chapter 1

Introduction and Methods of Research

Humans engage in a vast range of activities, emotions, beliefs, perceptions, and memories. These types of behaviors (both overt and covert) can be viewed as adaptations to the world around us and to the requirements of life, and different people find very different ways of expressing them. All humans share many similarities; but even within the boundaries of our biology, our culture, and our experience, great variety exists in what people do.

Societies differ to some extent over which variations of behavior are acceptable, but they also share the tendency to identify certain patterns as something other than "normal." Sometimes, people act and feel in ways that we could call *maladjusted* or *disturbed*: Their behaviors cause distress or harm to themselves or to others. They may act in ways that other people would consider unusual and objectionable. How have strange and puzzling behaviors been explained in different cultures, in different historical periods, and by different theorists? What techniques can be used to help individuals overcome such difficulties? This book will address those important questions. First, however, a more fundamental issue is at hand: What is abnormal behavior?

1.1 What Is Abnormal Behavior?

The term **abnormal behavior** implies behavior that is different, unusual, or deviant. Distinctiveness alone, of course, is not sufficient to imply abnormality. Olympic athletes, Nobel laureates, gifted musicians, and investors who make a killing on the stock market—all deviate considerably from the norm. Yet we are not inclined to consider them abnormal as the term is generally used. Although abnormal behavior does, for the most part, deviate from cultural norms, only certain kinds of deviant behaviors are likely to be called abnormal—namely, behavior that is culturally inappropriate, is accompanied by subjective distress, and involves a psychological impairment (an inability to cope with life's demands).

What does the term *abnormal behavior* mean?

1.1a Cultural Inappropriateness

The key concept here is that the behavior seems at odds with cultural expectations of appropriateness and propriety: The behavior is something that others find disturbing, puzzling, or irrational.

Ordinarily, a specific behavior is not judged strange in itself, only in the context of a particular situation. When sports fans (a term, incidentally, derived from the word *fanatic*) shout and shake their fists at a football game, there will be few lifted eyebrows; doing the same thing in church or in the public library, however, may be seen as unusual and troubling by others who witness these acts. Similarly, those who smear their faces in fake blood, dress up as dead people, and go door-to-door asking for treats would be viewed as very strange indeed—except in the United States on October 31.

Anthropologists have convincingly made the point that judgment of another person's normality will depend on the values and traditions of the culture in which he or she lives.

Abnormal behavior
Behavior that is culturally inappropriate, is accompanied by subjective distress, and involves a psychological impairment (inability to cope with life's demands)

For example, hearing voices and going into a trance are likely to be labeled abnormal in our society; and yet, among the Plains Indians of North America, such behaviors were highly valued as evidence of special talent for communication with the spirit world. Prestige and status would often accrue to the person having these experiences. What, however, would be the response today if a young woman from New Jersey announced that she heard divine voices instructing her to take over the position of chair of the Joint Chiefs of Staff of the U.S. Armed Forces in order to protect this country from foreign dangers? No doubt she would find a few followers, but it is unlikely that she would be as successful as Joan of Arc in accomplishing her mission. Even in Joan's case, not everyone bought her story.

When sport fans shout and shake their fist at a football game, there will be few lifted eyebrows, but doing the same thing in church or in the public library may be seen as strange. (Shutterstock)

When Ruth Benedict (1934) made her study of the Melanesian culture of the Dobu people, she found the society was characterized by a degree of suspicion and mistrust that would be labeled **paranoia** in North American culture. There was universal preoccupation with poisoning. No woman left her cooking pot untended for a moment; and because all others' food was considered to be deadly poison, community stores were out of the question. Their polite phrase at the acceptance of a gift was, "And if you now poison me, how shall I repay you for this present?" There was one man in this Dobu society who had a sunny, kindly disposition and liked to be helpful. Others laughed at him and thought him silly, simple, and a little crazy. Prevailing cultural beliefs, then, will influence how strange or inappropriate a given behavior is perceived to be.

Prevailing cultural beliefs influence how strange or inappropriate a given behavior, such as that of a shaman, is perceived to be. (Library of Congress/ Public Domain)

Anthropologists (for example, Kiev [1969] and Murphy [1964]), however, point out that we must not take too simple a view of the **cultural relativity** of abnormal behavior. For example, the trance states of shamans (priest-doctors such as voodoo priests and medicine men) show some similarities to psychopathological reactions in our society, but there are also important differences. Primarily, the shaman appears to be more in control of the trance state, deciding on which occasions to enter it and, most important, appears to be behaving according to cultural expectations while in it. A person who goes into trance states at inappropriate times and behaves in unpredictable ways might well be considered strange or "crazy" by the community. Marvin Harris (1989) notes that all known societies identify individuals (like shamans) who "have a special aptitude for obtaining help from the spirit world" (p. 411). Social rules probably dictate the "normal" methods for appealing for spiritual help in all of them. Indeed, by selecting which symptoms are legitimate, shamans, priests, and healers shape the definitions of mental disorders in culturally specific ways (Watters, 2010).

The question still remains: Can abnormality be defined largely in terms of cultural inappropriateness? There are some problems with such an approach. Take, for example, an individual in Nazi Germany who might, in belief and action, have differed from the prevailing anti-Semitic views and other aspects of the Nazi philosophy. Such a person would clearly have been deviating from acceptable cultural views and, by this definition, would have been considered abnormal. In the late 20th century, some dissidents in the Soviet Union were labeled mentally ill and placed in institutions because they voiced opposition to the Soviet dictatorship. Even now, women in some Islamic countries are considered deviant because of their wish to complete an education. Do we want to label this kind of behavior abnormal? On the contrary, it might be argued that standing up in this way against prevailing viewpoints takes considerable psychological strength.

Paranoia
Unfounded, irrational, or exaggerated suspicion or mistrust of others

Cultural relativity
The perspective that different cultures may use different standards in defining abnormality

There are other problems with cultural inappropriateness as the major criterion of abnormality. Many individuals in our society conform almost slavishly to the customs and laws of the community and yet experience inhibitions, anxieties, and great personal unhappiness. Although their overt behavior is not culturally inappropriate, their reactions may be considered, in some sense, abnormal. Other individuals (for example, professional criminals) defy societal laws but otherwise function quite well as spouses, parents, colleagues, and friends. Their behavior might more accurately be defined as criminal rather than abnormal. Cultural inappropriateness, although a characteristic of most abnormal behavior in all societies, is not entirely satisfying as the sole criterion of abnormality.

