, and
- using this description and a nosology to reach a diagnosis.

The quality and utility of diagnoses depend on:

- the reliability and validity of the assessment tools used, and
- the sensitivity and specificity of the diagnoses (false positives and false negatives).

Assessment Tools: How Do Health Professionals Detect Mental Disorders?

To avoid false positives and false negatives, clinicians need reliable sources of information. In practice, clinicians usually combine information from several assessment tools. When they use multiple channels of information, clinicians can compare the results from all sources, thus strengthening confidence in their findings. Here we consider the reliability and validity of the five most commonly used assessment tools—life records, interviews, tests, observations, and biological measures—and how each is used by clinicians in reaching diagnoses. We will also consider the cross-cultural validity of each of these methods.

Life Records

Life records are documents associated with important events and milestones in a person's life, such as school grades, court records, police reports, and medical records. This information can be helpful in determining whether, when, and how often a certain problem has occurred. Because life records are usually made for reasons other than a formal assessment, they are unlikely to be distorted by a person's attempt to create a certain impression.

life records: Documents associated with important events and milestones in a person's life, such as school grades, court records, police reports, and medical histories.

Forensic psychologists generally rely heavily on life records when completing postmortem assessments following unusual death circumstances to attempt to determine whether an individual's death was related to suicide or other causes. This is called a psychological autopsy. In these cases, the psychologist does not have the opportunity to use any of the next four assessment tools (except to possibly interview friends and family members), and so they must use whatever records are at their disposal to piece together the deceased person's likely mental state prior to death.

Interviews

Interviews are the most widely used assessment tool for classifying mental disorders. Because they resemble other forms of conversation, interviews are a natural way of gaining personal information. In addition, they are relatively inexpensive and flexible with respect to their content.

structured interview: An interview in which the interviewer asks questions in a predetermined sequence so that the procedure is essentially the same from one interview to another.

Modern diagnostic interviewing usually follows a structured format. In a **structured interview**, the interviewer asks questions in a predetermined sequence so that the procedure is essentially the same from one respondent to another. Consistent rules are provided for scoring respondents' answers or for using additional probes designed to obtain scorable responses. Usually, the interviewer is also given detailed guidelines for what to ask when the respondent answers questions in a given manner (for example, "If the respondent answers 'no,' skip to question 32 and continue with the interview").

Table 1.1 describes some of the most common of the many structured interviews in use today (see also Gross & Hersen, 2008; Rogers, 2001). Several of these interviews are coordinated with *DSM* criteria to help the interviewer arrive at a diagnosis, and most are updated/revised periodically to reflect new research or changing diagnostic criteria. The Personality Disorders Interview-IV (Widiger et al., 1995) is one example. Clinicians can use it to determine whether a given client meets criteria for any of the personality disorders in the *DSM-5*. For instance, one criterion for diagnosing someone with *borderline personality disorder* is whether the person has acted impulsively in at least two areas that could be personally damaging. An interviewer assesses this criterion with the following questions (Adapted from Huprich et al., 2015):

1. Did you ever spend so much money that you had trouble paying it off?
2. Have you ever gone on a drinking or eating binge?
3. Have you ever taken any major chances or risks with drugs?
4. Have you ever done anything impulsive that was risky or dangerous?
5. Have you ever become sexually involved with someone in a risky or dangerous way?

mental status examination (MSE): A brief, specialized, and focused interview designed to assess a person's memory, mood, orientation, thinking, and concentration.

Another type of structured interview is the **mental status examination (MSE)**, a brief, specialized, and focused interview designed to assess a person's memory, mood, orientation, thinking, and ability to concentrate, along with their appearance, attitude, and behavior. The MSE is analogous to the brief physical exam that physicians employ at the

TABLE 1.1 Structured Interviews Frequently Used to Assess Clinical Conditions

Interview	Purpose
The Schedule of Affective Disorders and Schizophrenia (SADS)	Differential diagnosis of more than 20 categories of mental disorder
The Diagnostic Interview Schedule (DIS), which led to the Composite International Diagnostic Interview (CIDI)	Used by nonprofessionals in large-scale epidemiological studies of mental disorder
Structured Clinical Interview for *DSM* (SCID)	Broad-scale differential diagnoses tied to the *DSM* criteria
Diagnostic Interview Schedule for Children–Revised (DISC-R)	Parallel formats for children and parents for making differential diagnoses of childhood disorders
Anxiety Disorders Interview Schedule (ADIS)	Differential diagnoses among anxiety disorders
Personality Disorders Interview-IV	Differential diagnoses among the *DSM* personality disorders
Interdisciplinary Fitness Interview, Revised (IFI-R)	Evaluation of competence to stand trial
Rogers Criminal Responsibility Assessment Scales (R-CRAS)	Assess criminal responsibility against specific legal criteria
Psychopathy Checklist, Revised (PCL-R)	Evaluation of major dimensions of psychopathic (antisocial) behavior

beginning of patient assessments. The questioning is direct and generally standardized, as suggested by the following excerpt:

Clinician (while also assessing the client's appearance)*:* How long have you been here?

Client: Since yesterday morning.

Clinician: What are you here for?

Client: I don't know. I think my partner called the police and here I am.

Clinician: What day is today?

Client: Tuesday, the twelfth.

Clinician: What year is it?

Client: 2023.

There are potential problems when the MSE or any structured interview is applied in a cross-cultural context, such as when the clinician and client are from different cultural backgrounds (Bhugra & Bhui, 1997). For example, cultures often have different norms for appearance, behavior, and display of emotions (Sheldon, 1997). Additionally, different cultures vary regarding *who* should be present for the interview (Kirmayer et al., 2011). In Western culture, generally a client is the only one present for an initial interview. However, for clients with more collectivist values, having family present may be critical in fully understanding what symptoms are present and how they manifest as well as initiating treatment. Cognitive assessment must also take the person's language and educational background into account.

Most clinical interviews also assess a person's **social history**, including educational achievements, occupational positions, family history, marital status, physical health, and prior contacts with mental health professionals (and this information can be augmented by life records if available). An accurate social history is crucial to the correct diagnosis of mental disorders, because it helps to establish whether the person has experienced symptoms of mental disorders in the past and, if so, which symptoms have been most prominent. Increasing research indicates that explicit exploration of culture within a social history can help understanding the client and result in better relationships and rapport with clients (Aggarwal et al., 2020).

social history: Obtained as part of clinical interviews, it includes assessment of educational achievements, occupational positions, family history, marital status, physical health, and prior contacts with mental health professionals.

Interrater and test-retest reliability generally exceed +.70 for structured diagnostic interviews and mental status examinations, although, as the interval between interviews becomes longer, test-retest reliability sometimes decreases (Olin & Zelinski, 1991). The validity of structured interviews has been studied less often than their reliability has, but they are generally superior to any other diagnostic assessment tool (Rogers, 2003). Occasionally, they even serve as the standard against which to judge the diagnostic validity of other assessment methods, such as tests or observations.

Unfortunately, many clinicians do not routinely use structured diagnostic interviews, preferring instead to "play their interviews by ear." In fact, clinicians reported using structured interviews, on average, with only about 15% of their clients (Bruchmüller et al., 2011). Often, clinicians report that structured interviews are too bothersome to learn and that less-structured interviews increase flexibility and save time. Or they mistakenly believe that their clients will not accept the use of structured interviews, even though about 80% of clients report finding these interviews helpful (Bruchmüller et al., 2011). However, unstructured interviews are almost always less reliable and less valid than structured ones (Samuel et al., 2013). Thus, what clinicians gain in flexibility and efficiency by using unstructured interviews instead of more-structured formats tends to be offset by what they lose in accurate and comprehensive information (Rogers, 1995, 2001, 2003).

psychological test: A systematic procedure for observing and describing a person's behavior in a standardized situation.

standardization: Administering and scoring a test using uniform procedures for all respondents.

Psychological Tests

A **psychological test** is a systematic procedure for observing and describing a person's behavior in a standardized situation. **Standardization** means that the test is administered and scored using uniform procedures for all test-takers. Tests require a person to respond to

a set of stimuli such as puzzles or inkblots, true/false statements, or multiple-choice questions. These responses are then scored and compared with **norms**, scores obtained from large numbers of people who have taken the test previously under the same conditions.

Almost all of the thousands of psychological tests now in use can be grouped into one of five categories: achievement and aptitude tests, attitude and interest tests, intelligence tests, neuropsychological tests, and personality tests. **Aptitude tests** measure the accumulated effects of educational or training experiences and attempt to forecast future performance; the Scholastic Aptitude Test (SAT), which most American high-school graduates take before applying to college, is a familiar example. **Achievement tests** measure how much a person knows or can do in a specific area; the Wide Range Achievement Test (WRAT-5) is a good example. Although achievement and aptitude tests are often used in diagnosing learning disorders and, occasionally, disorders that have an organic cause, they do not play a major role in diagnosing most mental disorders. Similarly, **attitude and interest tests**—which measure the range and strength of a person's interests, attitudes, preferences, and values—are seldom used in diagnostic classification, although they can add important information to a general psychological assessment (and may help you pick your career!).

norm: A score obtained from large numbers of people who have taken a test previously under similar conditions.

aptitude test: A measure of the accumulated effects of educational or training experiences that attempts to forecast future performance. One example is the Scholastic Aptitude Test (SAT).

achievement test: A measure of how much a person has learned about a specific area. One example is the Wide Range Achievement Test (WRAT-5).

attitude and interest tests: Tests that measure the range and strength of a person's interests, attitudes, preferences, and values.

intelligence test: A measure of general mental ability and various specific intellectual abilities, such as verbal reasoning, quantitative skills, abstract thinking, visual recognition, and memory.

Intelligence Tests

Intelligence tests measure general mental ability and various specific intellectual abilities, such as verbal reasoning, quantitative skills, abstract thinking, visual recognition, and memory (see Figure 1.2). The Stanford-Binet Intelligence Scale (5th edition; Roid & Barram, 2004), the Wechsler Intelligence Scale for Children (WISC-V; Wechsler, 2014), and the Wechsler Adult Intelligence Scale (WAIS-IV; Wechsler, 2008) are the best-known intelligence tests in the world today. Like structured interviews, these tests have been revised several times throughout their history. Although originally written in English, these tests have all been translated into several languages, and norms are available for many different countries. The Wechsler scales have an especially high correlation with *g*, the general factor of intelligence, also known as intelligence quotient or IQ (Reynolds et al., 2013). Intelligence tests are used in the assessment and classification of brain damage, intellectual disabilities, and other developmental disorders (see Chapter 3 for more on their use and limitations). Even though a diagnosis is never based on IQ alone, these cognitive ability tests can be instructive as they may rule out other explanations for problems, uncover other problems, and provide vital information as long as they are administered and interpreted accurately and the assessor does not rely merely on the summary IQ score (Sattler et al., 2016). For example, the WISC can be used to show discrepancies between a child's intelligence and their performance at school—and it is this discrepancy that school psychologists look for when using this test.

Contrary to popular belief, there is strong support that the same five-factor structure of intelligence (as measured by WISC-V, which has been adapted for over 20 countries) is found across different cultures, that any difference in IQ between countries is small

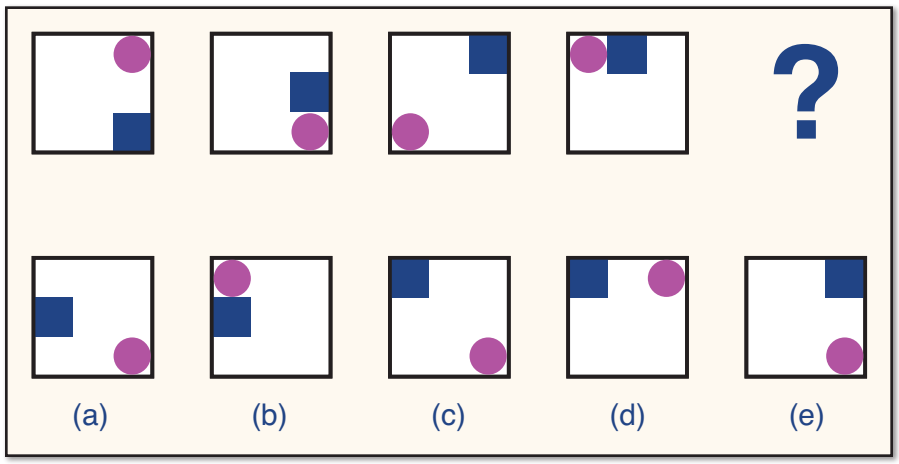


FIGURE 1.2 A Sample Figure Completion Task from a Test of Cognitive Ability

Intelligence tests have started to incorporate more items that are less reliant on language and specific cultural information, such as a figure completion task like the one shown here. The item is designed to assess the ability to recognize figural series. The correct answer is *d*.

(less than 1%), and that these differences are not correlated with social indicators such as a country's wealth (Prifitera et al., 2019). Nonetheless, a complete psychological evaluation should interpret IQ scores and other data within the context of the individual, which includes an understanding of the individual's culture and how their culture shaped them.

Neuropsychological Tests

Neuropsychological tests measure deficits in behavior, cognition, or emotion that are known to correlate with brain dysfunction and damage. They are valuable tools for determining whether a person is suffering brain damage or deterioration, or for assessing how well a person has recovered following neurosurgery (Prigatano et al., 1995). Neuropsychological testing often consists of a standardized set, or *battery*, of tests, but as illustrated in the continuation of the chapter-opening case that follows, it may also be individualized, beginning with a few standardized tests, followed by tests selected with questions specific to the client in mind (Lezak, 1995).

neuropsychological test: A psychological assessment tool that measures deficits in behavior, cognition, or emotion known to correlate with brain dysfunction and damage, and helps to determine whether a person is suffering from brain damage or deterioration.

From the Case of Bill, Continued

When Bill, whose case opens this chapter, was 16 years old and first started driving, he was involved in a car accident and sustained a closed-head injury. About a year later, Bill's family physician referred him to a psychologist for diagnostic testing because of a variety of lingering symptoms, including sleeplessness, loss of memory and concentration, and unusual outbursts of impulsivity and anger.

After taking a social history and learning about Bill's accident, the psychologist was especially interested in determining whether Bill might be suffering from some sort of head injury or from an anxiety disorder due to the stress of the accident. A number of neuropsychological tests were selected to measure Bill's attention, memory, perceptual accuracy, and language skills. When they all yielded normal results, the psychologist concluded that Bill's symptoms were the result of posttraumatic stress and recommended brief psychotherapy.

The most widely used neuropsychological test battery in North America is the one developed by Ward Halstead and later modified by his student, Ralph Reitan. Table 1.2 summarizes the tests included in the Halstead-Reitan Neuropsychological Test Battery (Reitan & Wolfson, 2009), which is given along with the WAIS. Two additional popular batteries are the Adult Luria-Nebraska Neuropsychological Battery (Golden, 2004) and the Luria-Nebraska Neuropsychological Children's Battery (Golden, 2011). Many neuropsychologists question the validity of the Luria-Nebraska batteries (Purisch, 2001), but their major advantage is that they can be administered in 3 to 4 hours, about half the time required for the Halstead-Reitan battery. Although these comprehensive batteries were originally designed primarily for differentiating between brain-injured and normal individuals, they have good test-retest reliabilities (Calamia et al., 2013) and continue to offer a rich array of clinical information regarding brain-behavior relations (Davis et al., 2005).

Personality Tests

Personality tests measure an individual's predominant personality traits and characteristics. There are projective and objective personality tests. **Projective tests** present ambiguous stimuli, such as inkblots, incomplete sentences, or vague drawings to which people are asked to respond in any way they choose, often by telling a story or filling in a blank. Three major projective instruments are the Rorschach Inkblot Test (see Figure 1.3), the Thematic Apperception Test (TAT), and human figure drawings. Users of projective tests assume that people's responses on the tests will reflect the meaning that they "project" onto the ambiguous stimuli—that is, how they perceive and interpret things that have no clear meaning (like modern art!). This may reveal important characteristics about the test-taker's personality.

personality test: A standardized psychological assessment of an individual's predominant personality traits and characteristics.

projective tests: Personality tests that require the person to respond to ambiguous stimuli, such as inkblots, incomplete sentences, or vague drawings. The responses are thought to reveal important characteristics about people by the way they project meaning onto the ambiguous stimuli.

