

Introduction and Methods of Research



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“T” “Pretty Grisly Stuff”

I never thought I'd ever see a psychologist or someone like that, you know. I'm a police photographer and I've shot some pretty grisly stuff, corpses and all. Crime scenes are not like what you see on TV. They're more grisly. I guess you kind of get used to it. It never bothered me, just maybe at first. Before I did this job, I worked on a TV news chopper. We would take shots of fires and rescues, you know. Now I get uptight sitting in the back seat of car or riding an elevator. I'll avoid taking an elevator unless I really have no other choice. Forget flying anymore. It's not just helicopters. I just won't go in a plane, any kind of plane.

I guess I was younger then and more daring when I was younger. Sometimes I would hang out of the helicopter to shoot pictures with no fear at all. Now, just thinking about flying makes my heart race. It's not that I'm afraid the plane will crash. That's the funny thing. Not ha-ha funny, but peculiar, you know. I just start trembling when I think of them closing that door, trapping us inside. I can't tell you why.

—Phil, 42, a police photographer

Source: From the Author's Files

“T” Covering Under the Covers

When I start going into a high, I no longer feel like an ordinary housewife. Instead I feel organized and accomplished and I begin to feel I am my most creative self. I can write poetry easily. I can compose melodies without effort. I can paint. My mind feels facile and absorbs everything. I have countless ideas about improving the conditions of mentally retarded children, of how a hospital for these children should be run, what they should have around them to keep them happy and calm and unafraid. I see myself as being able to accomplish a great deal for the good of people. I have countless ideas about how the environment problem could inspire a crusade for the health and betterment of everyone. I feel able to accomplish a great deal for the good of my family and others. I feel pleasure, a sense of euphoria or elation. I want it to last forever. I don't seem to need much sleep. I've lost weight and feel healthy and I like myself. I've just bought six new dresses, in fact, and they look quite good on me. I feel sexy and men stare at me. Maybe I'll have an affair, or perhaps several. I feel capable of speaking and doing good in politics. I would like to help people with problems similar to mine so they won't feel hopeless.

It's wonderful when you feel like this. . . . The feeling of exhilaration—the high mood—makes me feel light and full of the joy of living. However, when I go beyond this stage, I become manic, and the creativeness becomes so magnified I begin to see things in my mind that aren't real. For instance, one night I created an entire movie, complete with cast, that I still think would be terrific. I saw the people as clearly as if watching them in real life. I also experienced complete terror, as if it were actually happening, when I knew that an assassination scene was about to take place. I cowered under the covers and became a complete shaking wreck. . . . My screams awakened my husband, who tried to reassure me that we were in our bedroom and everything was the same. There was nothing to be afraid of. Nevertheless, I was admitted to the hospital the next day.

—A firsthand account of a 45-year-old woman with bipolar disorder

Source: Fieve, 1975, pp. 27–28

T **F** Psychological disorders affect relatively few Americans. (p. 4)

T **F** Behavior deemed abnormal in one society may be perceived as normal in another. (p. 10)

T **F** A night's entertainment in London a few hundred years ago might have included gaping at the inmates at the local asylum. (p. 13)

T **F** Despite changing attitudes in society toward homosexuality, the psychiatric profession still continues to classify homosexuality as a mental disorder. (p. 18)

T **F** Recent evidence shows there are literally millions of genes in the nucleus of every cell in the body. (p. 27)

T **F** Fraternal twins share the same genetic inheritance as do pairs of other siblings who are not twins. (p. 28)

T **F** Case studies have been conducted on dead people. (p. 29)



Thomas Hears Voices

I've been diagnosed as having paranoid schizophrenia. I also suffer from clinical depression. Before I found the correct medications, I was sleeping on the floor, afraid to sleep in my own bed. I was hearing voices that, lately, had turned from being sometimes helpful to being terrorizing. The depression had been responsible for my being irritable and full of dread, especially in the mornings, becoming angry over frustrations at work, and seemingly internalizing other people's problems. . . .

The voices, human sounding, and sounding from a short distance outside my apartment, were slowly turning nearly all bad. I could hear them jeering me, plotting against me, singing songs sometimes that would only make sense later in the day when I would do something wrong at work or at home. I began sleeping on the floor of my living room because I was afraid a presence in the bedroom was torturing good forces around me. If I slept in the bedroom, the nightly torture would cause me to make mistakes during the day. A voice, calling himself Fatty Acid, stopped me from drinking soda. Another voice allowed me only one piece of bread with my meals.

—Thomas, a young man diagnosed with schizophrenia and major depression

Source: Campbell, 2000, reprinted with permission of the National Institute of Mental Health

psychological disorder Abnormal behavior pattern that involves a disturbance of psychological functioning or behavior.

abnormal psychology The branch of psychology that deals with the description, causes, and treatment of abnormal behavior patterns.