Jeff Hall, a neo-Nazi supporter, helped lead demonstrations in Riverside and Los Angeles, California, where white supremacists waved swastika flags, chanted "white power," and gave stiff-armed Nazi salutes while surrounded by hundreds of counterprotesters. (AP Wide World Photo)

1.1b Subjective Distress

Subjective distress refers to internal emotions or experiences that are real to the person but cannot be observed directly by other people. Unhappiness, fear, apathy, terrifying visual and auditory experiences, and physical aches and pains are examples. Reports of subjective distress commonly accompany abnormal reactions and may include a variety of unpleasant emotions such as guilt, nervous tension, depression, and the pain of migraine headaches.

The individual's distress is an important dimension of abnormality that should be included as one aspect of an overall definition. Once again, however, there are exceptions. Some individuals, especially those with *manic disorders*, may deny any subjective distress and maintain that they feel wonderful. Individuals labeled *sociopathic* experience little remorse or distress associated with their antisocial behavior. In these cases, reports about the degree of subjective distress would not be an accurate indication of the presence of abnormality.

1.1c Psychological Disability

When persons are unable to function adequately in their roles as students, workers, parents, spouses, or friends, they can be considered to have a **psychological disability**, impairment, or dysfunction. They are unable to cope adequately with life's stresses and demands. Sometimes they are not able to function effectively as parents. When depressed or having a migraine headache, they are hardly able to get through the day and may frequently take to bed. Their interpersonal relationships are hampered by an inability to assert themselves appropriately.

One way of viewing the concept of psychological disability or dysfunction is to say that individuals with such handicaps have fewer alternative ways of behaving and thinking open to them. In this sense, psychological impairments are analogous to physical impairments; indeed, many of the terms used interchangeably with abnormality (such as *psychopathology*, *behavior pathology*, *behavior disorder*, *mental illness*, and *mental disease*) imply a parallel with physical disease. For example, persons with a broken leg or pneumonia are handicapped by those conditions and cannot do things they normally could. Although some writers, such as Szasz (1960), have severely criticized the idea that mental illness is similar to physical illness, the disease metaphor is widely employed today in psychiatry and psychology. As we shall see in later chapters, disease models of mental disorders have both strengths and weaknesses. In addition, alternative perspectives propose that individuals may acquire certain mental disorders on the basis of life experiences. The concept of psychological disability or impairment, however, need not imply any particular theory of how abnormality develops.

What is a psychological disability?

Subjective distress
Emotion or internal experience that is distressing to the individual but cannot be directly observed by others

Psychological disability
Inability to cope with life's demands and stresses, or difficulty in functioning in important daily social and interpersonal roles

It is important to note that the person with a psychological impairment is *unable* to do certain things, as opposed to the person who simply does not do them because of personal values, lack of interest, or similar reasons. It is not always possible to tell from the behavior itself whether it stems from a psychological impairment; instead, one must make a judgment as to whether the person is able to do otherwise. A succession of short-lived marriages does not in itself indicate a handicap; however, when a person wants a lasting marriage, is physically healthy, and yet seems to be involved in one disastrous marriage after another, a psychological disability might be suspected.

In sum, then, most but not all forms of abnormal behavior are likely to be culturally inappropriate and accompanied by subjective distress. In addition, all forms of abnormality might be conceived as reflecting a psychological impairment: a restriction in response alternatives that makes it difficult to cope with life's demands and stresses. These considerations form the basis for current definitions of the mental disorders addressed in this book.

1.2 Abnormality Is a Continuum

The conception of abnormality may be clarified further by viewing it as a continuum, with extreme abnormality at one end and positive mental health at the other. In extreme forms of abnormal behavior, the person is severely handicapped, suffers much subjective distress, and is so culturally inappropriate as to evoke intense fear or revulsion in others. From these extreme instances, in which most observers would agree that something is wrong, we move by imperceptible steps to the range of behaviors that we call normal.

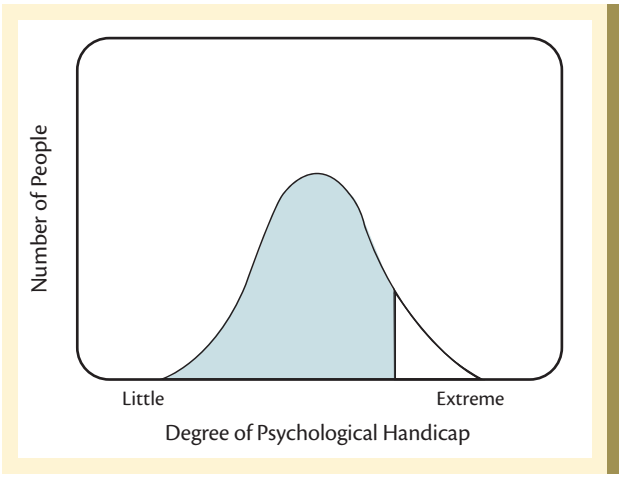
Milder forms of psychological impairments include the boy who is too timid to ask a girl on a date, the homemaker who feels vaguely dissatisfied and unfulfilled, the alienated student who finds nothing of interest in the world of the establishment, or the young person who feels acutely irritated whenever confronted by anyone in authority. Mild impairments are experienced from time to time by the vast majority of people in the middle range of this hypothetical continuum. Who among us does not have some occasional reaction that impairs work efficiency, disrupts interpersonal relationships, or otherwise hampers our ability to meet life's demands? Some of us feel anxious about speaking before an audience, some have minor irrational fears, and some get a little disorganized under the pressure of a course examination.

Is there a sharp dividing line between normal and abnormal?

There is, then, no single point at which one can draw a line separating normal from abnormal; there are only varying degrees of psychological disability, subjective distress, and cultural inappropriateness (Figure 1-1). Let us consider for a moment what is meant by the other end of the continuum—that is, the psychologically healthy person.

Figure 1-1 Psychological Disability Seen as a Continuum Along Which People Vary

Most of us fall in the middle range with only mild to moderate handicaps. Any exact border between normal and abnormal, such as the line separating the unshaded area above, is arbitrary.