TABLE 1.2 Tests Used in the Halstead-Reitan Neuropsychological Test Battery

Test	Description
Categories test	Consists of 208 slides that require a subject to form correct categorizations of the visual stimuli in the slides. The test measures mental efficiency and the ability to form abstract concepts.
Tactual performance test	Consists of a board with spaces into which 10 blocks of various shapes can be fitted, somewhat like a large jigsaw puzzle. The subject is blindfolded and then asked to fit the blocks into the spaces as quickly as possible. This test measures such abilities as motor speed, tactile and kinesthetic perception, and incidental memory.
Rhythm test	Presents 30 pairs of rhythmic beats. The subject says whether the rhythms are the same or different. It is a measure of nonverbal auditory perception, attention, and concentration.
Speech-sounds perception test	Requires that the subject match spoken nonsense words to words on written lists. Language processing, verbal auditory perception, attention, and concentration are measured by this task.
Finger-tapping test	A simple test of motor speed in which the subject depresses a small lever with the index finger as fast as possible for 10 seconds. Several trials with each hand are performed, allowing comparison of lateralized motor speed.
Trail-making test	A kind of "connect-the-dots" task involving a set of circles that are numbered or lettered. The circles must be connected in a consecutive sequence, requiring speed, visual scanning, and the ability to use and integrate different sets.
Strength-of-grip test	A right-side versus left-side comparison of strength. The subject simply squeezes a dynamometer twice with each hand.
Sensory-perceptual exam	Assesses whether the subject can perceive tactile, auditory, and visual stimulation when presented on each side of the body.
Tactile perception tests	Various methods to assess the subject's ability to identify objects when they are placed in the right and left hand, to perceive touch in different fingers of both hands, and to decipher numbers traced on the fingertips.
Aphasia screening test	A short test that measures several aspects of language usage and recognition, as well as abilities to reproduce geometric forms and pantomime simple actions.

Source: Reitan & Wolfson, 2009.

Carefully developed scoring systems, such as the widely used comprehensive system for scoring Rorschach responses (e.g., Exner, 1993) and the more recently developed Rorschach Performance Assessment System (R-PAS; Meyer et al., 2011), are designed to provide quantitative summaries of projective tests and have increased the tests' reliability, but they are still not as reliable as the best objective personality tests (Rogers, 2001; Wood et al., 1996). In addition, there is empirical support for the validity of a small number of indexes derived from the Rorschach and TAT. However, the substantial majority of Rorschach and TAT indexes, as well as human figure drawings, are not empirically valid (Lilienfeld et al., 2000). The Rorschach may be especially valuable for detecting psychosis (see Chapter 4), but overall, it has not lived up to the lofty claims made in its scoring manual (Mihura et al., 2013). Finally, utilizing the comprehensive scoring systems correctly takes extensive and ongoing training, and therefore, few practicing clinicians actually apply the system as it was intended (Hunsley & Bailey, 1999). Accordingly, projective tests tend to be less useful (and less often used) for diagnostic classification than other assessment tools. Projective tests also tend to have more uncertain cross-cultural validation than objective tests (Church, 2001).

FIGURE 1.3 Inkblots Such as Those Used in the Rorschach

What do these inkblots look like to you? Your response to this question might be determined by the shape of the blot ("The top one looks like a pelvis"), the whole blot ("The bottom one on the right looks like two socks tied together"), just some part of it ("The bottom left blot has a butterfly in the center"), or even the white spaces in the middle ("The bottom middle blot has two eyes in the center"). Some people might even perceive movement taking place, such as two clowns dancing in the top blot.

Source: Dimec/Shutterstock

Objective tests require answers or ratings to specific questions or statements (for example, "Have you ever felt depressed?") so that the responses can be scored quantitatively. The most widely used objective test of personality and psychopathology is the Minnesota Multiphasic Personality Inventory (MMPI). Originally developed in the 1930s, it was revised in the 1980s and 2000s and, more recently, reconceived as the Minnesota Multiphasic Personality Inventory-3 (MMPI-3; Ben-Porath & Tellegen, 2020). A separate form of the MMPI has been developed for adolescents (the MMPI-A; Butcher et al., 1992).

objective test: A personality test that requires answers or ratings to specific questions or statements that are scored quantitatively.

The MMPI-3 takes about 30 minutes to complete on computer and consists of 335 true/false statements (see https://www.pearsonassessments.com/content/dam/school/global/clinical/us/assets/mmpi-3/mmpi-3-by-the-numbers.pdf). MMPI items are included in the test because they (1) distinguish between people who do and do not display mental disorders, and (2) differentiate people with different mental disorders. For example, one group of items tends to be answered in the same way by people with schizophrenia, a different set of items tends to be answered similarly by people with depression, and a third set is answered in a typical way by people who are socially introverted. Based on these empirical differences, groups of differentiating items called *clinical scales* were named for the groups of people with which they were originally associated. Note that the original MMPI had 10 such clinical scales, but these were empirically refined into 8 restructured clinical (RC) scales (Ben-Porath & Tellegen, 2020). These newer RC scales demonstrate a moderate improvement in validity over the standard clinical scales (van der Heijden et al., 2013).

Table 1.3 summarizes the RC scales, along with 3 key *validity scales* (of 10 total), groups of items on the MMPI-3 that help detect test-taking attitudes and distortions that may influence clinical scale scores. For example, the *F* (or infrequency) scale contains items that are rarely endorsed by members of any diagnostic group, such as "I once rode my bicycle from New York to San Francisco." High *F* scores suggest that a respondent was careless, attempted to exaggerate symptoms, or displayed a severe disorder. The MMPI validity scales can help detect *malingering*, the purposeful production of falsely

TABLE 1.3 MMPI-3 Scales and Simulated Items

Key Validity (or Test-Taking Attitude) Scales	Description
L (Lie or Uncommon Virtues)	Items of overly good self-reports, such as "I smile at everyone I meet" (True)
F (Infrequent Responses)	Items answered in the scored direction by 10% or less of test-takers, such as "There is an international plot against me" (True)
K (Correction or Adjustment Validity)	Items reflecting defensiveness in admitting to problems, such as "I feel bad when others criticize me" (False)
Restructured Clinical (RC) Scales (with Original MMPI-2 Scale Name in Parentheses)	**Description**
RCd: Demoralization (New Scale)	Twenty-four items derived from clients showing general unhappiness and dissatisfaction, such as "I usually feel that life is interesting and worthwhile" (False)
RC1: Somatic Complaints (Hypochondriasis)	Twenty-seven items derived from clients showing diffuse physical health complaints, such as "I have chest pains several times a week" (True)
RC2: Low Positive Emotions (Depression)	Seventeen items from clients showing a distinctive, core vulnerability factor and depression, such as "I often feel sad" (True)
RC4: Antisocial Behavior (Psychopathic Deviate)	Twenty-two items from clients showing rule-breaking and irresponsible behavior, such as "I don't like following rules" (True)
RC6: Ideas of Persecution (Paranoia)	Seventeen items from clients showing self-referential beliefs that others pose a threat to them, such as "There are evil people trying to influence my mind" (True)
RC7: Dysfunctional Negative Emotions (Psychasthenia)	Twenty-four items from clients showing obsessions, compulsions, abnormal fears, and guilt and indecisiveness, such as "I save nearly everything I buy, even after I have no use for it" (True)
RC8: Aberrant Experiences (Schizophrenia)	Eighteen items from clients showing bizarre or unusual thoughts or behavior, who are often withdrawn and experiencing delusions and hallucinations, such as "Things around me do not seem real" (True) and "It makes me uncomfortable to have people close to me" (True)
RC9: Hypomanic Activation (Hypomania)	Twenty-eight items from clients characterized by emotional excitement, overactivity, and flight of ideas, such as "At times I feel very 'high' or very 'low' for no apparent reason" (True)

Source: Ben-Porath & Tellegen, 2008/2011, 2020.

or grossly exaggerated complaints with the goal of receiving a reward or getting out of legal trouble (Wygant et al., 2011).

To interpret a valid MMPI-3, clinicians create a *scale profile* showing a client's scores, such as the one presented in Figure 1.4. They then conduct a *profile analysis* by comparing the client's scale profile with the profiles of other clients. Increasingly, clinicians rely on computerized scoring and interpretation of the MMPI-3, in which a given client's profile is compared with thousands of other clients using actuarial formulas applied by a computer. The MMPI-3 normative sample is drawn from 810 men and 810 women over the age of 18 from diverse regions and communities in the United States (Ben-Porath & Tellegen, 2020). As Figure 1.5 shows, this sample comprised almost 40% non-white participants and was more representative of the ethnic and cultural diversity of the U.S.

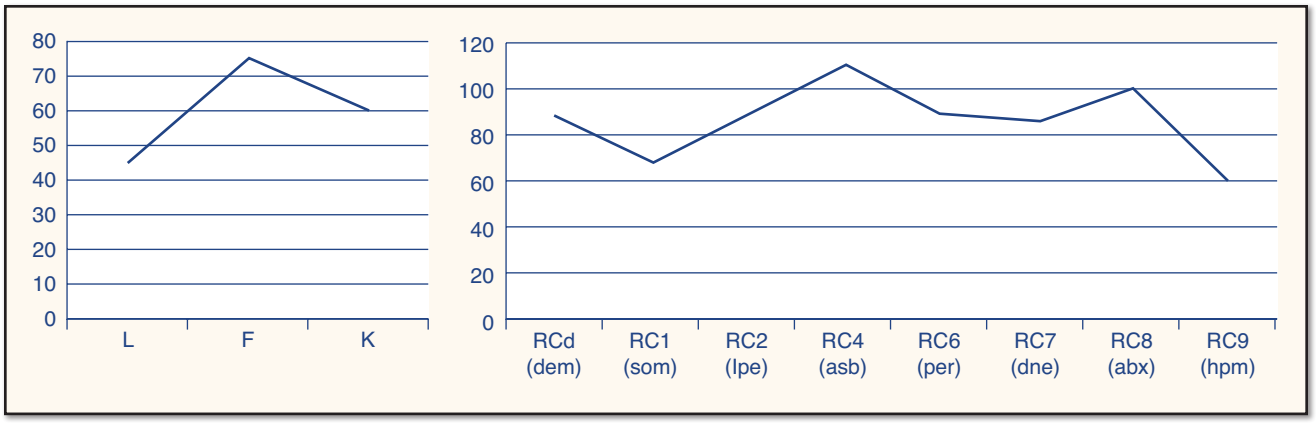


FIGURE 1.4 MMPI-3 Profile

This profile is based on the actual MMPI-2 taken by Jeffrey Dahmer in 1992. Jeffrey Lionel Dahmer (1960–1994), also known as the Milwaukee Cannibal, was an American serial killer and sex offender who murdered 17 men and boys between 1978 and 1991, with many of his later murders also involving necrophilia, cannibalism, and the permanent preservation of body parts. Dahmer's scale would be valid despite an elevated F scale, indicating that he may have been trying to "fake bad" as he attempted to mount the insanity defense. He would be considered a 4-8 code type (based on RC scales 4 [antisocial] and 8 [schizophrenia] being his most elevated), which is common among violent offenders, especially sex offenders, though is not in itself diagnostic of a criminal (Fraboni et al., 1990) and represents only about 5% of incarcerated offenders (Wise, 2009).

Source: Based on data from Nichols, 2006.

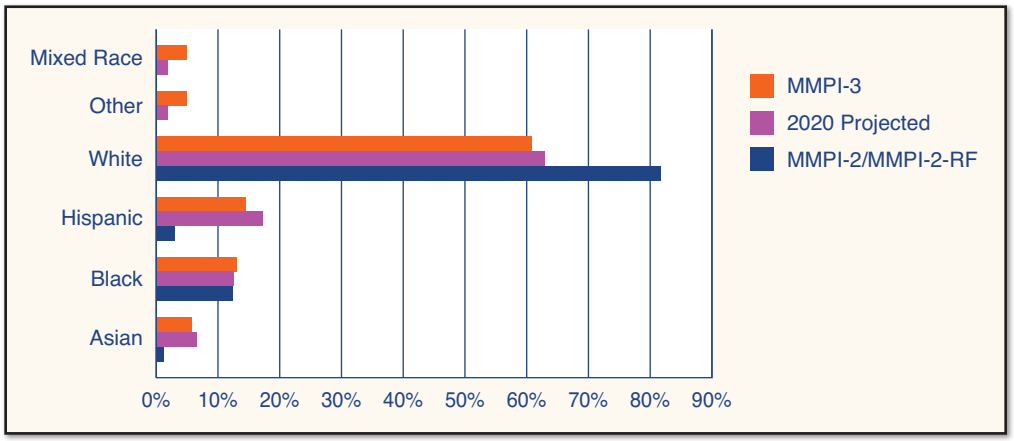


FIGURE 1.5 Ethnic Origins of Participants in the MMPI-3 Normative Sample Compared to 2020 Projected Census Data and MMPI-2/MMPI-2-RF Normative Sample

Source: Based on Ben-Porath & Tellegen, 2020.

population than any previous edition of the MMPI, which (previously) featured over 80% white participants in their normative samples. As such, conclusions drawn from the MMPI-3 may be more accurate for people of color than were older editions of the test.

Despite its continued widespread use, however, and its representative normative sample, the MMPI system has been criticized for having been developed without reference to any underlying psychological theory about mental disorders (Helmes & Reddon, 1993). Items were included on the test as long as they differentiated people with different disorders, but the items themselves may not possess much construct validity or explain much about the nature of the disorders with which they correlate. Several other objective personality tests have attempted to overcome the perceived weaknesses of the MMPI system and to conform more closely to the *DSM*. Among the more influential of these tests are the Millon Clinical Multiaxial Inventory-IV (Millon et al., 2015) and the online Personality Inventory for the *DSM-5* (PID-5; American Psychiatric Association, 2013b). In addition, tests of normal personality, such as the California Personality Inventory (Gough, 1987; Megargee, 2009) and the NEO Personality Inventory–Revised (Costa & McCrae, 1992a), are also used to assess characteristics associated with mental disorders (Costa & McCrae, 1992b), usually as supplements to other objective measures of psychopathology (Ben-Porath & Waller, 1992).

Objective personality tests tend to have good reliability and adequate validity. For example, test-retest reliabilities for the RC scales used in the MMPI-3 range from .67 to .88, averaging .78 (van der Heijden et al., 2008). Several studies have also demonstrated that these scales possess good construct validity for the assessment of different mental disorders and clinical conditions (Tellegen et al., 2003; Tellegen et al., 2009; Whitman et al., 2020). For instance, the new RC termed demoralization was correlated at .44 with suicidal thoughts (Whitman et al., 2020).

Nonetheless, objective test results are not foolproof indicators of mental disorders. They can be distorted by clients who are motivated to appear either overly healthy or extremely disturbed (like Jeffrey Dahmer in Figure 1.4). Furthermore, test publishers sometimes assert claims for the test's predictive powers that go beyond the findings of empirical research. Accordingly, most clinicians are careful not to use psychological tests in isolation. Such tests should be just one element in a comprehensive evaluation that includes several assessment methods as cross-checks.

Cross-cultural validation: Whether measures or tests that were originally generated in a single culture are applicable, meaningful, and thus valid when applied to members of another culture.

Finally, it is essential to use only tests that have been normed on the correct client population. **Cross-cultural validation** refers to whether measures (in most cases psychological constructs) that were originally generated in a single culture are applicable, meaningful, and thus equivalent in another culture (Matsumoto, 2003). The number of educational and psychological measures being translated and adapted into multiple languages and cultures is very much on the rise (Hambleton & Zenisky, 2010), and many tests (such as the MMPI-3) are now normed on diverse populations rather than predominantly white people. Similarly, many test developers recognize that there is a difference between simply translating a test to a new language versus developing a test from within a culture. For instance, the Spanish version of the WISC-V is not simply a direct translation of the English version but rather includes more culturally relevant examples. Cross-cultural research has become important in the fields of education and psychology, and articles addressing translation and adaptation over the past decades have increased by 350% (van de Vijver, 2009). According to Hambleton and Zenisky (2010, p. 47): "Journals such as the *European Journal of Psychological Assessment* and the *International Journal of Testing* are full of articles either advancing the methodology for test translation and adaptation or describing initiatives to translate and adapt particular tests, especially popular intelligence, achievement, and personality tests," and entire books have been written on the subject (Spielberger et al., 2004).