TRUTH or FICTION

Psychological disorders affect relatively few Americans.

FALSE. In one way or another, psychological disorders affect all of us.

THESE THREE PEOPLE—LIKE MANY OF THE PEOPLE YOU WILL MEET IN THIS TEXT—STRUGGLE with problems that mental health professionals classify as psychological or mental disorders. A **psychological disorder** is a pattern of abnormal behavior that is associated with states of emotional distress, such as anxiety or depression, or with impaired behavior or ability to function, such as difficulty holding a job or even distinguishing reality from fantasy. **Abnormal psychology** is the branch of psychology that studies abnormal behavior and ways of helping people who are affected by psychological disorders.

The problem of abnormal behavior might seem the concern of only a few of us. After all, relatively few people are ever admitted to a psychiatric hospital. Most people never seek the help of a mental health professional, such as a psychologist or psychiatrist. Fewer still ever plead not guilty to crimes on grounds of insanity. Most of us probably have at least one relative we consider “eccentric,” but how many of us have relatives we consider “crazy”? And yet, the truth is that abnormal behavior affects all of us in one way or another. If we limit ourselves to diagnosable mental disorders, nearly one in two of us (46%) are directly affected at some point in our lives (Kessler et al., 2005a; see Figure 1.1). More than one in four adult Americans (26%) experience a diagnosable psychological disorder in any given year (Kessler et al., 2005b; WHO, 2004). If we also include the mental health problems of our family members, friends, and coworkers and take into account those who foot the bill for treatment in the form of taxes and health insurance premiums and lost productivity due to sick days, disability leaves, and impaired job performance inflating product costs, then clearly all of us are affected to one degree or another.

The study of abnormal psychology is illuminated not only by the extensive research on the causes and treatments of psychological disorders reported in scientific journals, but also by the personal stories of people affected by these problems. In this text, we will learn from these people as they tell their stories in their own words. Through first-person narratives, case examples, and video interviews, we enter the world of people struggling with various types of psychological disorders that affect their moods, thinking, and behavior. Some of these stories may remind you of the experiences of people close to you, or perhaps even yourself. We invite you to explore with us the nature and origins of these disorders and ways of helping people who face the many challenges they pose.

Let us pause for a moment to raise an important distinction. Although the terms *psychological disorder* and *mental disorder* are often used interchangeably, we prefer using the term *psychological disorder*. The major reason is that the term *psychological disorder* puts the study of abnormal behavior squarely within the purview of the field of

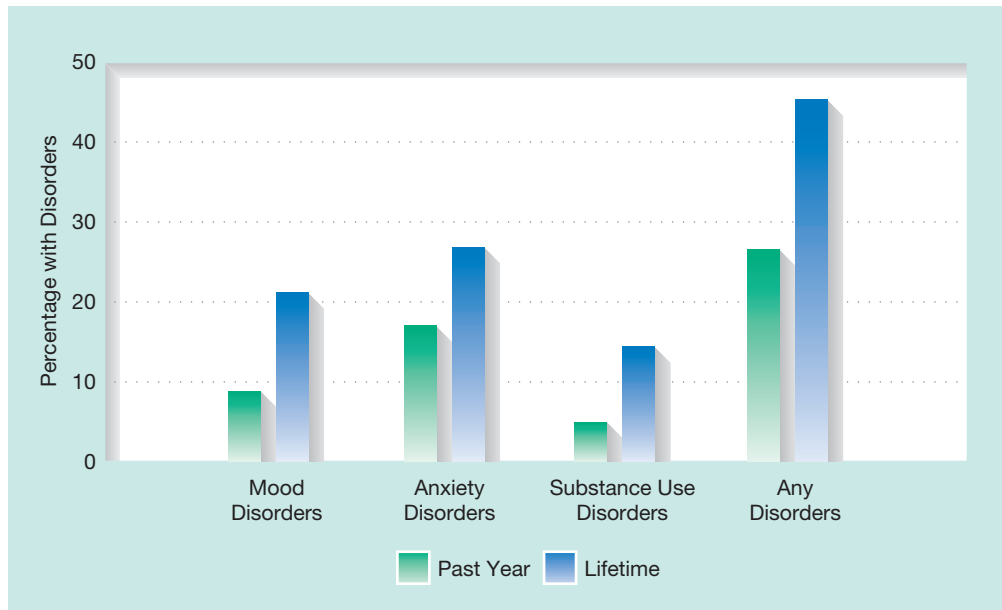


FIGURE 1.1 Lifetime and past-year prevalences of psychological disorders.