1.3 What Is Mental Health?

Psychologically healthy persons do not necessarily escape the stresses and strains of life. From time to time they wrestle with conflicting impulses, encounter crises in interpersonal relationships, and experience unpleasant emotions such as grief, anger, or fear. In general, however, they are able to function effectively and to find satisfaction in life. They can have lasting and emotionally gratifying relations with friends, spouses, parents, and children; they can work effectively and productively; and they can laugh, play, relax, and have

fun. They are likely to make a realistic appraisal of their own talents and shortcomings, or at least they do not resort to extreme forms of denial or distortion of those aspects of themselves that they wish were different. Basically, they view themselves as worthy members of the human race.

This idealized description of mental health in no way implies that such persons have to be conformists, adjusting passively to the demands of their culture. In the present definition of mental health, freedom from psychological disability is emphasized. Mentally healthy persons are able to pursue with effectiveness and satisfaction any number of life goals. They have weighed the value and desirability of the specific uses to which they put their psychological energies. A salesperson who enjoys selling, has mutually satisfying relationships with others, plays golf on Saturday, and drinks beer while watching the Sunday afternoon pro football game on TV would, by most criteria, be leading a conventional, middle-class life—and, by our definition, be enjoying mental health. A member of a rural commune who likewise has satisfying interpersonal relationships, enjoys organic farming, and relaxes by playing the guitar may have an equal degree of mental health. Persons who try to reform society, such as political or religious leaders, may create a much more stressful life situation for themselves than either of the other two examples; yet to the extent that they successfully cope with these stresses, they also enjoy mental health. An individual with the necessary abilities and relative freedom from psychological handicaps should be able to choose among these and other lifestyles. Good mental health leaves a person open to many alternative ways of behaving. It is not some idealized and unattainable state but is, instead, that end of the dimension where individuals have relatively few psychological disabilities.

1.3a By What Name Shall We Call It?

Many terms have been used to refer to abnormal behavior, including *psychopathology*, *mental illness*, *behavior disorder*, and *emotional disturbance*. While some use of labels is inescapable, it is reasonable to ask about the value in applying such general labels to people. Such terms refer to a broad and complex range of phenomena, which, as previously suggested, can be seen as a continuum on which there is no sharp dividing line. The causes of these phenomena may be very complex and interconnected with biology, genetics, culture, and individual life history. It is easy to fall into the **naming fallacy** where, by giving something a name or label, we assume we have in some sense explained it. Regardless of how we name a disorder, we must also be able to describe objectively what the abnormal behaviors are, understand how they develop (and perhaps how they could be prevented), and consider how they might be modified to help restore a person to a healthier state. As we shall see, mental disorders are easier to label than to explain and understand.

Mental disorders are identified and labeled in the context of what people do and how they interact with others around them. (Shutterstock)

Furthermore, there is a tendency for any term used in referring to these phenomena to acquire a derogatory meaning, and that fact deserves some comment. Most people feel frightened or repelled by individuals who behave abnormally. These reactions account, in part, for the fact that abnormally behaving people have historically been the object of ridicule and abuse. Any term used to refer to such individuals seems to acquire, in time, a negative connotation. To say that a person is "mentally ill" or "sick" is likely to evoke negative reactions in many listeners, and yet use of the term *mental illness* was initially promoted by enlightened physicians seeking to reduce some of the negative attitudes associated with terms such as *lunacy* and notions such as demonic possession. To minimize the negative connotations of labeling, the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (or more simply, the

Naming fallacy
The incorrect assumption that by applying a label or name to something, we have in some sense explained it

DSM-IV), published by the American Psychiatric Association (2000), noted that it is preferable to refer to someone we might call a "schizophrenic" as "a person with schizophrenia." While helping prevent the application of inevitably pejorative labels to individual people, this solution may also have the unfortunate effect of separating the behavioral disability from the person and giving it an existence of its own (rather like a virus), apart from the individual. We should not forget, however, that we can only identify and label these disorders in the context of what people do and how they interact with others around them.

What Is a Mental Disorder?

According to the current version of the *DSM* series, the *DSM-5*, 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 function" (American Psychiatric Association, 2013, p. 20). The disturbance usually involves significant personal distress or disruption in important activities in a person's life, such as occupational or social functions (see Table 1-1 *DSM-5*: Definition of a Mental Disorder). To be "clinically significant," the behavioral or psychological syndrome would have to be considered important and serious enough to presume that the individual is usually not able to manage the condition alone—although the manual notes that a diagnosis is not equivalent to the need for treatment.

Table 1-1 *DSM-5* Definition of a Mental Disorder

A mental disorder is a clinically significant syndrome reflecting a dysfunction in psychological, biological, or developmental processes, usually involving:	**Excluded from the definition:**
A. Disturbance in cognition, emotion regulation, or behavior B. Significant personal distress C. Disability in social, occupational, or other important activities	A. Expected or culturally approved responses to common stressors or loss, such as death of a loved one B. Deviant political, religious, or sexual behavior C. Conflicts that are primarily between the individual and society

Source: American Psychiatric Association, 2013.

Certain types of significant syndromes or patterns of behavior are excluded from the definition of a mental disorder in the *DSM-5*. Culturally appropriate and acceptable reactions to important events, like the death of a loved one, usually include strong responses such as grief, depression, sleep disturbance, loss of appetite, and social withdrawal. Within each culture, members expect and accept these reactions as normal events; in fact, it may appear abnormal if these reactions *don't* occur. Even though grief (for example) involves present distress and impairment in functioning for the bereaved, it is not a mental disorder within the limits of cultural expectations. Among current cultures, however, the sorts of sanctioned responses to the death of a loved one can vary widely. In some American Indian cultures in the Pacific Northwest, for example, it is not unusual to wear certain types of clothing or to continue setting a place at the table for the lost loved one for a year after the loss. In the larger society, most North Americans would not consider it unusual if the mourner's social and occupational involvements were disrupted for weeks or even a few months. At some point, however, cultures expect grief to subside and the intense reactions to lessen. If that does not happen, then a diagnosis of mental disorder becomes possible.

Other potentially distressing and harmful patterns or syndromes are also excluded from the definition. We tolerate a very large range of religious beliefs and practices. Political goals, motives, and means can take many forms. There is great diversity in our sexual desires and practices. Although these patterns of behavior may at times seem very much out of the norm, they are not—by that virtue alone—considered mental disorders. Similarly, some persons find themselves in conflict with their culture or their government. Some people instigate rebellions; protest the actions of businesses, governments, and religions; or violate the laws of a nation or a community. Some people engage in terrorist acts to intentionally create fear and havoc and to kill or maim unsuspecting victims. These syndromes can be called subversive or criminal, but they are not mental disorders for those reasons alone.