Observations

Observational data often contribute to clinical assessment and diagnosis. Observational assessments are especially popular with clinicians who follow a behavioral model of mental disorders (discussed in Chapter 2). In combination with other methods, observations can lead to a more comprehensive view of mental disorders, particularly when other instruments produce conflicting results. Observation is also useful when it helps clinicians learn how changes in the environment might affect a problem behavior. These advantages are illustrated in the continuation of the chapter-opening case that follows:

From the Case of Bill, Continued

Bill, whose case begins this chapter, was 10 when he was referred by his fifth-grade teacher to a psychologist because of behavior problems at school. According to the teacher, every time she asked Bill a question or gave him a direction, Bill talked back to her, making such statements as "I hate school, and you can't make me like it" or "You're picking on me; the other kids don't have to work so hard." Bill's mother disputed the teacher's account. She said that Bill never misbehaved at home and that the teacher did not know how to manage Bill, who was bored with school because he was "too smart" for the fifth grade. The psychologist gave Bill an intelligence test and found his IQ to be in the normal range. She then obtained permission to observe Bill at school and also

arranged for Bill and his mother to come to the clinic, where she could watch them through a one-way mirror.

The classroom observation revealed that, compared with his classmates, Bill spent more time talking to other children, completed fewer tasks, and was often inattentive. During the play assessment, Bill frequently contradicted his mother or ignored her suggestions. Bill's mother tried to persuade him to cooperate by reasoning with him or by threatening to cancel their planned trip to the mall. Based on these observations, the psychologist concluded that Bill was noncompliant in both settings, but in different ways. Would these observations be equally valid if the psychologist comes from a different cultural background than Bill and his family?

Observations can be conducted in many different settings. Clinicians use *naturalistic observation* to look at people's behavior as it occurs spontaneously in a school, home, hospital, or office. In *controlled observation*, a clinician arranges for people to be observed reacting to controlled and standardized events, such as a video about a feared stimulus.

Naturalistic observations are often impractical because of the obvious difficulty of following people around in their everyday environments. In addition, most people would not give clinicians permission to watch them in this fashion, creating an ethical barrier to many observations. As a result, direct observation for the purpose of assessing or diagnosing mental disorders is used mainly with children in school, daycare, or at play, and with severely disturbed patients in mental hospitals (Paul & Lentz, 1977). With adults, **self-monitoring** may be used instead. This is a special form of observation in which clients record the frequency, duration, intensity, or quality of their own moods, thoughts, and behaviors, such as smoking and eating (Nietzel et al., 1998).

self-monitoring: A special form of observation in which people record the frequency, duration, intensity, or quality of their own behaviors, such as smoking, eating, moods, or thoughts.

Most modern observational approaches using well-trained observers achieve excellent interrater reliabilities. Self-monitoring clients often attain correlations in the .90s between their observations and those of external observers. Observations can also be highly valid if they meet three important criteria (Nietzel et al., 1998). First, the observed behavior (e.g., a parent speaking in a raised voice to a child) must provide a satisfactory example of the construct being assessed (e.g., aggression). Second, the format for summarizing the observations (e.g., counting the number of voice raisings) must accurately represent the behaviors observed. Finally, the summary must provide a fair representation of the client's behavior when it is not being observed; for instance, the presence of an observer might cause a parent to be more controlled than usual. However, cultural validation remains essential as even behavioral observations might fall prey to cultural bias; in one study of parent-toddler dinner interactions, for instance, quantitative ratings varied by coder ethnicity (Wang et al., 2007).

Connections

Are measures of sexual arousal reliable enough to use in diagnosing specific sexual disorders? For the pros and cons, see Chapter 13.

Biological Measures

Biological methods allow a special kind of observation of changes in a client's body chemistry or other internal functioning that are almost never available to the naked eye (Tomarken, 1995) or revealed through self-reports. Biological assessment is especially important because genetic and biological factors are becoming more prominent in explaining mental disorders (see Chapter 2).

Advances in medical technology have led to the possibility of assessing several mental disorders via the measurement of the biological changes that are uniquely associated with those disorders. These *biological markers* include counting fat cells that are associated with obesity (Brownell & Wadden, 1992), monitoring elevations in liver enzymes or blood proteins (e.g., platelet monoamine oxidase B) to detect alcoholism (Allen & Litten, 1993; Snell et al., 2012), measuring changes in the immune system following exposure to stressors (Kielcolt-Glaser & Glaser, 1992), and monitoring neurochemical, endocrinological, and more recently, immunological/inflammatory changes in depression (Slavich & Irwin, 2014), bipolar disorder (Mathews et al., 2013), and schizophrenia (Hazlett et al., 1993; Bergink et al., 2014).

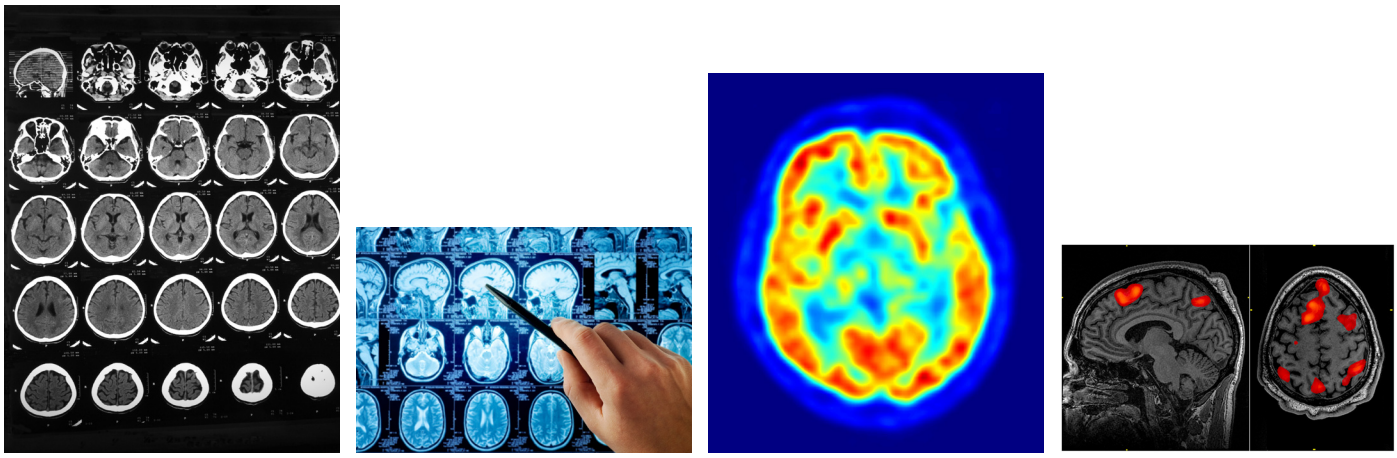
Biological measurements are also useful for assessing anxiety, mood, sexual, and other disorders that have clear physiological components. For example, in people with anxiety disorders, heart rate, respiration, blood pressure, muscle tension, and skin conductance are often measured as a way of studying the relationships between physiological arousal, subjective distress, and behavioral dysfunction (McNeil et al., 1993). Physiological measures are also important in assessing sexual arousal, especially for clients who are attracted to socially deviant stimuli. Several studies, for example, have found that rapists show more arousal to rape stimuli than to scenes of consensual sex, whereas non-rapists show the opposite pattern (Hall, 1990).

The most widely used biological measures of mental disorders are techniques for studying the brain and its functions. Some direct neurodiagnostic procedures are summarized in Table 1.4; others involve brain-imaging procedures shown in Figure 1.6. These latter procedures, several of which have been introduced during the past few decades, identify abnormalities in the structure or functioning of certain areas of the brain. For example, **computerized tomography** (CT scan) provides computer-enhanced, three-dimensional images of successive slices of the brain. CT scans are valuable in diagnosing tumors, traumatic damage, and degenerative diseases such as Alzheimer's and cerebrovascular disease (Imabayashi et al., 2013).

computerized tomography (CT): A neurodiagnostic procedure that provides computer-enhanced, three-dimensional pictures of the brain.

TABLE 1.4 Important Neurodiagnostic Procedures

Procedure	Description
Neurological clinical exam	The physician screens the patient's sensory abilities, eye movements, cognitive and perceptual abilities, language, motor and postural irregularities, and symptom history as a preliminary investigation of brain disturbance.
Lumbar puncture	Spinal fluid is extracted from the spinal cord through a needle. Examination of the fluid can help diagnose brain infections, hemorrhages, and some tumors. It has some complications, the most common of which are headaches.
Electroencephalogram (EEG)	The EEG monitors the electrical activity of the cerebral cortex. EEGs are useful in diagnosing seizure disorders and vascular diseases affecting large blood vessels in the brain, but they yield a relatively high rate of false positives. EEG recordings as a person sleeps—*polysomnographic measures*—are used to assess sleep disorders and can be collected in a person's home (Lacks & Morin, 1992).
Other electrical tests—electromyogram (EMG), evoked potentials, and nerve conduction velocities	All three tests measure electrical activity of some sort: in muscles (EMG), in the brain when elicited by an external stimulus (evoked potentials), or in peripheral nerves (nerve conduction velocities). They are useful in the diagnosis of muscle disease, sensory deficits, serious headaches, and nerve disease caused by conditions such as diabetes (Blanchard, 1992). Evoked potentials also have shown promise as a substitute for the polygraph in lie detection (Bashore & Rapp, 1993).
Arteriography	Dye is injected into arteries, and a series of X-rays is taken of the arteries as the dye passes through them. It is used to diagnose cerebrovascular disease, especially strokes and hemorrhages. Arteriograms can be uncomfortable and sometimes dangerous.
Biopsies and exploratory surgery	Both of these procedures involve direct examination of suspect tissue. Although they are risky, they can give definite diagnoses of some neurological conditions.
Computerized topographic mapping of EEGs	This technique uses computers to synthesize EEGs more efficiently. The computer analyzes EEG signals, codes their different frequencies with different colors, and then prints a multicolored map of the brain, showing differences in EEG activity. Use of this technique has declined in recent years as other brain-imaging procedures have evolved (Figure 1.6).



(a) (b) (c) (d)

FIGURE 1.6 Mapping the Geography of the Brain

CT, MRI, PET, or fMRI? Each type of brain scan has advantages and disadvantages. (a) CT scans show detailed pictures of the brain, but they cannot distinguish a live brain from a dead one. (b) MRIs can resolve structures that are only a fraction of an inch apart, but they cannot picture the activity of these structures. (c) PET scans rely on radioactive sugar (glucose) to allow neuroscientists to watch different areas of the brain "light up" as they go about their work, but they cannot picture structure. (d) fMRI scans, which track cerebral blood flow, have largely superseded PET scans for the study of brain activation patterns. PET scans, however, retain the significant advantage of being able to identify specific brain receptors (or transporters) associated with particular neurotransmitters through their ability to image radio-labelled receptors (Kim et al., 2014).

Sources: (a) Santibhavanak P/Shutterstock. (b) Triff/Shutterstock. (c) Jens Maus (Langner) (http://www.jens-langner.de) (d) John Graner, Neuroimaging Department, National Intrepid Center of Excellence, Walter Reed National Military Medical Center, 8901 Wisconsin Avenue, Bethesda, MD 20889, USA.

Positron emission tomography (PET scan) shows changes not just in the structure of the brain but also in its metabolic functioning. PET scans do this by tracking the rate at which brain cells consume radioactive glucose injected into the brain. Since diseased tissue uses glucose at a different rate than normal tissue, PET scans can reveal specific areas of abnormal brain physiology, as shown in Figure 1.6c. Before fMRI technology came online, PET scanning was the preferred method of functional (as opposed to structural) brain imaging, and it still continues to make large contributions to neuroscience (Meyer et al., 2012). PET scanning is also used for diagnosis of brain disease, most notably because brain tumors, strokes, and neuron-damaging diseases that cause dementia (such as Alzheimer's disease) all cause great changes in brain metabolism, which in turn causes easily detectable changes in PET scans even before MRI scans (see next paragraph) can detect any damage (Scott & Poon, 2004). **Single photon emission computed tomography (SPECT)** is a similar procedure using a radioactive chemical that lasts longer than those used in PET scans. Therefore, SPECT can take pictures of the brain from several angles.

Another technique, called **magnetic resonance imaging (MRI)**, works by tracking the activity of atoms in the body as they are "excited" by magnets in a chamber or coil placed around the patient (see Figure 1.6b). MRIs do not involve X-ray exposure. A newer version of magnetic resonance imaging, called **functional magnetic resonance imaging (fMRI)**, allows the simultaneous imaging of the brain's structure and function by detecting changes in cerebral blood flow (Huettel et al., 2009). Most fMRI scanners allow subjects to press a button or move a joystick in response to different visual images, sounds, and touch stimuli. Consequently, fMRI can be used to reveal brain structures and processes associated with perception, thought, and action. The resolution of fMRI is 2 to 3 millimeters, limited by the spatial spread of the hemodynamic response to neural activity (Huettel et al., 2009). Clinicians also use fMRI to anatomically map the brain and detect the effects of tumors, stroke, head and brain injury, or diseases such as Alzheimer's, although direct clinical use of fMRI still lags behind its use in research (Rombouts et al., 2007).

Diffusion MRI (or **dMRI**), also referred to as diffusion tensor imaging, is yet another magnetic resonance imaging (MRI) method that allows the mapping of the diffusion pro-

positron emission tomography (PET): A neurodiagnostic procedure that shows changes in the structure of the brain and in its metabolic functioning by tracking the rate at which brain cells consume injected radioactive glucose.

single photon emission computed tomography (SPECT): Similar to positron emission tomography (PET), a SPECT scan uses a radioactive chemical that allows pictures of the brain from several angles.

magnetic resonance imaging (MRI): A neurodiagnostic procedure that tracks the activity of atoms in the body as they are "excited" by magnets in a chamber or coil placed around the patient.

functional magnetic resonance imaging (fMRI): Functional magnetic resonance imaging or functional MRI (fMRI) is a functional neuroimaging procedure using magnetic resonance imaging (MRI) technology that measures brain activity by detecting associated changes in cerebral blood flow.

diffusion MRI (dMRI): Diffusion MRI, also known as diffusion tensor imaging, is a magnetic resonance imaging (MRI) method that allows the mapping of the diffusion process of molecules, mainly water, in biological tissues, in vivo and noninvasively; these water molecule diffusion patterns can reveal microscopic details about brain architecture.

cess of molecules, mainly water, in biological tissues, in vivo and noninvasively (Alexander et al., 2007). These water molecule diffusion patterns can reveal microscopic details about the architecture of the brain—that is, how the neurons of the brain are connected to or communicating with one another. For instance, recent studies using dMRI have identified abnormal diffusion patterns in the left middle temporal region of the brains of people with schizophrenia, which correspond with functional abnormalities in the language network (Leroux et al., 2013). Because it can reveal abnormalities in white matter fiber structure and provide models of brain connectivity, dMRI is rapidly becoming a standard for white-matter disorders, such as multiple sclerosis and stroke (Hagmann et al., 2006).

The reliability of biological measures is generally good, although each is sensitive to the effects of such factors as medication, circadian cycles, smoking, and overall fitness (Tomarken, 1995). These factors can also lower the validity of biological measures by misleading the diagnostician or researcher about a client's biological functioning. For example, many people with severe mental disorders receive medication, often for months or years. The effects of such medication may make it impossible to obtain a valid assessment of the original biological factors that might have contributed to their disorder (Rombouts et al., 2007). Further, the validity of biological assessments can vary from one disorder to the next or from one population to the next. Children, for example, often display abnormal EEGs, despite the absence of any brain damage. Like other assessments, biological methods are fallible, and their relationship to psychological variables is often ambiguous. Overall, the promise of the 1990s ("the decade of the brain") for research on mental disorders has remained largely unfulfilled even several decades later. Neuroscience has shed great light on how the brain functions, but the causes of mental disorders still elude us (Paris, 2013). Furthermore, you might intuitively think that biological assessments cannot be culturally-biased. Yet MRI research reveals that there may be subtle brain differences across individuals from different countries that may be shaped by contrasting cultural values (Huang et al., 2019).

Section Review

Clinicians collect assessment data from five sources, which are then usually combined to help them diagnose mental disorders. Each of these assessment sources has unique strengths:

- Life records are relatively immune to deliberate attempts by individuals to create particular impressions.
- Interviews are flexible sources of information that, when sufficiently structured, yield highly reliable diagnoses.
- Psychological tests are standardized instruments that allow accurate comparisons of a person's scores to those of others.
- Observations permit clinicians to assess the effects of situations on a person's behavior and to resolve discrepancies among other assessment sources.
- Biological measures permit assessment of internal changes that are neither observable nor reportable by clients themselves.

Diagnostic Classification: How Do Health Professionals Categorize Mental Disorders?