This graph is based on a nationally representative sample of 9,282 English-speaking U.S. residents aged 18 and older. Here we see percentages of individuals with diagnosable psychological disorders either during the past year or at some point in their lives for several major diagnostic categories. The mood disorders category includes major depressive episode, manic episode, and dysthymia (discussed in Chapter 8). Anxiety disorders include panic disorder, agoraphobia without panic disorder, social phobia, specific phobia, and generalized anxiety disorder (discussed in Chapter 6). Substance use disorders include abuse or dependence disorders involving alcohol or other drugs (discussed in Chapter 9).

Source: Kessler et al., 2005a; Kessler et al., 2005b.

psychology. Moreover, the term *mental disorder* (also called *mental illness*) is derived from the **medical model** perspective that holds abnormal behavior patterns to be symptoms of underlying illness. Although the medical model is a major contemporary model for understanding abnormal behavior, we believe we need to take a broader view of abnormal behavior by incorporating psychological and sociocultural perspectives as well.

Recently, the U.S. Surgeon General issued a report on the nation's mental health. Here are some key conclusions from the report (Satcher, 2000; USDHHS, 1999b):

- Mental health reflects the complex interaction of brain functioning and environmental influences.
- Effective treatments exist for most mental disorders, including psychological interventions such as psychotherapy and counseling and psychopharmacologic or drug therapies. Treatment is often more effective when psychological and pharmacological treatments are combined.
- Progress in developing effective prevention programs in the mental health field has been slow because we do not know the causes of mental disorders or ways of altering known influences, such as genetic predispositions. Nonetheless, some effective prevention programs have been developed.
- Although 15% of American adults receive some form of help for mental health problems each year, many who need help do not receive it.
- Mental health problems are best understood when we take a broader view and consider the social and cultural contexts in which they occur.
- Mental health services need to be designed and delivered in a manner that takes into account the viewpoints and needs of racial and ethnic minorities.

The Surgeon General's report forms a backdrop for our study of abnormal psychology. As we shall see throughout the text, we believe that understandings of abnormal

medical model A biological perspective in which abnormal behavior is viewed as symptomatic of underlying illness.

behavior are best revealed through a lens that takes into account interactions of biological and environmental factors. We also believe that social and cultural (or *sociocultural*) factors need to be considered in the attempt to both understand abnormal behavior and develop effective treatment services.

In this chapter we first address the difficulties of defining abnormal behavior. We see that throughout history, abnormal behavior has been viewed from different perspectives. We chronicle the development of concepts of abnormal behavior and its treatment. We see that in the past, treatment usually referred to what was done *to*, rather than *for*, people with abnormal behavior. We then describe the ways in which psychologists and other scholars study abnormal behavior today.

HOW DO WE DEFINE ABNORMAL BEHAVIOR?

We all become anxious or depressed from time to time, but is this abnormal? Becoming anxious in anticipation of an important job interview or a final examination is perfectly normal. It is appropriate to feel depressed when you have lost someone close to you or when you have failed at a test or on the job. So, where is the line between normal and abnormal behavior?

One answer is that emotional states such as anxiety and depression may be considered abnormal when they are not appropriate to the situation. It is normal to feel down when you fail a test, but not when your grades are good or excellent. It is normal to feel anxious before a college admissions interview, but not to panic before entering a department store or boarding a crowded elevator.

Abnormality may also be suggested by the magnitude of the problem. Although some anxiety is normal enough before a job interview, feeling that your heart might leap from your chest—and consequently canceling the interview—is not. Nor is it normal to feel so anxious in this situation that your clothing becomes soaked with perspiration.

Criteria for Determining Abnormality

Mental health professionals apply various criteria in making judgments about whether behavior is abnormal. The most commonly used criteria include the following:

1. *Unusualness.* Behavior that is unusual is often considered abnormal. Only a few of us report seeing or hearing things that are not really there; “seeing things” and “hear-



Is this abnormal? One of the criteria used to determine whether or not behavior is abnormal is whether it deviates from acceptable standards of conduct or social norms. The behavior and attire of these men is abnormal in a classroom or workplace, but not at a football game.

ing things” are almost always considered abnormal in our culture, except, perhaps, in the case of certain types of religious experiences (USDHHS, 1999a). Moreover, “hearing voices” and other forms of hallucinations under some circumstances are not considered unusual in some preliterate societies.

Becoming overcome with feelings of panic when entering a department store or when standing in a crowded elevator is uncommon and considered abnormal in our culture. Uncommon behavior is not in itself abnormal. Only one person can hold the record for swimming the fastest 100 meters. The record-holding athlete differs from the rest of us but, again, is not considered abnormal. Thus rarity or statistical deviance is not a sufficient basis for labeling behavior abnormal; nevertheless, it is one yardstick often used to judge abnormality.