It may seem obvious that there will be instances in which professionals might disagree as to whether a person is suffering from a mental disorder. Thus, the **diagnostic reliability** of mental disorders is a very important issue for the *DSM* system, as we shall consider later. Complicating the matter further, some people diagnosed with mental disorders also commit deviant political, religious, sexual, or criminal activities. The extent to which the mental disorder accounts for those acts may be unclear.

1.4 The Prevalence of Abnormality

The looseness of definition should not in any way obscure the existence of abnormal behavior—which is both real and pervasive, as a number of studies have shown. In an early study, Srole, Langner, Michael, Opler, and Rennie (1962) interviewed and administered a questionnaire to a random sample of 1,660 individuals living on Manhattan's East Side. Symptoms indicative of mental disorder were measured, and the percentage of individuals falling into six categories representing degree of impairment was as follows:

Well	18.5%
Mild	36.3%
Moderate	21.8%
Marked	13.2%
Severe	7.5%
Incapacitated	2.7%

If the last three categories were combined, 23.4% of the sample was considered to have at least a marked degree of psychological handicap. Similar results were obtained in studies involving rural as well as urban populations (Warheit, Holzer III, & Arey, 1975). An interview of a random sample of adults in an area of New Haven, Connecticut, concluded that 15% were experiencing a psychiatric disorder and 18% of the people interviewed had experienced a depressive disorder of at least a moderate degree sometime during the past year (Weissman & Myers, 1978).

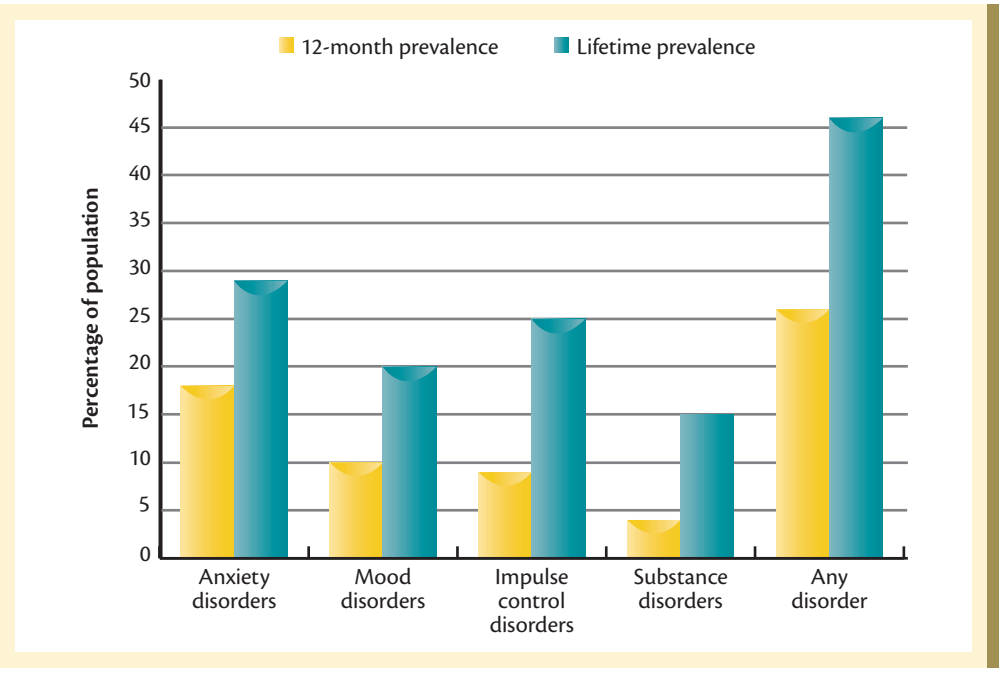
More recently, Kessler and colleagues estimated the prevalence of some of the more common mental disorders among the U.S. population in terms of whether a disorder had been experienced in the previous year (12-month prevalence; Kessler, Chiu, Demler, & Walters, 2005) or had ever been experienced by a person (lifetime prevalence; Kessler, Berglund, et al., 2005). The most common mental disorders were anxiety disorders with a 12-month prevalence of 18.1% of the population and a lifetime prevalence of 28.8% of the population (see Figure 1-2). Following anxiety disorders were mood disorders (such as depression), impulse-control disorders, and substance disorders. If all disorders are combined, about 26.6% of people in the United States experienced a defined disorder in the past 12 months. Over the course of our lifetimes, nearly half (46.4%) of us will experience at least one of the disorders.

Diagnostic reliability
Consistency and agreement between clinicians in use of a diagnostic label

Figure 1-2 ***Prevalence of Mental Disorders***

Prevalence of mental disorders within the population, during the previous 12-month period and over the course of a person's lifetime

Sources: Lifetime data from "Lifetime Prevalence and Age-of-onset Distributions of *DSM-IV* Disorders in the National Comorbidity Survey Replication," by R. C. Kessler, P. Berglund, O. Demler, R. Jin, K. R. Merikangas, and E. E. Walters, 2005, *Archives of General Psychiatry, 62*, 593. 12-month data from "Prevalence, Severity, and Comorbidity of 1 Twelve-month *DSM-IV* Disorders in the National Comorbidity Survey Replication (NCS-R)," by R. C. Kessler, W. T. Chiu, O. Demler, and E. E. Walters, 2005, *Archives of General Psychiatry, 62*, 617.



1.5 The Scientific Study of Abnormal Behavior

Only recently have we attempted to study ourselves with the same objectivity that we have used in trying to understand the inanimate world and other living organisms. Abnormal behavior, especially, has lent itself to beliefs and superstitions that have yielded only slowly to the advance of scientific understanding. The history of changing conceptions of abnormality will be traced in subsequent chapters. First, consideration of common methodologies used in the scientific study of abnormal behavior and the advantages and disadvantages associated with them is warranted.

1.5a The Case Study

Carefully documented **case studies** of individuals have played an important role historically in the study of abnormal behavior. Typically, the investigator derives information from talking with a person who displays abnormal behavior (or those who know the person) and describing, in narrative form, the behavior of interest, related environmental circumstances, and past events that might make the present behavior intelligible. The intensive study of individuals and of the changes in symptoms that occur during therapy has been a rich source of ideas about the nature and causation of abnormal behavior.