The ultimate purpose of the different assessment tools discussed in the previous section is to arrive at a diagnosis of the client's problem. Accurate diagnosis is a necessary first step for the treatment and scientific study of mental disorders. Diagnosing disorders helps bring order to what would otherwise be a confusing array of individual symptoms. Classifying mental disorders into categories so that a diagnosis can be made is essential: It allows us to study the disorders, to better understand their likely course and possible treatments, and to look for common causal factors in the backgrounds, experiences, and other characteristics of people with similar disorders. Diagnosis also allows clinicians

to describe mental disorders with a common language that is efficient and easier to understand.

A Brief History

Although efforts to classify mental disorders began as early as Hippocrates' humoral system, scientifically-based classification schemes did not appear until the nineteenth century. Several European physicians in that era proposed classification systems, beginning with Wilhelm Griesinger (1817–1868), who argued that mental disorders should be understood as biological diseases of the brain. The most influential classification scheme of that century was developed by Emil Kraepelin, a German psychiatrist. Kraepelin believed that the thousands of mental patients he observed throughout the world could be placed in three categories: *dementia praecox* (now called schizophrenia), *manic-depressive psychosis* (now called bipolar disorder), and *organic brain disorders* (now called dementia, delirium, and other neurocognitive disorders).

By 1917, a simple classification system for mental disorders was being used to gather hospital statistics in the United States. It did not prove clinically useful, however, so other classification schemes were developed in the 1930s and 1940s, including systems by the military to classify the many veterans who suffered mental disorders as a result of combat in World War II (see Widiger et al., 1991 for a historical review of this period). In 1948, the World Health Organization (WHO) was founded and soon published the sixth edition of the *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death (ICD-6)*, which included mental disorders for the first time in a chapter titled "Mental, Psychoneurotic, and Personality Disorders" (Apter, 2019). Across these sections were 26 categories, each containing multiple diagnoses but no descriptions accompanying the diagnoses.

Adriaen Collaert

Personification of the four temperaments—sanguine, choleric, melancholic, phlegmatic—from the title page of Adriaen Collaert: *Septem Planetae* (*The Seven Planets*, 1581). The four temperaments, first described by Hippocrates and later named by Galen, formed an early classification system. Hippocrates believed that mental disorders were biologically caused by an imbalance of body fluids, or humors: Too much blood (upper left) resulted in an optimistic temperament, an excess of yellow bile (upper right) caused mania, too much black bile (lower left) resulted in depression, and too much phlegm (lower right) caused fatigue or lethargy.

The First *DSM*

The *ICD-6* included only some mental disorders, classified essentially in the same way as in the system used by the U.S. military. However, because the classification schemes were often in substantial disagreement with one another, the American Psychiatric Association (APA) decided to create its own system. In 1952, it published the first edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-I)*, which contained 128 categories (Apter, 2019). Descriptions were short, leaving it up to the diagnosing clinician's discretion to interpret meaning, focusing on the cause of disorders rather than their symptoms. To make the *DSM* conform more closely to the eighth edition of the *International Classification of Diseases* (*ICD*; World Health Organization, 1968), a second version of the *DSM* (*DSM-II*) was published in 1968.

The first two *DSMs* had several major weaknesses, including lack of a uniform principle for assigning diagnoses. Some diagnoses were based on theories of causation (often psychoanalytic; see Chapter 2), others concentrated on symptoms that tended to cluster, and some reflected an assortment of criteria. Many disorders were defined so vaguely that it was difficult to obtain adequate reliability for them. Low reliability, in turn, ensured low validity for many diagnoses. Furthermore, early *DSM* systems focused almost exclusively on a single label. They failed to consider background factors that influence the severity and prognosis of disorders, such as a client's medical problems, psychosocial stress, and cultural influences. Ultimately, and ironically, these systems had little effect on how

different clients were treated, and they did not predict the course of disorders the way that a valid classification system should.

To correct these and other problems, the APA published the *DSM-III*, a radically revised edition of the *DSM*, in 1980, followed by another slightly revised edition, known as the *DSM-III-R* (American Psychiatric Association, 1987). The advent of the *DSM-III* and *DSM-III-R* signaled a major change in how the North American classification system was constructed. The *DSM-III* was the first edition of the *DSM* to provide specific, clearly defined criteria, some combination of which had to be present for a disorder to be diagnosed. These operational definitions uncoupled the *DSM* diagnoses from warring theoretical assumptions about the cause and nature of disorders. By focusing instead on the *observable signs and symptoms* of various disorders, the *DSM-III* and *DSM-III-R* greatly improved the reliability of diagnoses by clinicians, regardless of their theoretical model of psychopathology (American Psychiatric Association, 1980, 1987).

Despite their many improvements, though, the *DSM-III* and *DSM-III-R* continued to have serious weaknesses. Several diagnostic criteria were still too vague and sometimes inconsistent, and interrater reliabilities were low for some of the diagnoses—.78 overall but .61 for personality disorders and .54 for developmental disorders (Spitzer et al., 1979). Furthermore, the influence of clients' gender, age, and cultural factors on diagnosis was not emphasized. In addition, many clinicians believed that too little attention was paid to the construct validity of many diagnoses (see Bellack & Hersen, 1988; Kaplan, 1983; McReynolds, 1989; Millon & Klerman, 1986; Nathan, 1987a; and Vaillant, 1984 for these and other critiques of the *DSM-III* and *DSM-III-R*). In the *DSM-III* and *DSM-III-R*, many diagnostic criteria were based on the opinions of experts, not on empirical findings, because an insufficient number of diagnostic research studies were available at that time. Finally, the *DSM-III* and *DSM-III-R* did not clearly document the rational or empirical support for their diagnostic criteria.

One year after the publication of the *DSM-III-R*, the APA formed a task force to develop the *DSM-IV*, chaired by Allen Frances. This task force was charged with correcting many of the weaknesses in the *DSM-III-R*, but there were other reasons for the revision as well. First, WHO was ready to publish the latest edition of its *ICD (ICD-10)* in 1993, and the United States was under a treaty obligation to maintain classification systems consistent with those of WHO. Second, there was a desire to build a stronger empirical foundation for *DSM* criteria. As discussed next, these two objectives—harmonizing with WHO and improving the evidence base—also have heavily guided the current version of the *DSM*.

Harmonizing with WHO

Between 2003 and 2008, a cooperative agreement between the APA and WHO, supported by the National Institute of Mental Health (NIMH), convened 13 international *DSM-5* research planning conferences involving 400 participants from 39 countries. These conferences reviewed the world literature in specific diagnostic areas to prepare for revisions in developing both WHO's *ICD-11* and the *DSM-5* (American Psychiatric Association, 2013a).

Diagnosis of mental disorders in the United States and Canada is guided by the *DSM*, whereas the *ICD* is officially used in the rest of the world as the global clinical and research standard. Like the *DSM*, the *ICD* is updated periodically, with the *ICD-11* published in 2017. In truth, the *DSM-5* has been used unofficially by clinicians around the world, many of whom believe its diagnostic criteria are better validated than those of the *ICD*.

However, since 2015, all mental health professionals in the United States have been required to use *ICD* diagnostic codes—not *DSM* codes, though the categories are similar—for insurance reimbursement and compliance with the Health Insurance Portability and Accountability Act (HIPAA; Goodheart, 2014). As a result of WHO's decision to also use specific operational definitions of mental disorders, the two systems have moved closer in their approaches to diagnosis, making greater international cooperation possible and reducing cross-cultural variations in diagnostic practices (Sartorius et al., 1995; American Psychiatric Association, 2013). International contributions to classification are important,

given that about 75% of psychiatric populations live in developing countries, primarily in Asia, Africa, and South America (Mezzich & von Cranach, 1988).

Improving the Evidence Base

Both the *DSM-IV* and *DSM-5* started by assembling groups of researchers and clinicians to study specific disorders and recommend the best way to diagnose them (Widiger et al., 1991; American Psychiatric Association, 1994, 2000, 2013a). For the *DSM-5*, David Kupfer chaired an overall task force of 28 members and oversaw 13 work groups generally consisting of 6 to 15 experts each in that particular disorder; these experts were mainly medical doctors (psychiatrists), with some psychologists and other mental health professionals in the mix as well.

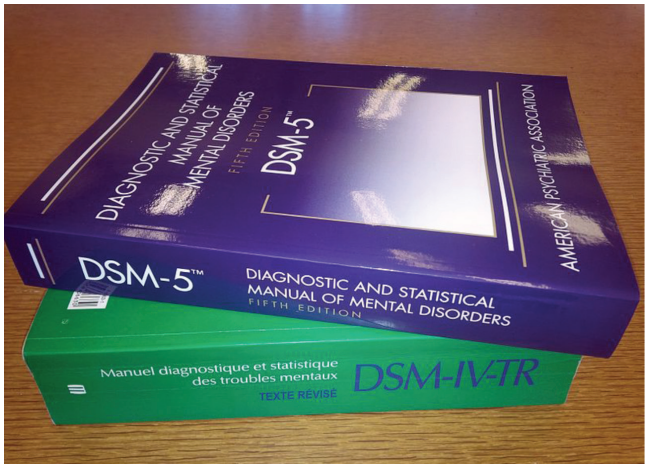
To resolve specific diagnostic controversies, the work groups conducted a series of field trials. A **field trial** is a research study conducted in the natural environment. For *DSM-5* field trials, diagnostic interviews using *DSM-5* criteria were conducted by 279 clinicians of varied disciplines, who received training comparable to what would be available to any clinician after publication of the *DSM-5*. Overall, 2,246 participants with various diagnoses and levels of comorbidity were enrolled in these field trials, of which over 86% were seen for two diagnostic interviews (Clarke et al., 2013). In adults, test-retest reliabilities of the cross-cutting symptom items generally were good to excellent. Reliabilities were not as uniformly good for child respondents. Clinicians rated psychosis with good reliability in adult clients but were less reliable in assessing clinical domains related to psychosis in children and to suicide in all age groups (Narrow et al., 2013).

Between 2010 and 2012, the APA posted various iterations of draft diagnostic criteria and proposed changes in organization on a website dedicated to this process (www.dsm5.org) for three separate comment periods. Feedback from more than 13,000 submissions was reviewed by each of the 13 work groups before arriving at the final version of the *DSM-5* in 2013. The website remains operative today and is an excellent resource for students to learn about the process and issues surrounding the long-awaited publication of the *DSM-5*.

⚠ ***DSM-5-TR* Update:** Michael First co-chaired the recent text revision of the manual using a similar strategy, which resulted in publication of the *DSM-5-TR* (APA, 2022).

The minor changes in the DSM-5-TR *will be noted with these update boxes throughout this book.*

field trial: A research study conducted in the natural environment.



F.RdeC

The more recent *DSM-5*, stacked on top of a French version of the *DSM-IV-TR*.

Why Use the *DSM-5-TR*?

There is a critical dichotomy in the *DSM* between its value as a guide for researchers and its clinical utility—that is, how useful it is for mental health professionals in actual practice. Some scholars have even suggested the creation of two separate diagnostic manuals—one for researchers and one for clinicians—to account for the fact that these two groups use the manual quite differently (Paris, 2013). Whereas researchers may follow the algorithmic model of *DSM* diagnosis (e.g., using a structured interview to examine and check for at least five of the nine listed symptoms of major depression), clinicians rely on a prototype model, retaining a general idea of what a specific disorder looks like, rather than taking the time to count criteria (Zimmerman & Galione, 2010).

According to the *DSM-5* Task Force, improving clinical utility was among the top priorities for the latest *DSM* revision (American Psychiatric Association, 2013a). Therefore, although the *DSM* retains its high value as a research tool, its mental health classifications are also useful in helping clinicians: (1) communicate; (2) select effective interventions; (3) predict course, prognosis (outcome), and future management needs; and (4) determine who might benefit from treatment (First, 2010).

In addition, the *DSM-5* opens with a cautionary statement about its use in forensic (legal) settings (see Chapter 17 for more about forensic mental health):

> Although the *DSM-5* diagnostic criteria and text are primarily designed to assist clinicians in conducting clinical assessment, case formulation, and treatment planning,

DSM-5 is also used as a reference for the courts and attorneys in assessing the forensic consequences of mental disorders. As a result, it is important to note that the definition of mental disorder included in *DSM-5* was developed to meet the needs of clinicians, public health professionals, and research investigators, rather than all the technical needs of the courts and legal professionals (APA, 2013a, p. 25).

This detailed warning has been praised by many forensic psychologists as a vital attempt to prevent misuse of the *DSM-5* in legal cases (Kocsis, 2013).

Because of their widespread acceptance and use in a multitude of settings both in the United States and worldwide, the *DSM-5* categories and criteria are followed in this textbook. We describe the general strategy for using the *DSM-5* in the next section. However, using the *DSM-5* does not mean that you should be blind to its serious shortcomings, as outlined in the final major section of this chapter ("The Four Guiding Principles: MAPS of the Territory"). As Joel Paris (2013, p. 187) advises, you should "learn the *DSM-5* but do not believe it."

multiaxial classification: A system for diagnosing mental disorders and describing a person along several dimensions, or axes, including physical health, psychosocial and environmental problems, and global functioning.

Axis I: In *DSM-IV*, the dimension that contained 16 general groupings of major mental disorders.

Axis II: In *DSM-IV*, the dimension that consisted of 10 personality disorders and mental retardation. *DSM-5* now includes these 10 disorders with all the other (former Axis I) disorders on a single axis.

Axis III: In *DSM-IV*, the dimension where clinicians listed general medical conditions that could be relevant to understanding or treating a person's mental disorder. Using *DSM-5*, medical conditions are simply listed along with the mental disorders on the same axis.

Axis IV: In *DSM-IV*, the dimension where clinicians recorded psychosocial and environmental stressors that could affect the diagnosis, treatment, and course of a mental disorder. Using *DSM-5*, these factors may be listed along with the mental disorders on the same axis.

Axis V: In *DSM-IV*, the dimension on which clinicians rated a person's overall level of functioning at the time of the evaluation, giving a summary assessment of the person's general clinical status and providing a gauge for how well the person responded to treatment. *DSM-5* encourages use of the WHODAS system instead.

Diagnoses with the *DSM-5-TR*

The *DSM-III* first introduced **multiaxial classification**, which was continued through the *DSM-IV*; this means that a person was described along several dimensions or *axes* (the plural of *axis*), such as physical health and social and occupational functioning, as well as the presence of mental disorders. The *DSM-5*, however, has moved to a nonaxial documentation of diagnosis, combining what was formerly **Axis I**/most mental disorders, **Axis II**/Personality Disorders, and **Axis III**/General Medical Conditions onto a single axis, with separate notations for important psychosocial and contextual factors (formerly **Axis IV**) and disability (formerly **Axis V**). *DSM-5* diagnoses of mental disorders are now arranged on a single axis according to the following 20 major categories, provided here with a brief description and indication of which chapter in this textbook covers that particular category:

1. **Neurodevelopmental disorders.** These include a group of conditions with onset in the developmental period (i.e., childhood) and are covered in Chapter 3. Included here are intellectual disabilities, learning disorders, communication disorders, autism spectrum disorder, attention-deficit/hyperactivity disorder, and several other problem behaviors typically associated with childhood.
2. **Elimination disorders.** These involve the inappropriate elimination of urine or feces and are usually first diagnosed in childhood or adolescence, so they are covered in Chapter 3.
3. **Disruptive, impulse-control, and conduct disorders.** These include conditions involving problems in the self-control of emotions and behaviors. Although there is no set age limit for these disorders, they usually appear at least by adolescence and are also covered in Chapter 3.
4. **Schizophrenia spectrum and other psychotic disorders.** Covered in Chapter 4, schizophrenia and other psychoses typically involve serious disturbances in a person's perception and thinking, emotional responsiveness, and behavioral appropriateness. Several bizarre symptoms can be present in a psychosis; the most prominent usually involve distorted perceptions and thinking.
5. **Bipolar and related disorders.** These disorders, covered in Chapter 5, involve disturbances in emotion and usually entail shifts between periods of depression and periods of highly elevated mood and energy, known as *manic episodes*. These have been separated from the depressive disorders in the *DSM-5* and placed between the chapters on schizophrenia and depression in recognition of their place as a bridge between those two diagnostic classes in terms of symptomatology.
6. **Depressive disorders.** Covered in Chapter 6, these disorders involve disturbances in emotion that usually include prolonged periods of sad, empty, or irritable mood, similar to bipolar disorder. Issues of duration, timing, or presumed etiology (cause) differentiate the disorders in this category from one another.

7. **Anxiety disorders.** Strong "irrational" feelings of fear, anxiety, and panic, along with avoidance of feared situations, typify the anxiety disorders, detailed in Chapter 7. Various anxiety disorders are defined by the nature of the feared stimulus and the primary way the anxiety is expressed, such as through panic attacks, chronic worry, or avoidance of specific stimuli.
8. **Obsessive-compulsive and related disorders.** In Chapter 8, we cover disorders that involve persistent thoughts, urges, or images that are experienced as unwanted, which may also be accompanied by behaviors or mental acts that an individual may feel driven to perform.
9. **Trauma and stressor-related disorders.** These include disorders in which exposure to a traumatic or stressful event is listed explicitly as a diagnostic criterion, ranging from posttraumatic stress disorder (PTSD) to adjustment disorders, covered in Chapter 9.
10. **Dissociative disorders.** These disorders, covered in Chapter 10, involve a disturbance or alteration in the normally integrated functions of identity, consciousness, or memory. Examples include multiple personality disorder (now called dissociative identity disorder) and psychologically caused memory disruptions.
11. **Somatic symptom and related disorders.** The central feature of these disorders is the existence of physical complaints or symptoms that suggest a physical disorder but that are, in fact, caused by psychological factors. The temporary loss of a sensory ability such as vision is a common example, to be covered in Chapter 11.
12. **Feeding and eating disorders.** Covered in Chapter 12, these disorders are characterized by a persistent disturbance of eating or eating-related behavior that results in the altered consumption or absorption of food and that significantly impairs physical health or psychosocial functioning. *Anorexia nervosa* (self-starvation) and *bulimia nervosa* (binging and purging) are the main disorders in this category.
13. **Sleep-wake disorders.** Insomnia, excessive sleepiness, recurrent nightmares and sleep terrors, and other sleep-related difficulties are included here. These problems, covered in Chapter 12, are not considered disorders when they occur only occasionally.
14. **Sexual dysfunctions.** This is a heterogeneous group of disorders, covered in Chapter 13, that are typically characterized by a clinically significant disturbance in a person's ability to respond sexually or experience sexual pleasure.
15. **Gender dysphoria.** There is only one overarching diagnosis in this category, covered in Chapter 13, which is indicated by a strong, persistent discomfort with one's gender and a preference to be the other sex.
16. **Substance-related and addictive disorders.** Included in this category are mental disorders arising from dependence on or abuse of alcohol, amphetamines, caffeine, cannabis, cocaine, hallucinogens (such as phencyclidine), inhalants, nicotine, opioids, and other drugs. Covered in Chapter 14, this category also includes gambling addiction.
17. **Neurocognitive disorders.** These disorders all involve impairment in a person's cognitive functioning. Discussed in Chapter 15, they can be the result of substance abuse, disease, trauma, or age-related deterioration.
18. **Personality disorders.** Formerly covered on Axis II, these disorders entail enduring patterns of inner experience and behavior that deviate markedly from the expectations of the individual's culture. Further, these patterns are stable over time, pervasive and inflexible, have an onset in adolescence or early adulthood, and lead to distress or impairment. They are covered in Chapter 16.
19. **Paraphilic disorders.** This category, covered in Chapter 17, involves people who derive intense and persistent sexual interest from acts or objects other than physically mature, consenting human partners.
20. **Other mental disorders.** This category includes certain mental disorders for which historical, physical, or laboratory findings point to a medical condition as the cause, along with a variety of clinical conditions that do not meet the criteria for being a

Connections

How do personality disorders, which used to be listed on a separate axis during diagnosis, differ from other mental disorders? Are they the causes or the results of some mental disorders? See Chapter 16.

mental disorder but are problematic conditions nonetheless and may be the focus of professional treatment. Examples include psychological symptoms that lead to a medical problem, that make a medical condition worse, or that delay a person's recovery from the condition; interpersonal conflicts involving romantic partners or family members; academic and occupational problems; bereavement; and other life crises.

Beyond these 20 broad categories, the *DSM* also includes "Conditions for Further Study," such as Internet Gaming Disorder, as well as "Other Conditions That May be a Focus of Clinical Attention," such as economic problems and occupational problems.

Criteria for Diagnosis

polythetic approach: An approach to classification that requires a person to meet a particular number of criteria out of a larger set of criterion symptoms to be diagnosed with a specific mental disorder.

classical method of classification: A method of classification in which every disorder is assumed to be a distinct and unique condition for which each and every attribute must be present for a diagnosis to be made.

Like the *DSM-III* and *DSM-IV*, the *DSM-5* lists specific operational criteria that must be met before a given disorder can be diagnosed. And like its predecessors, the *DSM-5* retains a **polythetic approach** to classification, meaning that, to be diagnosed with a mental disorder, a person must meet a particular number of criteria out of a larger set of possible criterion symptoms. For example, Figure 1.7 shows that even though Gollum, from *The Hobbit* and *Lord of the Rings* literature and film series, does not display all possible symptoms of schizoid personality disorder, he meets enough *DSM-5* diagnostic criteria (four of the seven) to be diagnosed with the disorder (see Chapter 16). The polythetic approach contrasts with the **classical method of classification** in which every disorder is assumed to be a distinct, unique condition for which each and every attribute must be present for a diagnosis to be made. When making a diagnosis using DSM-5, you need to go through each listed criterion like a checklist and compare it to the case—if the person has that symptom, check it off, and then count all the checkmarks to see whether that person meets the minimum number (e.g., 5+ out of 9 possible symptoms for

FIGURE 1.7 A *DSM-5* Diagnosis of Gollum from *The Hobbit* and *Lord of the Rings* (J. R. R. Tolkien, 1937, 1954–1955)

Here is Bashir et al.'s (2004) diagnosis of the case: Sméagol (Gollum), a 587-year-old homeless male of hobbit descent, presents with antisocial behavior, increasing aggression, and preoccupation with a specific object (a ring). His criminal history consists of at least one murder and another attempted murder (of Samwise Gamgee). He has no history of a substance use disorder, although he smoked "pipe weed" in adolescence, like many of his tribe.

Several differential diagnoses need to be considered, as well as potential biological causes for his symptoms. Gollum is hypervigilant and does not seem to need much sleep. Along with his bulging eyes and weight loss, this suggests hyperthyroidism.

Psychologically, Gollum displays a pervasive pattern of detachment from social relationships and a restricted range of emotions in interpersonal settings, beginning in childhood. He fulfills at least four of the seven criteria for schizoid personality disorder, as per *DSM-5*: lack of desire for close relationships, almost always choosing solitary activities, lack of close friends, and showing emotional coldness toward others.

Source: AM-STUDiO/Shutterstock

major depressive disorder). However, the person must also meet any other stated criteria, such as distress/dysfunction, lack of medical cause, and time frame (e.g., 6+ months for schizophrenia) in order for a DSM diagnosis to be made.

Classical models are commonly used to diagnose physical illnesses and they usually yield *homogeneous* categories. For instance, all people with Type I diabetes have a pancreas that makes little to no insulin. In other words, all individuals given the same diagnosis appear quite similar to one another. Polythetic systems, on the other hand, produce greater variability among people receiving the same diagnosis. They generate *heterogeneous* categories; the same diagnosis can be given to people who have a similar, *but not identical*, set of symptoms. For example, some people with major depressive disorder have sad mood and low interest or pleasure in their life, whereas others have sleep, concentration, and energy issues.

In addition, a person may be diagnosed with more than one *DSM-5* disorder at the same time if they meet the criteria for each disorder. In fact, there are several reasons why mental disorders are likely to coexist, a condition known as **comorbidity** (Kendall & Clarkin, 1992). First, different disorders can result from the same cause or from different, but simultaneous, causes. For example, exposure to a significant stressor, such as the COVID-19 pandemic, could lead to both an anxiety disorder and to depression. Second, the appearance of one disorder can lead to the development of another disorder; for instance, having ADHD might make a child more likely to develop oppositional defiance, which could then constitute a separate *DSM-5* disorder. Third, comorbidity may merely reflect the fact that different disorders often share similar criteria, resulting in an increased probability that diagnosis of one disorder will be accompanied by diagnosis of another disorder with overlapping criteria.

comorbidity: The cooccurrence of two or more mental disorders in the same person.

The comorbidity of mental disorders, to be discussed throughout this textbook, has numerous implications for how clinicians diagnose and treat mental disorders (Clarkin & Kendall, 1992). Does each disorder require different, but simultaneous, treatment, or should the more serious disorder be treated first? Does the presence of a comorbid disorder make the targeted disorder more difficult to treat? These are some of the questions that researchers continue to investigate.

The *DSM-5* also contains new supplementary material that accompanies the criteria for many disorders. For example, one section lists physical examination or general medical findings that might be associated with a disorder. Another special section provides descriptions on specific cultural, age, and gender features that might accompany a particular diagnosis. These portions of the *DSM-5* reflect two modern directions in the study of abnormal behavior—an increasing interest in discovering the biological foundations of disorders and a recognition that mental disorders need to be understood in their larger cultural and social context.

Diagnosis in the Real World

When clinicians conduct assessments and assign specific diagnoses, their decisions are affected by many factors other than a person's social history, test responses, or clinical interview. In short, *DSM-5* is not the problem, but the way we overvalue it is (Paris, 2015, p. 32). Consider again the case of Bill that opened this chapter. Based on Bill's history and current symptoms, what diagnosis do you think a clinician would give him?

Money, Privacy, and Diagnoses

Bill's symptoms satisfy the criteria for an anxiety disorder, the amount of conflict in his marriage points to a marital problem, and the psychological stress of an impending job loss indicates the likelihood of an adjustment disorder. The clinician may assign any or all of these diagnoses, but additional factors that are distinct from, and go beyond, Bill's clinical complaints will influence the final decision.

First, like the majority of Americans, Bill has health insurance, paid for in part by his employer. His health insurance covers mental disorders according to the Mental Health Parity Act, legislation signed into U.S. law in 1996 (and extended more recently as the

Mental Health Parity and Addiction Equity Act [MHPAEA]) that requires that annual or lifetime dollar limits on mental health benefits be no lower than any such dollar limits for medical and surgical benefits. So Bill's insurance policy will pay for psychotherapy for *DSM* disorders, including anxiety disorders, but it does not cover treatment of marital problems. There is thus an obvious *financial* incentive for the clinician (and Bill) to diagnose an anxiety disorder.

To make Bill's treatment financially feasible, the clinician could decide to diagnose an anxiety disorder, but Bill is concerned that his insurance company will review the diagnosis and treatment before reimbursement is made. He wants assurance from the clinician that the diagnosis will be kept confidential; otherwise, he is convinced that his employer will use the anxiety disorder diagnosis to hasten his dismissal. The clinician cannot, in good conscience, provide this assurance because, if Bill's case goes to court, confidentiality may be overridden by a judge's order.

In addition to Bill's financial and social considerations, the clinician's professional interests may influence the diagnosis. Clinicians who have expertise in treating one disorder may construe ambiguous cases in a way that results in the favored diagnosis. Some clinicians try to build a reputation for specializing in specific disorders, so marketing considerations might also influence diagnoses.

Another factor that influences diagnosis is that many people with mental disorders do not go first to mental health professionals, but to a hospital emergency room, their family physician, or a health maintenance organization (HMO). Compared with mental health specialists, primary care physicians tend to underdiagnose mental disorders (Munoz et al., 1994). If Bill had first consulted his primary care physician, he might well have been diagnosed with, and treated for, a physical rather than a mental disorder.

Diversity and Assessment Measures

⚠ ***DSM-5-TR* Update:** Laudably, the *DSM-5-TR* now includes a comprehensive review of the impact of racism and discrimination on the diagnosis and manifestations of mental disorders (Moran, 2021).

When you first read about Bill, how did you visualize him? His photograph appears on this page. Assumptions about Bill's ethnicity, for example, illustrate another major influence on the way clinical diagnosis is determined in the real world. Human diversity affects the manifestation and diagnosis of mental disorders in several ways. For example, as discussed previously, most psychological tests, structured interviews, and observational systems were first developed and normed on Caucasian samples. Could these measures in some cases be biased against ethnic minorities as a result? Additionally, if we ignore ethnicity and culture, what are we missing in our understanding of who Bill is and his lived experiences? For example, is some of Bill's worry about potentially being targeted when his company downsizes also tied to past experiences of microaggressions (i.e., subtle experiences of racism, such as being closely scrutinized when browsing merchandise in a store)? How has that worry manifested over time, and how might it contribute to expressions of anxiety and depression? How might the actions of a therapist reinforce or minimize those experiences and unintentionally exacerbate his symptoms? The answers to these questions become critical as we think about diagnosis and treatment.

Rido/Shutterstock

A photo of Bill Thompson, the focus of the case that opens this chapter.

A test can be biased in at least two ways. First, people from a certain ethnic group may do poorly on a test relative to other groups *for reasons that have nothing to do with what the test is measuring*. For example, a person whose first language is English will probably perform better on an IQ test administered in English than a person who grew up speaking Spanish. Many popular IQ and personality tests have been translated into different languages to overcome this bias, but you still must be cautious that the translation does not introduce subtle differences in meaning that distort the interpretation of test scores.

A second type of bias occurs when scores on a test lead to valid predictions for one ethnic group but invalid predictions for another group. In one study (Timbrook & Graham, 1994), Black and white participants completed the MMPI-2, and their partners rated them on a variety of traits

and behaviors that should correlate with the test scores. No ethnic differences were found for the accuracy of MMPI-2 scores in predicting the partners' ratings. More recent studies have converged on that point, including one of 1,000+ college students concluding that the new clinical scales (RCs) of the MMPI-RF and MMPI-3 did not differ in predictive accuracy by ethnicity (McBride, 2013), so the MMPI-3 is therefore not considered a culturally biased assessment tool.

Cultural values can also affect a person's willingness to disclose personal problems to a professional or be assessed in the first place. To take one example, being surveyed about symptoms of a mental disorder over the phone by a stranger probably has a unique meaning for an older Chinese woman whose traditions suggest that personal problems are matters to be kept within the family (Ying, 1989). At the same time, she might see refusing to cooperate with an interviewer as unacceptably rude. Many traditional Chinese women appear to resolve this dilemma by talking to interviewers but not acknowledging that they have experienced psychological symptoms; in fact, mental health services continue to be underutilized by Asian American women in general (Augsberger et al., 2015). Furthermore, the cultural background of many Hispanic Americans tends to discourage seeking help from outside professionals, so it is not surprising that Hispanic Americans use formal mental health services less than most other ethnic groups (Alegría et al., 2008). Finally, due to past experiences and history, members of various ethnic groups may have justified mistrust of the healthcare system, including mental health providers (Brooks & Hopkins, 2017). Understanding and addressing this mistrust at the individual *and* systemic levels may help reduce health disparities impacted by individuals not seeking help.

Diversity and Definitions of Mental Disorders

Ethnic or cultural factors are most likely to distort diagnoses when clinicians do not understand a person's cultural or ethnic background. For example, when they do seek help, Asian Americans may express psychological problems through physical complaints (Maffini & Wong, 2014), a tendency known as **somaticizing**. This form of complaint may be less embarrassing to people from an Asian background than admitting to emotional problems. Hispanic Americans might report culturally specific expressions of distress, such as *susto* (fright) or *ataque de nervios* (attack of nerves), which are often associated with psychological disorders (Durà-Vilà & Hodes, 2012). Therefore, clinicians need to consider how cultural tolerance and language for different kinds of problems may affect the way clients experience and present distress.

somaticizing: A tendency to express psychological problems through physical complaints.

To foster an appreciation of how diversity affects the expression of mental disorders, the *DSM-5* includes a separate section on cultural formulation, which provides a framework for assessing information about the cultural features of an individual's mental health problem and how it relates to a social and cultural context and history (American Psychiatric Association, 2013a, p. 749). The *DSM-5* revised the *DSM-IV-TR Outline of Cultural Formulation* into the more formalized *Cultural Formulation Interview (CFI)*. The CFI assesses four domains of culture that are relevant to diagnosis and treatment: (1) Cultural Definition of the Problem; (2) Cultural Perceptions of Cause, Context, and Support; (3) Cultural Factors Affecting Self-Coping and Past Help Seeking, and (4) Cultural Factors Affecting Current Help Seeking (APA, 2013). Whereas more research is needed on the use of the CFI, early work suggests that the use of the CFI is associated with improved rapport and engagement in treatment (Aggarwal et al., 2020). Regular use of the CFI can help clinicians gain a wider understanding of cultural influences that are in play for an individual.