Although case studies are useful in illustrating different forms of abnormal behavior and in generating theories, they are not proper scientific methods, and they cannot be used to "prove" a theory. For one thing, there is a tendency to select, as evidence, cases that support one's theory while ignoring those cases that are embarrassingly inconsistent with it. Furthermore, the information used in a case study report is highly

Case study
The in-depth examination of an individual clinical case

How can we study abnormal behavior scientifically?

selective, and one rarely has any way of knowing how much information was omitted or never sought in the first place. By simply tracking the changes that take place in a person's condition, we cannot distinguish causal influences from simple coincidence. Finally, even when the findings for a given case are accurate, they cannot be generalized to anyone other than the person being studied unless, as discussed in the following section, similar information was obtained from a sample of individuals. We should be careful, then, not to be led into believing that a general proposition has been demonstrated by a case study, no matter how persuasive and sensible the material seems to be. As William James (1897) said, "There is really no scientific or other method by which men can steer safely between the opposite dangers of believing too little or of believing too much. To face such dangers is apparently our duty, and to hit the right channel between them is the measure of our wisdom as men."

1.5b Epidemiological Research

It can be useful to have certain descriptive information about abnormal behavior—for example, the frequency of different forms of psychopathology among different socioeconomic classes, genders, ethnic groups, age groups, and so forth. Research aimed at getting this kind of information is called normative or **epidemiological research**. The study of the prevalence of depression in the New Haven area, cited earlier, is an example of this kind of research, as is the more current work of Kessler and his colleagues (Kessler, Chiu, et al., 2005; Kessler, Berglund, et al., 2005). Epidemiology often involves the study of the incidence of a disorder in a population (that is, the number of new cases within a specific period) or the prevalence of a disorder (that is, the number of people who show the disorder at any one time). The data produced by epidemiological research can provide important information about public health trends and risks across different elements of the population. Basic requirements for good epidemiological research, as well as for other kinds of research, are **random sampling** and the reliability and validity of measurement. Let us look at what is meant by these terms.

1.5c Sampling and Generalization

Weissman and Myers (1978), in their epidemiological study of depression, randomly sampled 1 out of every 14 households in the New Haven area and then randomly selected an adult from each household. Such an approach ensures that, within a certain range of chance variation, estimates of the incidence of depression will fairly accurately reflect the actual incidence in the larger population. Kessler and colleagues calculated 12-month and lifetime prevalence rates of different disorders from information collected in structured face-to-face interviews with a nationally representative sample of households, including over 9,200 persons (Kessler, Chiu, et al., 2005; Kessler, Berglund, et al., 2005). If these investigators had instead relied on statistics based on individuals who had sought treatment for mental disorders, their results would be incomplete due to the omission of untreated cases of depression.

The nature of the population randomly sampled is important in determining to what groups of people a given finding can be generalized. Thus, generalizations about the incidence of disorders can be safely made only to those populations that resemble the selected sample in terms of ethnic, socioeconomic, and other factors. Most research on psychopathology is not aimed at estimating rates of incidence in the general population; rather, it is aimed at understanding something about the nature or treatment of a given disorder. In this case, too, it is important to know to what populations the results can be generalized. Thus, Mosher and Menn (1978) assessed the effectiveness of a special treatment facility with schizophrenic patients. The patients used in this study were young, had not had more than one brief hospitalization previously, and were unmarried. Paul and Lentz (1977) evaluated the effectiveness of another approach to rehabilitating schizophrenic patients. Their patients averaged 45 years of age, had been hospitalized for an average of 17 years, and had recently been found unacceptable for transfer to an extended-care facility outside the hospital. Clearly, it cannot be assumed that results obtained in one of these studies can be generalized to the population of individuals sampled in the other study.

Epidemiological research
The study of the incidence of a disorder in a population

Random sampling
Selecting subjects by chance from some larger population

1.5d Reliability and Validity of Measurement

BVT Lab

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Reliability of measurement refers to the extent to which a measure consistently yields the same result on repeated trials. In physical measurements, reliability tends to be quite high. If several people measured the width of a table with a yardstick, their measurements would differ only by small amounts, perhaps 1/16 inch. Such a measure is highly reliable for most purposes, although for some endeavors, such as fine machine tool work, it would not be. Psychological measurement is never as precise as physical measurement. One reason for this imprecision is that when physical attributes (such as height or weight) are measured, we assess the entire domain of the attribute in question: We measure all of a person's height or all of a person's weight. The same is never true when we measure behavior; we can only sample a small part of the domain of how a person acts, thinks, or feels. To determine whether a person is depressed, for example, we must rely on reports of how that person feels most of the time, under most circumstances. All of us show variations in our psychological states, so the application of a diagnostic label is a judgment call. Therefore, diagnostic reliability is an important problem to consider in the measurement of abnormality.

One type of reliability that is particularly important in psychological research is **interobserver reliability**, or the extent to which different observers (or raters) agree on the way they categorize, or in some way quantify, a given observation. Suppose, for example, that an investigator wished to measure the aggressive behavior of mental patients. One method would be to count the instances of aggressive behavior among the patients. For this information to be useful, however, the investigator must demonstrate that two or more independent observers agree on their ratings or counts of aggression. Thus, it is usually necessary for observers to undergo preliminary training in which they practice making ratings until they can agree on which behaviors they are going to label a certain way—in this case, as aggressive. The careful researcher will always report in some fashion the degree of agreement between independent observers. Similarly, clinicians interviewing clients have been trained in the application of a diagnostic label; interobserver reliability is shown when the same patient receives a consistent diagnosis from two or more different clinicians.

Reliability
The extent to which a measure consistently yields the same results on repeated trials

Interobserver reliability
The extent to which different observers (or raters) agree on the way they categorize or in some way quantify a given observation

An assessment tool or method is valid if it measures what it purports to measure. When measuring certain clearly defined behaviors, such as the number of times a person talks to or hits another person, there is little problem of **validity**. The problem arises when one must, in order to obtain a measurement, make an inference about a psychological trait or process that is itself not directly definable in terms of specific, observable behaviors. If, for example, raters are asked to judge the degree of aggressiveness shown by a person, we want to know if the resulting score really measures aggression or something else. This is not always an easy issue to resolve. Ordinarily, the best procedure is to provide a detailed description of what observable behaviors were used to make an inference about aggression (such as hitting and verbal insults). When we define our target behavior in terms of how it is measured, we provide an **operational definition** of the behavior, which allows others to measure the target in the same way and thus compare results.