In addition, the *DSM-5* describes many **culture-bound syndromes**, patterns of abnormal behavior that appear only in certain localities or cultures. For instance, *koro*, covered in Chapter 2, appears in the *DSM-5* under Obsessive-Compulsive and Related Disorders, as well as in the special appendix called "Glossary of Cultural Concepts of Distress."

culture-bound syndrome: A pattern of abnormal behavior that appears only in certain localities or cultures.

Diversity and Interactions Between Clients and Clinicians

The effect of ethnic or cultural factors on diagnosis stems in part from their impact on how clinicians and clients interact. At the most obvious level, if they have difficulty

overpathologizing: A tendency to mistakenly construe some behavior as a symptom of a mental disorder when, in fact, the behavior is culturally appropriate.

underpathologizing: A tendency for clinicians to mistakenly construe some behavior as merely reflecting a cultural difference when, in fact, it is the symptom of a mental disorder.

understanding each other's spoken language, the clinician will have difficulty understanding the client's psychological functioning. In particular, clinicians must be cautious about how they interpret idioms, such as "My nerves are shot" or "I'm having my spells again." Failure to understand the influences of clients' cultural background and experience can lead clinicians to make two fundamental mistakes (Lopez, 1989). First, clinicians can misconstrue a certain behavior as a symptom of a mental disorder when, in fact, the behavior is considered desirable in the client's culture. An example of this **overpathologizing** error is when a Hispanic American's deference to family authority figures is interpreted as a sign of anxiety or immaturity. The opposite of this tendency is the **underpathologizing** error, in which clinicians dismiss some bizarre behavior as merely the reflection of a cultural difference when, in fact, it is the symptom of a mental disorder. This mistake sometimes occurs when clinicians try too hard to prove their cultural sensitivity and can result in people being denied the treatment they clearly need.

Connections

How could social adversity and poverty contribute to the incidence of mental disorders? See Chapter 2.

Section Review

Scientific classification of mental disorders was first widely established in the United States with the introduction of the *DSM* in 1952. In *DSM-5* diagnoses:

- a person's behavior is compared with a set of clearly specified criteria for each disorder;
- the person's behavior must satisfy a predetermined number of these criteria for a disorder to be diagnosed; and
- a person is also assessed for medical conditions, exposure to stressors, and overall functioning, as well as the presence of mental disorders.

Diagnoses of mental disorders in the real world are influenced by:

- financial considerations,
- concerns about privacy, and
- ethnic and cultural factors that shape the way clinicians and clients understand and interact with each other.

The Frequency of Mental Disorders: How Common Are They?

How many people currently suffer from a mental disorder or have suffered from one at some point in their lives? These are among the questions addressed by the field of epidemiology. The total number of people who suffer from a disorder in a specific population is called the **prevalence** of a disorder. Lifetime prevalence is the percentage of people in a population who have had a disorder at any time in their lives, and point prevalence includes only those who have the disorder at one specific point in time (i.e., at the time of interview). The 1-year prevalence is a hybrid type of prevalence between lifetime prevalence and point prevalence, recording the history of the disorder within the year prior to assessment (Eaton et al., 1985). The number of people who develop a new disorder in a specific time period (usually the previous 6 or 12 months) is known as the **incidence** of a disorder.

prevalence: The total number of people who suffer from a disorder in a specific population.

incidence: The number of people who develop a disorder in a specific time period, usually the previous 6 or 12 months.

Epidemiologists have studied the prevalence of mental disorders in the United States and other parts of the world since the latter half of the 20th century. Their studies are usually based on interviews with large numbers of people who have been selected to represent a larger population. For example, researchers conducting the Midtown Manhattan Study (Srole et al., 1962) interviewed more than 1,600 people in New York City. Based on these interviews, the authors estimated that about 26% of the population had a mental disorder.

The most comprehensive study of mental disorders in the United States was the Epidemiologic Catchment Area (ECA) Project sponsored by the National Institute of Mental Health (Robins & Regier, 1991). In this study, trained interviewers used a structured interview (the Diagnostic Interview Schedule [DIS], discussed in Table 1.1) to collect

information about 30 major mental disorders in five large "catchment" areas: Los Angeles, California; St. Louis, Missouri; New Haven, Connecticut; Baltimore, Maryland; and Durham, North Carolina. More than 20,000 participants were selected so that their age, gender, economic status, education, and place of residence made them as representative as possible of the U.S. population in general. Interviews were conducted not only with community residents, but with people living in prisons, nursing homes, hospitals, and other institutions.

In the new century, WHO expanded its Composite International Diagnostic Interview (CIDI; Table 1.1), the interview used in almost all major psychiatric epidemiological surveys in the world over the past decade, to include detailed questions about severity (Kessler & Ustun, 2004). This expanded CIDI (which itself was based on the DIS mentioned previously) was used in a coordinated series of epidemiological surveys carried out under WHO auspices and known as the World Mental Health (WMH) Survey Initiative. Using similar methodology, these surveys continue to be conducted regularly worldwide (Eaton et al., 2012), as well as in the United States as the National Comorbidity Survey (NCS; Kessler et al., 2005).

Despite the limitations of self-report, these data provide a vital snapshot of the approximate frequency of mental disorders (see Figure 1.8). So what can these large-scale epidemiological projects tell us about national and global mental health? Highlights of this ongoing research are:

1. Mental disorders are common in the United States and internationally. An estimated 20–25% of Americans ages 18 and older—about one in four or five adults—suffer from a diagnosable mental disorder in a given year (Kessler et al., 2005; Substance Abuse and Mental Health Services Administration [SAMHSA], 2020), which translates to over 65 million people. Even though mental disorders are widespread in the population, the main burden of these disorders is concentrated in a much smaller proportion—about 6%—who suffer from a serious mental illness. In addition, mental disorders are the leading cause of disability in the United States and Canada.
2. The lifetime prevalence of mental disorders is frequently related to demographic or social variables. Within the United States, higher rates of disorder are associated

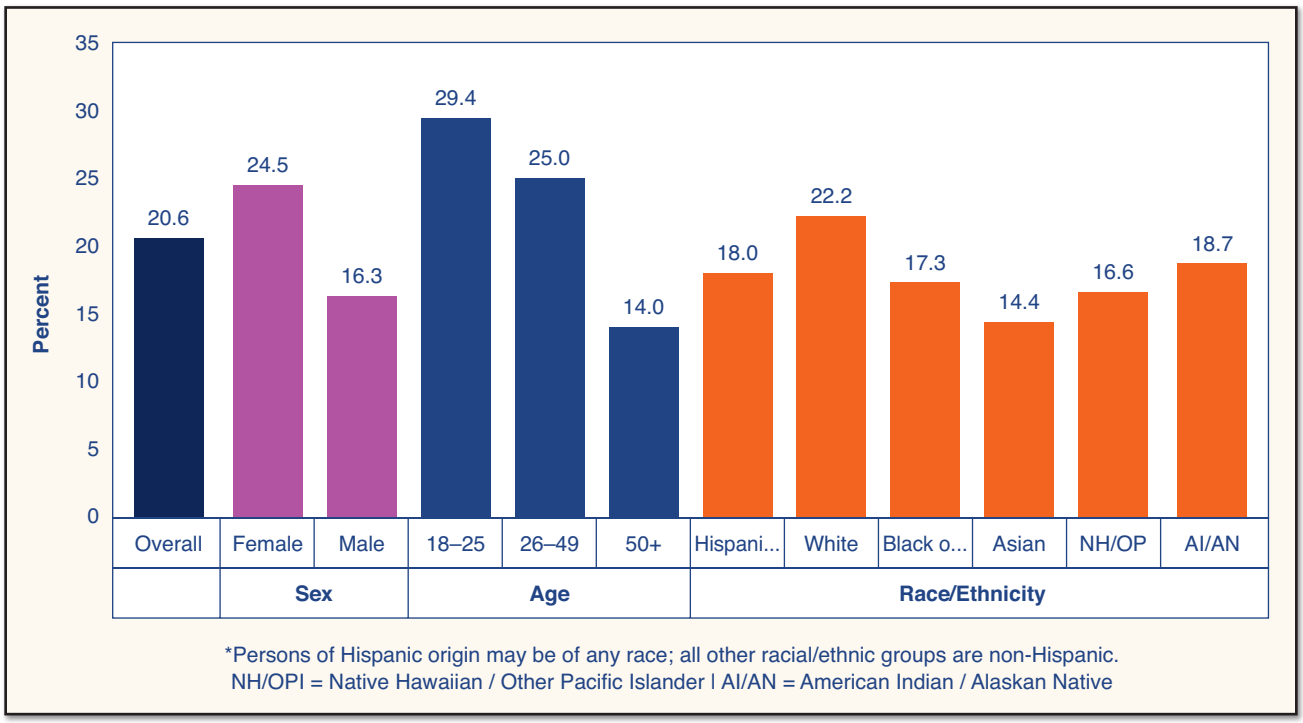


FIGURE 1.8 Past Year Prevalence of Any Mental Disorder in U.S. Adults (2019)

Source: Substance Abuse and Mental Health Services Administration, 2020.

with being poor and not completing high school. However, according to detailed ECA and NCS results and more recent results from SAMHSA (2020), people of color report a lower prevalence of several disorders, including mood disturbances and substance use disorders, compared with Caucasian Americans (Kessler et al., 1994; SAMHSA, 2020).

remission: When symptoms of a previously present disorder are no longer apparent, implying improvement or recovery.

3. In the United States, about 38% of people with a history of disorder are "in **remission**," defined as being free of symptoms during the year prior to the interview. Over half of the people who had suffered drug abuse/dependence, generalized anxiety disorder, alcohol abuse, or antisocial personality disorder had been without symptoms of these disorders during the prior year.
4. In the United States, remission rates exceed the percentage of people seeking treatment for a disorder. Indeed, only 20–40% of community residents with a current disorder report receiving recent treatment for it (SAMHSA, 2020), usually from general physicians rather than mental health professionals. Children, the elderly, ethnic minorities, the poor and homeless, and people with physical disabilities are especially likely to be *underserved*, meaning that they do not receive interventions that may be needed.
5. Comorbidity of mental disorders is common. In the ECA sample, 60% of people with one disorder in their lifetime had at least one additional diagnosed mental disorder. In the NCS, 56% of respondents with a history of at least one disorder had suffered from other disorders in their lifetime, and over half of all lifetime disorders occurred in the 14% of the sample. In other words, the major burden of mental disorders is concentrated in a group of comorbid people who constitute less than one sixth of the population.
6. The first symptoms of most mental disorders occur at a surprisingly early age. Considering all disorders, the average age for noticing the first symptoms of a disorder was 16 in the ECA data. In the NCS study, anxiety disorders and eating disorders often began in people's teenage years, and, as you might expect, disorders such as ADHD and autism were typically diagnosed in childhood (Kessler et al., 2005). This finding helps explain the dual emphases throughout this book on understanding the developmental origins of mental disorders and on the need for preventive programs that focus on children and adolescents.
7. As Table 1.5 shows, the prevalence and projected lifetime risk of mental disorders varies considerably worldwide. For instance, the projected risk of a person meeting diagnostic criteria for any mental disorder at some point in their lifetime ranges from 18% in China to over 55% in the United States, with most European countries somewhere in the middle of those extremes. In addition, the specific type of disorders that are frequently diagnosed differs by nation. Anxiety disorders are most common in the United States, Columbia, and New Zealand, whereas mood disorders are most often diagnosed in the United States, New Zealand, and France. Substance use disorders are highest in the United States, the Ukraine, and South Africa.
8. Overall, the most common disorders worldwide are personality disorders and alcohol use disorders, followed by dementia for older adults, major depressive disorder, and anxiety disorders such as simple phobias (see Table 1.6).
9. During the coronavirus pandemic, "U.S. adults reported considerably elevated adverse mental health conditions associated with COVID-19. Younger adults, racial/ethnic minorities, essential workers, and unpaid adult caregivers reported having experienced disproportionately worse mental health outcomes, increased substance use, and elevated suicidal ideation" (Czeisler et al., 2020, p. 1049).
10. Having a mental disorder in the developing world can be grim (Clay, 2014). "Up to 85% of people with severe mental disorders in low- and middle-income countries receive no treatment, according to WHO. People with mental disorders often face inhumane living conditions and harmful, degrading treatment practices in healthcare facilities" (Clay, 2014, p.20). People with mental disorders often face inhumane living conditions and harmful, degrading treatment practices in health-

TABLE 1.5 *DSM* Disorders Worldwide: Prevalence/Percent of Sample with Disorders in Their Lifetime and Projected Lifetime Risk (of developing the disorder before age 75)

Country	*Any Anxiety Disorder*		*Any Mood Disorder*		*Any Substance Use Disorder*		*Any Mental Disorder*	
	Prevalence (%)	Projected Lifetime Risk (%)	Prevalence (%)	Projected Lifetime Risk (%)	Prevalence (%)	Projected Lifetime Risk (%)	Prevalence (%)	Projected Lifetime Risk (%)
Belgium	13.1	15.7	14.1	22.8	8.3	10.5	29.1	37.1
Columbia	25.3	30.9	14.6	27.2	9.6	12.8	39.1	55.2
France	22.3	26.0	21.0	30.5	7.1	8.8	37.9	47.2
Germany	14.6	16.9	9.9	16.2	6.5	8.7	25.2	33.0
Israel	5.2	10.1	10.7	21.2	5.3	6.3	17.6	29.7
Italy	11.0	13.7	9.9	17.3	1.3	1.6	18.1	26.0
Japan	6.9	9.2	7.6	14.1	4.8	6.2	18.0	24.4
Lebanon	16.7	20.2	12.6	20.1	2.2	—	25.8	32.9
Mexico	14.3	17.8	9.2	20.4	7.8	11.9	26.1	—
Netherlands	15.9	21.4	17.9	28.9	8.9	11.4	31.7	42.9
New Zealand	24.6	30.3	20.4	29.8	12.4	14.6	39.3	48.6
Nigeria	6.5	7.1	3.3	8.9	3.7	6.4	12.0	19.5
China	4.8	6.0	3.6	7.3	4.9	6.1	13.2	18.0
South Africa	15.8	30.1	9.8	20.0	13.3	17.5	30.3	47.5
Spain	9.9	13.3	10.6	20.8	3.6	4.6	19.4	29.0
Ukraine	10.9	17.3	15.8	25.9	15.0	18.8	36.1	48.9
United States	31.0	36.0	21.4	31.4	14.6	17.4	47.4	55.3

Source: Based on data from Kessler et al., 2007.

care facilities. They are frequently denied the right to work, go to school, and have families. In an attempt to improve the situation globally, WHO developed a Comprehensive Mental Health Action Plan 2013–20 (World Health Organization, 2013a). Adopted by WHO in 2013, the plan was a call to action to help guide countries as they strive to ensure that all citizens with mental disorders receive the treatment they need. The plan lists four specific objectives: (1) strengthening leadership in mental health, (2) providing comprehensive mental health and social services in community-based settings, (3) implementing prevention and mental health promotion strategies, and (4) strengthening research programs and information systems for mental health fields. This action plan was extended to 2030 at the 72nd World Health Assembly in May 2019 to ensure its alignment with the 2030 Agenda for Sustainable Development (WHO, 2020).

KieferPix/Shutterstock

COVID-19 caused an increase in many psychological disorders worldwide, especially anxiety, depression, and trauma-related disorders.

TABLE 1.6 Prevalence of Specific Mental Disorders in Adults Worldwide: Percent of Sample with Disorders in the 12 Months Prior to Interview

Mental Disorder	Median 1-Year Prevalence	Prevalence Range	Number of Studies
Panic disorder	0.9	0.6–1.9	33
Social phobia	2.8	1.1–5.8	30
Simple phobia	4.8	3.5–7.3	25
Major depressive disorder	5.3	3.6–6.5	42
Obsessive-compulsive disorder	1.0	0.6–2.0	19
Drug use disorder	1.8	1.1–2.7	11
Alcohol use disorder	5.9	5.2–8.1	14
Personality disorders	9.1	9.0–14.4	5
Schizophrenia	0.5	0.3–0.6	23
Bipolar disorder	0.6	0.3–1.1	16
Dementia (age > 65 years)	5.4	3.2–7.1	25

Source: Based on data from Eaton et al., 2008.