Validity
The extent to which a measure assesses what it is purported to assess

Operational definition
A definition of a target behavior in terms of how it is measured.

The problem of validity becomes especially acute when certain behaviors are considered "signs" of some underlying and unobservable process. For example, fear of small, enclosed places might be interpreted as a fear of death or excessive consumption of alcohol as a sign of fixation at the oral stage of development (see Chapter 3). Unobservable states or characteristics—such as oral fixations or dispositions to be hostile, fearful, and so on—are frequently referred to as **constructs**; and the term **construct validity** is used to refer to the degree to which an assessment measures the hypothetical construct that it claims to measure.

Construct
Hypothetical or theoretical concept that cannot be measured directly

Construct validity
The degree to which an assessment measures the hypothetical construct that it claims to measure

High reliability does not guarantee high validity. Two observers might agree that one person punching another lightly in the ribs indicated aggression, when in fact the behavior was meant in a friendly way. Similarly, clinicians might agree that a person's report of visual and auditory hallucinations points to a diagnosis of schizophrenia, but their agreement does not necessarily make it so. (Perhaps the person has recently ingested a drug, such as LSD, that

produces hallucinations.) Construct validity is usually determined by the way that a given measure relates to other measures and conditions. If a given measure of the construct "disposition to be aggressive" predicts aggressive behavior in other situations, and if subjects high on this measure show more aggression than those low on it, we would conclude that there is some positive evidence for the measure's construct validity.

Some psychologists have proposed that hypothetical constructs like "fixation at the oral stage" may help account for excessive drinking. (Shutterstock)

1.5e Correlational Research

Another method used to obtain knowledge about abnormal behavior is **correlational research**. In a correlational study, the investigator attempts to demonstrate an association or correlation between two or more measures. For example, people's height and weight tend to be correlated. If we measure these characteristics in 100 people, we would find, in general, that taller people are heavier. The correlation would not be perfect; some tall people would weigh less than some short people, but the general association would be positive. A descriptive statistic called the **correlation coefficient**, which varies between –1.00 and +1.00, is one way of quantifying the strength of the relationship. As the correlation coefficient moves closer to a perfect +1.00, the two measures move up or down together in a very predictable way. For example, as the weight of a vehicle increases, its fuel consumption increases as well; there is a strong positive correlation between weight and fuel use. A correlation coefficient approaching a perfect –1.00 indicates that as one measure increases, the other decreases in a very predictable way. For example, increasing income is negatively correlated with financial aid; as income goes up, aid goes down. A zero correlation indicates that two measures are not related in any predictable way; no association is apparent. A scatter plot graphically portrays the correlation between two measures.

Correlations can tell researchers something about the strength and direction of a relationship, but correlations do not demonstrate causation. In the 1950s, medical scientists began to find a correlation between cigarette smoking and lung cancer. Studies showed that the more cigarettes people smoked per day, the more likely they were to have lung cancer (Doll & Hill, 1954). The tobacco companies, their scientific zeal perhaps enhanced by the prospect of decreased profits, were quick to point out that such correlations did not prove that cigarette smoking caused lung cancer. They argued that it was quite possible that lung cancer and cigarette smoking were both influenced by some unknown third factor. For example, a person with certain physiological characteristics might be predisposed to both tobacco smoking and lung cancer. In such a case, it would not matter whether or not the person smoked since the occurrence of lung cancer would depend on the unknown physiological variable and not on smoking. Another possibility considered was that people experiencing chronic nervous tension were more likely to smoke and develop lung cancer and that lung cancer was caused by nervous tension, not smoking. As is frequently the case with correlational findings, one can go on at some length thinking up alternative explanations. In Figure 1-3, for example, we see scatter plots of correlations of different magnitudes between two variables, X and Y.

Correlational research, however, should not be discarded too lightly. It does make a difference whether there is a strong positive correlation or no correlation since a positive finding is consistent with the *possibility* of a causative relationship. No relationship, causative or otherwise, is likely to be associated with a zero correlation. It is possible, also, to rule out certain factors as the complete explanation (or cause) by controlling these factors. Thus, to return to the smoking example, we could divide our sample of cigarette smokers into a number of subgroups in which the individuals all show about the same amount of nervous tension—individuals very high in nervous tension would be in one group, those with moderate nervous

Correlational research

When the investigator attempts to demonstrate an association or correlation between two or more measurements

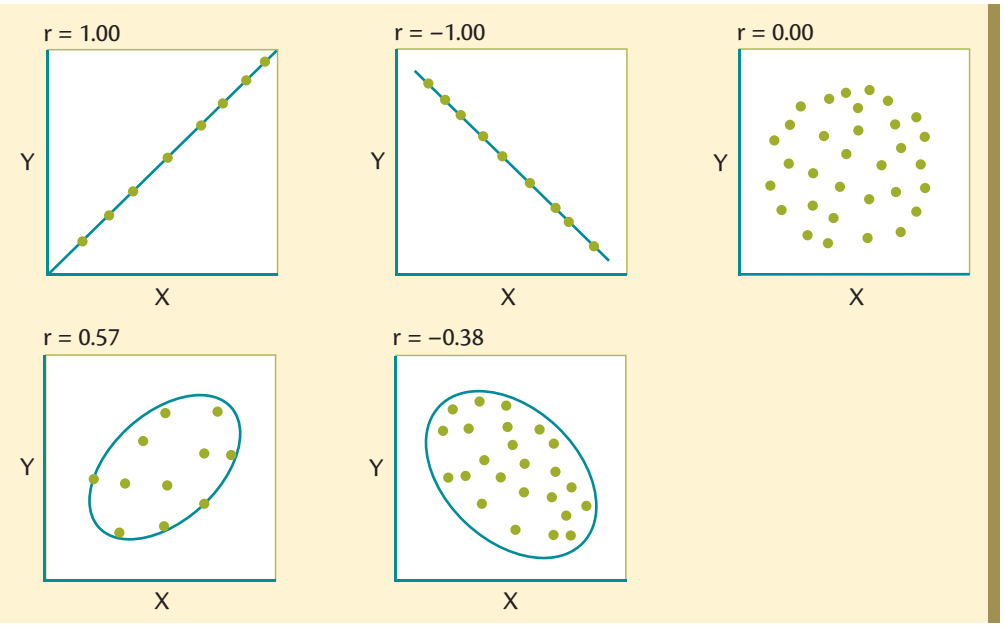
Correlation coefficient

A measure of the direction and strength of the relationship between variables

Figure 1-3 ***Scatter Plots Showing Correlations of Different Magnitudes Between Two Variables, X and Y***

Each person is represented by a point that reflects scores on the two dimensions. The correlation of +0.57, for example, could be the relationship between height and weight for a sample of 11 individuals.

Data from *Fundamentals of Behavioral Statistics, 2nd ed.*, by R. P. Runyon and A. Haber, 1971. Reading, MA: Addison-Wesley. Copyright 1971 by Addison-Wesley.



Experimental method
Research method in which conditions are manipulated in order to test the effects of manipulations on various measures

Experimental group
Group on which manipulation of interest is performed in an experimental design

Control group
Group that is treated similarly to the experimental group in an experimental design, except that no manipulation is performed

tension would be in another group, and so on. If one still found a correlation between smoking and lung cancer within each group of people who have the same degree of nervous tension, then it would be difficult to explain the correlation by this particular variable. The problem is that an unknown number of other variables might be contributing to the observed relationship. As for lung cancer and smoking, subsequent experimental research with animals—aided by correlational research that controlled for a number of other variables—has demonstrated that smoking, indeed, is a leading cause of lung cancer, as well as other serious diseases. The correlational research was valuable in leading to later, confirmatory experimental research that produced important information of great significance for public health.

Much of the subject matter of abnormal psychology must be studied by correlational methods for practical and ethical reasons. For example, we cannot ethically manipulate brain neurochemistry or family environments in an effort to produce schizophrenic offspring. If we are aware of and can avoid the interpretive pitfalls associated with correlational research, a great deal of understanding can be achieved by this method.

Although preliminary studies did show a correlation between lung cancer and the number of cigarettes smoked per day, the correlation alone did not prove causation. (Shutterstock)

1.5f Experimental Research

The most powerful way of shedding light on factors that affect human behavior is the **experimental method**. The essence of the psychological experiment is that the people to be studied are randomly assigned to two or more groups—in the simplest case, to an **experimental group** and a **control group**. The experimental group experiences some special condition (a manipulation or treatment), while the control group does not. The logic of this approach is that

if the experimental group shows effects not shown by the control group, then these effects can be considered to be caused by the experimental manipulation or treatment. Since the subjects are randomly assigned to the two groups, it is assumed that the groups are alike in every respect except for the experience of the particular treatment. Suppose, for example, that mental patients are randomly assigned to two groups, one of which is given tranquilizing pills, while the other is not. We could say then that any consequent difference in symptoms between these two groups is attributable to the administration of the tranquilizing pills.

Confirmatory experimental research with animals produces important information of great significance for matters affecting public health. (iStock)

How large does the difference in symptoms between the experimental and control groups have to be before you can conclude that it is not just a chance difference that could occur between any two random samples? Statistical techniques are available for helping to make this kind of decision. These techniques permit the prediction of how often a difference of a certain magnitude would be expected if the research were repeated many times with different random samples. Thus, one can predict that a given difference would occur by chance 1 in every 20 times that the study was repeated, or 1 in every 100, or 1 in every 4. The greater the number of studies that demonstrate difference of a certain magnitude, the less likely it is that the obtained difference is due to chance. Somewhat arbitrarily, psychologists usually accept a probability of 5 in 100 times ($p = .05$) as a **significant difference**—that is, a difference unlikely to have occurred by chance and therefore reflecting a real effect.

Significant difference
A difference unlikely to have occurred by chance and therefore reflecting a real effect

Unfortunately, interpreting the results of an experiment is not always simple. For example, in the experiment just described, we concluded that a significantly greater reduction in symptoms among subjects in the experimental group could be attributed to the administration of the tranquilizing pills. However, administering pills involves a number of factors in addition to what the pill does after it dissolves in the recipient's stomach. Perhaps the patients who were given the pills were also given the expectation of improvement, since we expect medicine to alleviate symptoms of illness. When an expectation of improvement communicated by the doctors and nurses is sufficient to cause improvement, it is called a **placebo effect**. Perhaps the doctors and nurses, knowing who got the pills and who did not, unconsciously spent more time with those patients who received the medication. Perhaps the observers who rated the patients on their symptomatic behaviors were aware of who got the pills and who did not and unconsciously distorted their ratings to produce the obtained effect.

Placebo effect
When an expectation of improvement is sufficient to cause improvement

The experimental method by itself does not automatically lead to unambiguous results, but experiments can be designed to rule out many of these alternative interpretations. Thus, the proper control group in our illustration might be one in which the patients are given a sugar pill (placebo), and the doctors and nurses administering the pills are kept ignorant of which pill is which. This type of experimental design, in which both subjects and personnel are kept blind with respect to whether a subject is in the experimental or the control group, is called a **double-blind design**. Properly used, the experimental method can be an incisive way of answering questions about the nature, genesis, development, and modification of abnormal behavior.

Double-blind design
Type of experimental design in which both subjects and personnel are kept blind with respect to whether a subject is in the experimental or control group

Some experimental methods do not rely on groups of people but rather on individual subjects. These **single-subject experimental designs** have been widely employed in some research areas (such as applied behavior analysis) to systematically study an individual's behavior under a variety of experimental conditions, with the goal of understanding the functional relationships between the conditions imposed and the resulting behavior of interest. Unlike case studies, in which observations are not made under systematic controlled

Single-subject experimental design
Experimental method that does not rely on groups of people but rather on repeated measures from individual subjects

conditions, single-subject experiments employ techniques, such as repeatedly alternating baseline and experimental conditions or systematically introducing interventions across successive settings, to control for confounding variables and to provide replicable, objective evidence that the experimental variables are influencing the behavior. These techniques have some strengths and some weaknesses when compared with experimental group studies, but they do provide a scientific method for intensively studying the causes of the behavior of individuals.