The Four Guiding Principles: MAPS of the Territory

Criticisms of *DSM* Diagnoses

As we discuss in the "Controversy" feature as well as in this section, the *DSM-5* is still a target of significant criticisms (Clark et al., 1995; Frances, 2012; Paris, 2013) despite continued improvement in the empirical foundations for diagnoses and greater sophistication in the way the diagnostic system is organized. It is all too easy to assume that the wide variety of mental disorders we describe in this textbook are real "things" (diseases) that people "have." Whereas that is sometimes true, we want you to remember that there are potential limitations to traditional notions about the nature, diagnosis, and treatment of mental disorders. To remind you of these limitations, we offer you the acronym MAPS, which stands for M*edical myths*, A*ttempted answers*, P*rejudicial pigeonholing*, and S*uperficial syndromes*. Each of these four guiding principles, discussed in more detail in the sections that follow, is represented by an icon that will display throughout the textbook whenever that particular principle applies.

M = Medical Myths

MAPS - Medical Myths

Medical myths is the notion that, despite the urgings of powerful drug companies and the potential increases in diagnosis of some mental disorders in the *DSM-5* (Frances, 2012), pills are not always (or even often) the optimal first-line treatment for most of the disorders in the *DSM-5* (Heuzenroeder et al., 2004; Hofmann et al., 2012), with the exception of bipolar disorder (Smith et al., 2007). Furthermore, the biological/medical model discussed in Chapter 2 is only one narrow lens through which we view disorders, and *we currently have no mental disorders for which the biological/genetic underpinnings have been fully established* (Paris, 2013). It is tempting to take the simplest route possible to understanding and treating mental disorders—for instance, to view depression as an illness or disease resulting merely from low serotonin levels in the brain. But viewing mental disorders as physical diseases is oversimplified and usually just plain wrong.

CONTROVERSY

DSM-5 Is Guide Not Bible—Ignore Its Ten Worst Changes

The following was published on December 2, 2012, by Allen J. Frances, MD, in *DSM-5 in Distress* blog and is reprinted with permission of the author.

Allen Frances, MD, was chair of the DSM-IV *Task Force and of the department of psychiatry at Duke University School of Medicine, Durham, NC. He is currently professor emeritus at Duke and is the author of several important books, including* Saving Normal: An Insider's Revolt Against Out-of-Control Psychiatric Diagnosis, *DSM-5,* Big Pharma and the Medicalization of Ordinary Life *and* Essentials of Psychiatric Diagnosis, Revised Edition: Responding to the Challenge of *DSM-5.*

This is the saddest moment in my 45-year career of studying, practicing, and teaching psychiatry. The Board of Trustees of the American Psychiatric Association (APA) has given its final approval to a deeply flawed *DSM-5* containing many changes that seem clearly unsafe and scientifically unsound. My best advice to clinicians, to the press, and to the general public—be skeptical and don't follow *DSM-5* blindly down a road likely to lead to massive overdiagnosis and harmful overmedication. Just ignore the ten changes that make no sense.

Brief background. *DSM-5* got off to a bad start and was never able to establish sure footing. Its leaders initially articulated a premature and unrealizable goal—to produce a paradigm shift in psychiatry. Excessive ambition combined with disorganized execution led inevitably to many ill-conceived and risky proposals.

These were vigorously opposed. More than 50 mental health professional associations petitioned for an outside review of *DSM-5* to provide an independent judgment of its supporting evidence and to evaluate the balance between its risks and benefits. Professional journals, the press, and the public also weighed in—expressing widespread astonishment about decisions that sometimes seemed not only to lack scientific support but also to defy common sense.

The *DSM-5* has neither been able to self-correct nor willing to heed the advice of outsiders. . . . Fortunately, some of its most egregiously risky and unsupportable proposals were eventually dropped under great external pressure (most notably "psychosis risk," mixed anxiety/depression, Internet and sex addiction, rape as a mental disorder, "hebephilia," cumbersome personality ratings, and sharply lowered thresholds for many existing disorders). But APA stubbornly refused to sponsor any independent review and has given final approval to the ten reckless and untested ideas that are summarized below.

The history of psychiatry is littered with fad diagnoses that in retrospect did far more harm than good. Yesterday's APA approval makes it likely that the *DSM-5* will start a half dozen or more new fads which will be detrimental to the misdiagnosed individuals and costly to our society. . . .

So, here is my list of *DSM-5*'s ten most potentially harmful changes. I would suggest that clinicians not follow these at all (or, at the very least, use them with extreme caution and attention to their risks); that potential patients be deeply skeptical, especially if the proposed diagnosis is being used as a rationale for prescribing medication for you or for your child; and that payers question whether some of these are suitable for reimbursement. My goal is to minimize the harm that may otherwise be done by unnecessary obedience to unwise and arbitrary *DSM-5* decisions.

1. Disruptive mood dysregulation disorder: *DSM-5* will turn temper tantrums into a mental disorder—a puzzling decision based on the work of only one research group. We have no idea whatever how this untested new diagnosis will play out in real-life practice settings, but my fear is that it will exacerbate, not relieve, the already excessive and inappropriate use of medication in young children. During the past two decades, child psychiatry has already provoked three fads—a tripling of attention deficit disorder, a more than 20-times increase in autistic disorder, and a 40-times increase in childhood bipolar disorder. The field should have felt chastened by this sorry track record and should engage itself now in the crucial task of educating practitioners and the public about the difficulty of accurately diagnosing children and the risks of overmedicating them. *DSM-5* should not be adding a new disorder likely to result in a new fad and even more inappropriate medication use in vulnerable children.
2. Normal grief will become major depressive disorder, thus medicalizing and trivializing our expectable and necessary emotional reactions to the loss of a loved one and substituting pills and superficial medical rituals for the deep consolations of family, friends, religion, and the resiliency that comes with time and the acceptance of the limitations of life.
3. The everyday forgetting characteristic of old age will now be misdiagnosed as minor neurocognitive disorder, creating a huge false positive population of people who are not at special risk for dementia. Since there is no effective treatment for this

(Continued)

CONTROVERSY

DSM-5 Is Guide Not Bible—Ignore Its Ten Worst Changes *(Continued)*

"condition" (or for dementia), the label provides absolutely no benefit (while creating great anxiety) even for those at true risk for later developing dementia. It is a dead loss for the many who will be mislabeled.

4. *DSM-5* will likely trigger a fad of adult attention deficit disorder, leading to widespread misuse of stimulant drugs for performance enhancement and recreation and contributing to the already large illegal secondary market in diverted prescription drugs.
5. Excessive eating 12 times in 3 months is no longer just a manifestation of gluttony and the easy availability of really great-tasting food. *DSM-5* has instead turned it into a psychiatric illness called binge eating disorder.
6. The changes in the *DSM-5* definition to autism will result in lowered rates: 10% according to estimates by the *DSM-5* work group, perhaps 50% according to outside research groups. This reduction can be seen as beneficial in the sense that the diagnosis of autism will be more accurate and specific—but advocates understandably fear a disruption in needed school services. Here the *DSM-5* problem is not so much a bad decision, but the misleading promises that it will have no impact on rates of disorder or of service delivery. . . .
7. First-time substance abusers will be lumped in definitionally with hard-core addicts, despite their very different treatment needs and prognosis and the stigma this will cause.
8. *DSM-5* has created a slippery slope by introducing the concept of behavioral addictions that eventually can spread to make a mental disorder of everything we like to do a lot. Watch out for careless overdiagnosis of Internet and sex addiction and the development of lucrative treatment programs to exploit these new markets.
9. *DSM-5* obscures the already fuzzy boundary around generalized anxiety disorder and the worries of everyday life. Small changes in definition can create millions of anxious new "patients" and expand the already widespread practice of inappropriately prescribing addicting antianxiety medications.
10. *DSM-5* has opened the gate even further to the already-existing problem of misdiagnosis of PTSD (posttraumatic stress disorder) in forensic settings.

DSM-5 has dropped its pretension to being a paradigm shift in psychiatric diagnosis and instead (in a dramatic 180-degree turn) now makes the equally misleading claim that it is a conservative document that will have minimal impact on the rates of psychiatric diagnosis and in the consequent provision of inappropriate treatment. This is an untenable claim that *DSM-5* prescription cannot possibly support because, for completely unfathomable reasons, it never took the simple and inexpensive step of actually studying the impact of *DSM* on rates in real-world settings.

Except for autism, all the *DSM-5* changes loosen diagnosis and threaten to turn our current diagnostic inflation into diagnostic hyperinflation. Painful experience with previous *DSM*s teaches that if anything in the diagnostic system can be misused and turned into a fad, it will be. Many millions of people with normal grief, gluttony, distractibility, worries, reactions to stress, the temper tantrums of childhood, the forgetting of old age, and "behavioral addictions" will soon be mislabeled as psychiatrically sick and given inappropriate treatment.

People with real psychiatric problems that can be reliably diagnosed and effectively treated are already badly shortchanged. *DSM-5* will make this worse, diverting attention and scarce resources away from the really ill and toward people with the everyday problems of life who will be harmed, not helped, when they are mislabeled as mentally ill.

Our patients deserve better, society deserves better, and the mental health professions deserve better. Caring for the mentally ill is a noble and effective profession. But we have to know our limits and stay within them.

DSM-5 violates the most sacred (and most frequently ignored) tenet in medicine: First Do No Harm. That's why this is such a sad moment.

Thinking Critically

The previous article shows that, although the APA and WHO have gone to great lengths to offer national and international diagnostic systems that they believe to be of scientific value, doubt remains about the science behind these systems. Specifically, there are concerns about whether these systems might continue to create diagnostic errors and other problems. To what extent are such concerns valid? Deciding requires critical thinking, which involves asking yourself the following questions about this or any other controversial topic, such as those featured in the "Controversy" feature present in many chapters in this text (Bernstein, 2007; Burke et al., 2014):

1. What are you being asked to *believe or accept*?
2. What *evidence* is available to support the claim?

CONTROVERSY

DSM-5 Is Guide Not Bible—Ignore Its Ten Worst Changes *(Continued)*

3. What *alternative* ways are there to interpret the evidence?
4. How would you rate all the evidence/alternatives on a 0–10 scale based on *validity/strength*?
5. What *assumptions or biases* came up when answering questions 1–4 (e.g., using intuition/emotion, authority, or personal experience rather than science)?
6. What *additional evidence* would help you evaluate the alternatives?
7. What *conclusions* are most reasonable or likely?

Regarding question 1, Allen Frances makes several key claims in his blog, including the notion that *DSM-5* will lead to increased diagnosis of depression, neurocognitive disorders, PTSD in forensic settings, and ADHD in adults. Additional critical-thinking steps you should consider are:

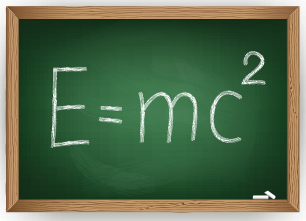
- What evidence would you need to be convinced that these disorders will (or will not) be overdiagnosed now that the *DSM-5* is in wide use? For example, recent studies have shown that many people who would have been diagnosed with autism spectrum disorder (ASD) in *DSM-IV* might not be diagnosed with those disorders in *DSM-5* (Spectrum News, 2018). Nevertheless, people with ASD have received services at higher rates than ever before (which counters Frances's point #6). However, research has supported Frances's point #1, as disruptive mood dysregulation disorder symptoms are found in many mental disorders and rarely occur in isolation, to the degree that its formulation as a unique and separate disorder is not well supported (Baweja et al., 2016). And other researchers have backed up Frances's claims (point #2) regarding the overdiagnosis of depression (Paris, 2015).
- What types of future research studies could psychologists design to test more of Frances's key claims? For instance, there have been no comprehensive studies on overdiagnosis (one of Frances's consistent claims) to date (Thombs et al., 2019). What might such a study look like?

This is precisely the kind of thinking that we hope you will engage in as you read this textbook (and live your life!).

The Medical Model Stresses the Individual Above the Sociocultural Context

Especially with the removal of the multiaxial system (and Axis IV, which formerly listed psychosocial stressors), the *DSM-5* emphasizes individual dysfunction far more than the effects of harmful environments and social policies that impair people's psychological adjustment. Some critics believe that this emphasis on internal factors is one of the most harmful effects of the medical model of mental disorders around which the *DSM* is organized. By focusing diagnoses exclusively on individual problems, mental health professionals run the risk of blaming the victims of poverty, discrimination, undereducation, unemployment, and abuse. In a country such as the United States, where one in every five children lives in poverty, the potential significance of considering the external factors contributing to psychopathology is obvious. If destructive environments and social policies are the true culprits behind some mental disorders, diagnostic practices that distract mental health professionals from working on these external problems do a disservice to people with mental disorders and to society at large.

A = Attempted Answers

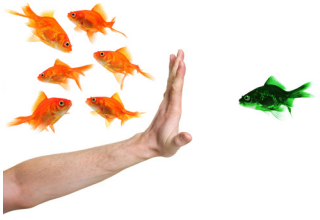


MAPS - Attempted Answers

Far from being medical illnesses, mental disorders are just a collection of potentially interrelated symptoms—subjective observations that an assessor makes indicating that something might be wrong. What is important to note is that these symptoms often arise as the person's attempted solution to a problem. For instance, delusions may create meaning for people who are depressed, compulsive behaviors (e.g., hand-washing) may reduce the anxiety caused by obsessional thoughts (e.g., worries about getting sick), children with autism may seek sameness/rituals to manage their social discomfort, and children

with ADHD may overstimulate themselves to "wake their brains up." Moreover, there may be adaptive advantages to certain mental disorders. For instance, depression encourages people to temporarily withdraw from others after losses/stressors so they can "lick their wounds" (in ancestral environments, sometimes literally!) and return to society when they are ready to reengage. Throughout this textbook, we help you understand *why* specific symptoms might emerge in specific situations and what functions they might serve for the individual who may inadvertently have generated them.

P = Prejudicial Pigeonholes



MAPS - Prejudicial Pigeonholes

We delve deeper into our history of understanding mental disorders in Chapter 2, and you will see how the historical context can change the way we view them. Even in modern times, the labels included in each version of the *DSM* and which treatments are implemented first are partly reflections of historical trends and sociocultural attitudes. For example, homosexuality was included as a mental disorder until its removal from the *DSM-III-R* in 1987, and several scholars argue that the remaining sexual behavior categories of disorders in the *DSM*, now called paraphilic disorders in the *DSM-5* (covered in Chapter 17), should be removed as well (Silverstein, 2009). As we discuss next, pigeonholing someone, which means thinking of that individual unfairly as belonging to a particular group, can have dire consequences for that person's future.

Labeling Produces Stereotypes, Prejudice, and Harm

It is easy to forget that diagnoses apply to disorders, not individuals. When people overlook this fact, diagnoses can have many adverse effects, including rejection and discrimination. The potential dangers of labeling were suggested several decades ago by a famous study conducted by David Rosenhan (1973). Rosenhan and seven other people, *none of whom suffered from a mental disorder*; presented themselves to psychiatric hospitals in five states and asked to be admitted as patients. Each person complained of the same, single symptom: hearing voices saying the words *thud*, *empty*, and *hollow*. In almost every instance, the hospital staff admitted these people and diagnosed them with schizophrenia, a serious disorder. Following their admissions to the hospitals, these pseudopatients behaved as normally as possible. Nonetheless, their actions were often interpreted as signs of disorder. For example, the hospital staff interpreted behaviors intended to relieve boredom, such as keeping a personal journal, as symptoms of mental illness. Despite their normal behavior, the researchers were kept in the hospitals anywhere from 7 to 52 days. After being discharged, they were usually given the diagnosis "schizophrenia, in remission," suggesting that the disorder (which they never had in the first place!) might return someday.

You should be careful not to make too much of this study. As many critics have pointed out (e.g., Spitzer, 1975), hospital staff are rarely confronted by normal people who report hearing nonexistent voices and ask to be admitted. Usually, something is wrong, and the clinician's wisest and safest course is to take the complaint seriously and admit the patient to the hospital (in keeping with the previously stated tendency of *DSM* to yield more false positives than false negatives; Paris, 2015). Still, the Rosenhan study did dramatically demonstrate how labels can exert too much influence, distorting the interpretation of a labeled person's behavior.

Labels of mental disorders can also lead to detrimental changes in the labeled person's behavior. If a person is incorrectly diagnosed as having diabetes, this false-positive diagnosis may be frightening and could lead to additional, costly, medical procedures. But the label itself would not *cause* diabetes; it is caused by a malfunctioning pancreas's inability to produce insulin as noted previously. With mental disorders, however, false labels can sometimes make the conditions they describe more likely, an outcome known as a *self-fulfilling prophecy*. This concern is particularly strong with some childhood disorders. For example, children incorrectly diagnosed as having learning disabilities may decrease their academic effort because they believe that no amount of effort can ever

overcome their "disabilities." Tragically, decreased motivation might increase their risk of academic difficulties, until the diagnosis eventually appears accurate.