A placebo pill is used to negate effects from treatment that do not depend on the treatment itself. (Shutterstock)

This brief introduction to some of the more fundamental aspects of scientific inquiry is by no means exhaustive of the methodological issues involved in research in this area. Later, in the context of specific investigations, the various methods of research discussed here will be illustrated with examples from the research literature. As these examples will show, a scientific analysis of abnormal behavior has been very fruitful in uncovering many causes of psychopathology, as well as in identifying effective ways to prevent and treat many mental disorders. At the same time, the methods of science can reveal the limitations of our techniques and our understanding. That, too, is a valuable and important outcome.

Chapter Review

TO SUM UP ...

- Three characteristics are commonly considered in defining abnormal behavior: cultural inappropriateness, subjective distress, and psychological disability. In general, abnormality does not lend itself to precise definition. The emphasis in this book is on understanding the current diagnostic system for identifying mental disorders, which includes identifying the behavior of interest, the factors that have led to its development, and the ways in which the behavior might be changed.
- Abnormality can be seen as residing in an interpersonal system, such as a family or larger social group, as well as being a characteristic of an individual.
- It makes sense to view abnormality as a continuum in which incapacitation and distress are extreme at one end and minimal at the other end. Most of us fall in the middle, with some mild inhibitions or anxieties that do not seriously handicap us.
- Despite some looseness in definition, psychological disorders are identifiable syndromes that affect a substantial proportion of our population.
- The study of abnormal behavior can be approached in a scientific manner. To do so, we need to be familiar with such concepts as sampling and generalization, reliability and validity of measurement, normative research, correlational research, and experimental research.

KEY TERMS

Abnormal behavior 3
Case study 10
Construct 12
Construct validity 12
Control group 14
Correlational research 13
Correlation coefficient 13
Cultural relativity 4
Diagnostic reliability 9
Double-blind design 15
Epidemiological research 11
Experimental group 14
Experimental method 14
Interobserver reliability 12
Naming fallacy 7
Operational definition 12
Paranoia 4
Placebo effect 15
Psychological disability 5
Random sampling 11
Reliability 12
Significant difference 15
Single-subject experimental design 15
Subjective distress 5
Validity 12

QUESTIONS FOR STUDY

- What is the role of cultural context in the determination of abnormal behavior? Provide two examples of behaviors that, depending on cultural context, could be considered either normal or abnormal.
- What are the strengths and limitations of the different methods for investigating abnormal behavior?
- Give several examples of positive or negative correlations between two variables that reflect a causative relationship between the variables. Give several other examples that do not reflect a causative relationship between the variables.

POP QUIZ

1. _____ would **not** be one of the text's criteria for abnormal behavior.
   A. Subjective distress
   B. Psychological impairment
   C. Cultural inappropriateness
   D. Distinctiveness

2. A behavior that seems abnormal in one cultural context may very well be perfectly acceptable in a different culture or society. This is called _____.
   A. cultural relativity
   B. cultural bias
   C. behavior specificity
   D. epidemiological reaction

3. If an individual's behavior deviates widely from the culturally accepted norm, would that behavior be abnormal according to the text?
   A. Yes, any behavior that is not culturally sanctioned is considered abnormal.
   B. Yes, cultural relativity points out that abnormal behavior is defined across cultures in the same manner.
   C. No, the behavior would have to be accompanied by subjective distress and psychological impairment to be abnormal.
   D. No, deviant behavior is always criminal behavior, not abnormal behavior.

4. Jake's behavior has been deemed a psychological impairment. What does this mean?
   A. Jake is quite distressed by the behavior.
   B. The behavior is not common in Jake's culture.
   C. The behavior is not appropriate in Jake's culture.
   D. Jake's behavior interferes with his ability to function in his roles.

5. Which of the following is emphasized in the present definition of mental health provided in the text?
   A. freedom from psychological disability
   B. absence of the stresses and strains of life
   C. lack of conflicting impulses or crises in interpersonal relationships
   D. conformity to cultural demands

6. The line separating normal from abnormal behavior is difficult to establish because abnormality is on a _____.
   A. fine line
   B. narrow range
   C. trimodal distribution
   D. continuum

7. Mental disorders are easier to _____ than to _____.
   A. define / describe
   B. explain / define
   C. label / explain
   D. describe / label

8. Dr. Miller and Dr. Thomas agree that specific behaviors are characteristic of major depressive disorder. Both consistently apply the major depressive disorder label when these specific behaviors are apparent. The agreement between Dr. Miller and Dr. Thomas in terms of the use of the major depressive disorder label indicates _____.
   A. content validity
   B. diagnostic reliability
   C. construct validity
   D. test-retest reliability

9. _____ have a lifetime prevalence rate of about 30% in the U.S. population.
   A. Mood disorders
   B. Psychotic disorders
   C. Substance disorders
   D. Anxiety disorders

10. Why would a researcher choose to conduct a case study for an individual with a rare and unusual mental disorder?
   A. The findings could be used to "prove" the researcher's theory.
   B. The research could be a rich source of ideas about the nature of the abnormal behavior.
   C. Causal influences could be differentiated from simple coincidence.
   D. The findings can be accurately generalized to others.

11. Which of the following is true in epidemiological research?
   A. Its measures consistently yield the same result on repeated trials.
   B. The frequency of behaviors among different groups is calculated.
   C. Relationships between two variables are plotted on a scatter plot.
   D. One variable is manipulated to determine its effect on another variable.

12. Requirements for good epidemiological research studies include which of the following?
   A. case studies, correlations, and experiments
   B. correlation coefficients and placebo effects
   C. experimental and control groups
   D. random sampling, reliability, and validity

13. Generalizations can only be made to populations that share the characteristics of the original study's participants. Thus, generalization of findings is closely related to _____.
   A. random sampling
   B. reliability
   C. constructs
   D. validity

14. In a double-blind study, which of the following is true?
    A. The participants do not know whether they received the manipulated variable.
    B. The researchers do not know whether the participants received the manipulated variable.
    C. Both the researchers and the participants do not know whether the participants received the manipulated variable.
    D. Both the researchers and the participants do not know of the study's outcomes.

15. Which of the following methods is best able to reveal cause-and-effect relationships between variables?
    A. correlational research
    B. epidemiological research
    C. the case study
    D. the experiment

Additional study resources are available at **www.BVTLab.com**.

ANSWERS

1.D 2.A 3.C 4.D 5.A 6.D 7.C 8.B 9.D 10.B 11.B 12.D 13.A 14.C 15.D