Finally, labeling may contribute to over-blaming an individual for their problems. For example, someone's diagnosis of anxiety or depression may be heavily influenced by the sociocultural context they live in, such as a young Black male in the United States who is anxious about being harmed by police. Whereas that individual may benefit from an intervention like cognitive behavioral therapy to help manage some of their anxiety, placing too much emphasis on changing individual cognitions without changing a discriminatory environment can minimize a client's experience and lead them to believe that their symptoms are all their fault. In reality, it may be that systemic change (slow as it is) represents the best way to reduce the individual's symptoms.

The good news here is that abnormal psychology classes—the likely reason you are reading this textbook—can reduce students' prejudices against people with mental disorders (Barney, 2014).

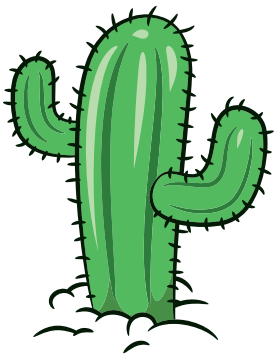
Gender Bias in the *DSM*

Also under the broad umbrella of prejudicial pigeonholing is the claim that the diagnosis of mental disorders is gender biased. Some theorists charge that *DSM* diagnostic criteria codify "masculine-based assumptions about what behaviors are healthy and what behaviors are crazy" (Kaplan, 1983) and that this shows up especially in the diagnosis of personality disorders (Chapter 16). Others object that society encourages women to be submissive and dependent, but then labels them as mentally disordered if they show too much of these qualities. In the *DSM-5*, for example, one criterion for histrionic personality disorder (which is much more commonly diagnosed in women than men) is "consistently uses physical appearance to draw attention to self." Our male-dominated society appears to want women to be physically attractive but then condemns them with a diagnostic label if they show what men think to be too much of this quality.

In one study (Ford & Widiger, 1989), psychologists read one of three case histories that illustrated antisocial personality disorder (APD; diagnosed more often in males), histrionic personality disorder (HPD; diagnosed more often in females), or an ambiguous mixture of the two. One third of the psychologists were told that their case involved a female client, one third were told it was a male, and one third were not informed of the client's gender. A second group of psychologists rated the extent to which each symptom presented in the cases represented a criterion for antisocial or histrionic diagnosis. For the antisocial case, the psychologists failed significantly more often to diagnose APD for the female (15%) than for the male (42%). The reverse was true for the HPD case; the psychologists significantly underdiagnosed this disorder in males (44%) compared with females (76%). The ambiguous case was not affected by the gender of the client, and the gender of the psychologists themselves made little difference to their diagnoses. This and other research suggest that the diagnosis of personality or other disorders in the *DSM-5* may result from prejudicial pigeonholing, using data (such as gender) that go beyond the relevant symptoms of each client.

S = Superficial Syndromes

The last several versions of the *DSM* (*III*, *IV*, and *5*) have had high interrater reliability in diagnoses—that is, agreement between different observers—because the diagnostic criteria are commonly based on superficial signs and symptoms. In other words, diagnosis is made typically using features that clinicians or clients can easily see/observe, such as depressed mood, restlessness, social awkwardness, or hypervigilance, rather than by any deeper understanding of the cause of these symptoms. Many of the later chapters will have a photo or two of a specific cactus to illustrate the key caveat that the *DSM* is based on observable syndromes rather than diseases per se (Paris, 2013). The cactus icon also reappears throughout this textbook because it shows how easily we can diagnose



MAPS - Superficial syndromes

people—and even cactus trees—with mental disorders using only what we see on the outside (e.g., droopy cactus arms = depression). In this textbook, we explore the abnormality beneath the cactus to get at what causes these disorders and how to treat them, and not just how to spot them based on surface characteristics.

Mental Disorders Occur on a Continuum, Not in Discrete Categories

Related to their reliance on superficial syndromes, *DSM*-based diagnoses imply that a person either does, or does not, have a disorder. This categorical, all-or-none approach to classification has been challenged by mental health professionals, who argue that mental disorders are not arranged so neatly in real life (Carson, 1991). Many argue that the line separating disorder from nondisorder in the *DSM*—in terms of the particular number of symptoms needed to define a disorder—tends to be rather arbitrary (Paris, 2013).

dimensional approach: An approach to describing mental disorders in which disorders are portrayed along different personality dimensions that produce a profile summarizing the person's functioning.

One alternative would be for clinicians to think of disorders occurring along different dimensions (Widiger et al., 1987). In a **dimensional approach** to personality diagnosis, for example, a person receives scores on several dimensions of personality, such as extraversion, openness to different kinds of experiences, conscientiousness, agreeableness, and emotional stability. When taken together, these scores produce a profile that summarizes the person's standing on those dimensions. How would Bill from the chapter-opening case be described by a dimensional system? Using the most common personality dimensions—sometimes called "The Big Five"—a clinician might describe Bill as introverted, moderately open, relatively conscientious, mildly disagreeable, and emotionally unstable.

However, the categorical approach has remained dominant in the *DSM* for several reasons: (1) the medical tradition of diagnosis emphasizes discrete illnesses (see the "Medical Myths" section earlier), (2) clinicians find it easier to use categorical systems, and (3) theorists have not been able to agree on the nature or number of personality dimensions necessary to describe psychopathology adequately (Millon, 1991).

The *DSM* Pays Too Much Attention to Reliability, Not Enough to Validity

To ensure high interrater reliability, the diagnostic criteria for *DSM* disorders were simplified and made specific enough that clinicians could agree on them. However, this simplification may have distorted the true nature of some disorders (Carson, 1991; Widiger & Trull, 1991). Imagine that you used the same approach in setting up a movie review system ("rotten potatoes") to help different film critics agree on whether a particular film is good enough to earn four stars. You might require that only movies with French subtitles be rated four stars. This four-star criterion would produce excellent agreement among movie critics but would not be valid because it excludes many potentially excellent movies from consideration. Likewise, too much simplification in diagnostic criteria may enable clinicians to agree, but their diagnoses may not adequately reflect the core features or implications of many mental disorders behind the cacti. Put into statistical lingo, this might be sacrificing validity in order to boost reliability.

To sum up MAPS—the four guiding principles that reappear throughout this book—the diagnosis of mental disorders is frequently based on oversimplified medical assumptions and surface characteristics of human beings, as well as influenced by sociopolitical climate and stereotypes, rather than on a profound and real understanding of mechanism and cause. As Paris (2013) puts it:

> Thirty-odd years after the *DSM-III*, we are still in the dark about the nature of most disorders. . . . Advances in neuroscience have not succeeded in explaining ANY mental disorder. Genetics has raised more questions than it can answer. Neurochemistry turns out to be much more complex than most people believed. And the beautiful pictures of neuroimaging will be seen by future generations as, at best, suggestive and, at worst, primitive. Clinical observation and consensus from experts, rather than hard facts, are still the guiding forces behind the manual. (pp. 183–184)

Revisiting the Case of Bill

The case of Bill, which began this chapter, is typical of what clinicians encounter in their everyday practice. Bill's symptoms are common, and his concerns about being diagnosed are also familiar to most clinicians. His case illustrates how clinicians must constantly balance knowledge about disorders and official classifications with client needs, culture, and the many practical consequences of a *DSM* diagnosis.

The clinical psychologist who assessed Bill conducted a comprehensive psychological assessment that included a social history and review of Bill's medical and work records, an extensive structured interview geared to measure *DSM-5* diagnostic criteria, and psychological testing with the MMPI-3 and the Wechsler Adult Intelligence Scale (WAIS-IV). The clinician also conducted one session in which, after obtaining Bill's permission, she interviewed Bill's wife to gain additional information about the couple's marital problems.

Based on these assessment data, the clinician concluded that Bill was experiencing a generalized anxiety disorder, which, as discussed in Chapter 7, is a common type of disorder found somewhat more often among minority than among Caucasian populations. Bill's nervous stomach and shortness of breath are examples of the physical symptoms often associated with generalized anxiety disorder, as is the marital dissatisfaction that Bill reported. To provide a thorough diagnostic evaluation, Bill's psychologist completed his chart as follows: generalized anxiety disorder; medical conditions: Crohn's disease; stressors: threat of job loss, marital difficulties.

Before reporting the diagnosis to Bill's health insurance company, the psychologist discussed with Bill the implications of the diagnosis. She also explained that generalized anxiety disorder can be effectively treated with cognitive-behavioral therapy (CBT) even more so than with medication, as discussed further in Chapter 7.

Bill decided to continue in psychotherapy, making his weekly copays with his insurance covering the remaining fees. Like most good clinicians, Bill's therapist took the time to explain what is known about the cause of his disorder. His treatment lasted 14 sessions, after which he reported that most of his symptoms had declined considerably, that he no longer felt suicidal, and that he was doing better at work. He said that his marital problems had not changed much but that neither he nor his wife was ready to work on them.

As Bill's case illustrates, diagnoses seldom help clients understand how or why they developed a disorder. This is both a strength and weakness of systems such as the *DSM*. Because it bases diagnoses on specific symptoms rather than on presumed causes, the *DSM* allows clinicians of different theoretical persuasions to agree on most diagnoses. However, this agreement sometimes comes at the price of not indicating enough about the origins or implications of a disorder. In the remaining chapters, we describe what clinicians know about the causes and treatment of mental disorders to get a glimpse behind the cacti.

Source: Reprinted with permission from Ted Weltzin.

A CONVERSATION WITH

Thomas Widiger

Dr. Thomas Widiger, professor of psychology at the University of Kentucky, is a leading expert on the diagnosis of mental disorders. Dr. Widiger has written extensively about classification issues, and he served as the research coordinator for the DSM-IV. *In 2009, he was awarded the Distinguished Scientist Award from the Society for a Science of Clinical Psychology.*

Diagnosis

Q *Why do we need a classification system such as the* DSM*?*

A The main reason is the one you discuss in this chapter. We have to have a common language so we can discuss what we are studying. Classification allows us to communicate about mental disorders. Without it, meaningful communication would be impossible. Even though diagnosis carries risks of bias and stigmatization, these risks are outweighed by the communication advantage that formal classification provides. On the other hand, careful construction of a system such as the *DSM* is crucial because, like any language, it governs how clinicians think about their clients.

Q *What is the role of psychological assessment in diagnosis?*

A Beginning with the *DSM-III*, the use of well-defined classification criteria has resulted in an increased emphasis on structured and semistructured diagnostic interviews. Although psychological testing remains an important element in assessment, its role in diagnosis is diminishing. Obviously, this trend means that students need much better training in interviewing techniques than they have typically received so that they are competent in using the new structured interviews.

Q *How prevalent are mental disorders?*

A I actually think they are much more prevalent than existing studies in fact suggest. I am convinced that all people suffer a mental disorder at some point in their lives. We recognize this to be true for our neighbors or roommates or friends, but we find it difficult to admit ourselves. If we acknowledged that mental disorders are more common in ourselves, it would have the added advantage of decreasing their stigma. People are less stigmatized by physical illnesses, in part, because we recognize they are just a part of life. Mental disorders are really no different. Nobody is entirely physically healthy, and nobody is entirely psychologically healthy.

Q *How will diagnosis change in the future?*

A The biggest change in the future will be an increasing reliance on neurochemical models of disorder. You can already see this trend in the progress and emphasis on medication treatments and in the *DSM* itself, which includes a special section for listing any lab and physical exam findings that are associated with the disorder. This emphasis is, of course, part of a larger trend within psychiatry, which is betting more and more of its money on biological horses. NIMH (National Institute of Mental Health) has, in fact, developed its own diagnostic system that is explicitly tied to neurobiological models of brain disease. However, I believe the pendulum is swinging too far in the biological direction. We are psychosocial beings as well as biochemical animals, and our understanding of mental disorders needs to reflect this fact.

I also think we will see dimensional approaches to mental disturbance becoming more accepted. This was, in fact, an explicit emphasis in *DSM-5*. Very few mental disorders will have single or specific etiologies and pathologies. Mental disorders are the result of a complex interaction of a variety of genes with an array of environmental experiences. The end result can be a complex profile of psychopathology that is not well described by a single, homogenous diagnostic category. It will be much better to recognize that many of the existing categories do not refer to distinct conditions but rather to different slices or forms of underlying dimensions that usually shade into normality.

Source: Adapted from Ted Weltzin.

Summary

Identifying Mental Disorders: What Are They?

Mental disorders have been defined in various ways, but the definition that we prefer is that mental disorders involve a dysfunction or failure of biological or psychological processes to operate as they should, resulting in some harm and/or distress to the individual.

Assessment and Diagnosis

Clinical assessment is the process that clinicians follow to gather the information necessary for diagnosing mental disorders. The quality of clinical assessment is judged along two dimensions: reliability and validity.

Assessment Tools: How Do Health Professionals Detect Mental Disorders?

Clinicians use life records, interviews, psychological tests, behavioral observations, and biological measures as their primary sources of information. Data from these sources are usually then combined to help clinicians diagnose mental disorders, taking into account culture and other important client characteristics.

Diagnostic Classification: How Do Health Professionals Categorize Mental Disorders?

Although attempts to classify mental disorders have been made since antiquity, formal nosological systems are a product of the past century. The two systems in widest use—the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* in North America and the *International Classification of Diseases (ICD)* in the rest of the world—have been revised many times. In their most recent versions, these two nosologies base diagnoses on specific, operational criteria. The *DSM-5* also allows for evaluations of other dimensions that contribute to mental disorders. Both of these systems are flawed in important ways but also spawn research and treatment and are superior to current alternatives. It therefore behooves you, the abnormal psychology student, to learn the *DSM* but still critically evaluate it.

The Frequency of Mental Disorders: How Common Are They?

According to major epidemiological surveys, about one third to almost one half of adults have experienced a mental disorder at some point in their lives, and about one quarter have suffered a disorder in the prior year. Mental disorders often coexist (are comorbid); in fact, most people with one disorder in their lifetimes have had at least one other diagnosed mental disorder. The prevalence of mental disorders is associated with various demographic factors, including age, gender, educational level, and ethnicity, and varies throughout the world.

The Four Guiding Principles: MAPS of the Territory

Criticisms of the *DSM* include concerns that official labels can have harmful effects, that disorders do not constitute clear categories that are distinct from other variations in behavior, that too much attention has been paid to the reliability of diagnoses at the expense of their validity, and that most diagnostic labels imply that mental disorders are caused by individual, internal factors, thus minimizing the role of possible social causes. Diagnoses may also be affected by such real-world factors as the reimbursement requirements of health insurance companies, clients' concerns about the confidentiality of their diagnoses, clinicians' personal preferences and interests, and the ethnic and cultural backgrounds of both clinicians and clients.

Throughout this textbook, we keep four guiding principles about the *DSM* and the nature of mental disorders in mind via the acronym MAPS—medical myths, attempted answers, prejudicial pigeonholing, and superficial syndromes. Icons representing each of these four principles appear throughout the book to signal whenever a particular principle is relevant.

Key Terms

achievement test, p. 12
aptitude test, p. 12
assessment, p. 5
attitude and interest test, p. 12
Axis I, p. 26
Axis II, p. 26
Axis III, p. 26
Axis IV, p. 26
Axis V, p. 26
classical method of classification, p. 28
comorbidity, p. 29
computerized tomography (CT), p. 20
correlation coefficient, p. 6
cross-cultural validation, p. 18
culture-bound syndrome, p. 31
diagnosis, p. 5
diffusion MRI (dMRI), p. 22
dimensional approach, p. 42
epidemiology, p. 3
field trial, p. 25
functional magnetic resonance imaging (fMRI), p. 21
incidence, p. 32
intelligence test, p. 12
life record, p. 9
magnetic resonance imaging (MRI),p. 21
mental disorder, p. 2

mental status examination (MSE), p. 10
multiaxial classification, p. 26
neuropsychological test, p. 13
norm, p. 12
nosology, p. 6
objective test, p. 15
overpathologizing, p. 32
personality test, p. 13
polythetic approach, p. 28
positron emission tomography (PET), p. 21
prevalence, p. 32
projective test, p. 13
psychological test, p. 11
reliability, p. 6
remission, p. 34
self-monitoring, p. 19
sensitivity, p. 7
single photon emission computed tomography (SPECT), p. 21
social history, p. 11
somaticizing, p. 31
specificity, p. 7
standardization, p. 11
structured interview, p. 10
underpathologizing, p. 32
validity, p. 6