2. *Social deviance.* All societies have norms (standards) that define the kinds of behaviors acceptable in given contexts. Behavior deemed normal in one culture may be viewed as abnormal in another. For example, people in our culture who assume that all male strangers are devious are usually regarded as unduly suspicious or distrustful. But such suspicions were justified among the Mundugumor, a tribe of cannibals studied by anthropologist Margaret Mead (1935). Within that culture, male strangers *were* typically malevolent toward others, and it was normal to feel distrustful of them. Norms, which arise from the practices and beliefs of specific cultures, are relative standards, not universal truths.

Thus, clinicians need to weigh cultural differences when determining what is normal and abnormal. Moreover, what strikes one generation as abnormal may be considered normal by the next. For example, until the mid-1970s homosexuality was classified as a mental disorder by the psychiatric profession (see the *Controversies in Abnormal Psychology* feature on page 18). Today, however, the psychiatric profession no longer considers homosexuality a mental disorder, and many people argue that contemporary societal norms should include homosexuality as a normal variation in behavior.

Another result of basing normality on compliance with social norms is the tendency to label nonconformists as mentally disturbed. We may come to brand behavior that we do not approve as “sick” rather than accept that the behavior may be normal, even though it offends or puzzles us.

3. *Faulty perceptions or interpretations of reality.* Normally, our sensory systems and cognitive processes permit us to form accurate mental representations of the environment. Seeing things and hearing voices that are not present are considered hallucinations, which in our culture are generally taken as signs of an underlying mental disorder. Similarly, holding unfounded ideas or *delusions*, such as *ideas of persecution* that the CIA or the Mafia are out to get you, may be regarded as signs of mental disturbance—unless, of course, they *are*. (As former Secretary of State Henry Kissinger is said to have remarked, “Even paranoid people have enemies.”)

It is normal in the United States to say that one “talks” to God through prayer. If, however, a person insists to have literally seen God or heard the voice of God—as opposed to, say, being divinely inspired—we may come to regard her or him as mentally disturbed.

4. *Significant personal distress.* States of personal distress caused by troublesome emotions, such as anxiety, fear, or depression, may be abnormal. As we noted earlier, however, anxiety and depression are sometimes appropriate responses to the situation. Real threats and losses do occur in life, and *lack* of an emotional response to them would be regarded as abnormal. Appropriate feelings of distress are not considered abnormal unless they persist long after the source of anguish has been removed (after most people would have adjusted) or if they are so intense that they impair the individual’s ability to function.
5. *Maladaptive or self-defeating behavior.* Behavior that leads to unhappiness rather than self-fulfillment can be regarded as abnormal. Behavior that limits our ability



When is anxiety abnormal? Negative emotions such as anxiety are considered abnormal when they are judged to be excessive or inappropriate to the situation. Anxiety is generally regarded as normal when it is experienced during a job interview (top), so long as it is not so severe that it prevents the interviewee from performing adequately. Anxiety is deemed to be abnormal if it is experienced whenever one boards an elevator (bottom).

to function in expected roles, or to adapt to our environments, may also be considered abnormal. According to these criteria, heavy alcohol consumption that impairs health or social and occupational functioning may be viewed as abnormal. Agoraphobic behavior, characterized by intense fear of venturing into public places, may be considered abnormal in that it is both uncommon and maladaptive because it impairs the individual's ability to fulfill work and family responsibilities.

6. *Dangerousness.* Behavior that is dangerous to oneself or other people may be considered abnormal. Here, too, the social context is crucial. In wartime, people who sacrifice themselves or charge the enemy with little apparent concern for their own safety may be characterized as courageous, heroic, and patriotic. But people who threaten or attempt suicide because of the pressures of civilian life are usually considered abnormal.

Football and hockey players who occasionally get into fistfights or altercations with opposing players may be normal enough. Given the nature of the sports, unaggressive football and hockey players would not last long in college or professional ranks. But individuals involved in frequent altercations may be regarded as abnormal. Physically aggressive behavior is most often maladaptive in modern life. Moreover, physical aggression is ineffective as a way of resolving conflicts—although it is by no means uncommon.

Abnormal behavior thus has multiple definitions. Depending on the case, some criteria may be weighted more heavily than others. But in most cases, a combination of these criteria is used to define abnormality.

Let's now return to the three cases we introduced at the beginning of the chapter. Consider the criteria we can apply in determining that the behaviors reported in these case vignettes are abnormal. For one thing, the abnormal behavior patterns in these three cases are unusual in the statistical sense. Most people do not encounter these kinds of problems, although we should add that these problems are far from rare. The problem behaviors also meet other criteria of abnormality, as we shall see.

Phil suffered from *claustrophobia*, an excessive fear of enclosed spaces. (This is an example of an anxiety disorder and is discussed more fully in Chapter 6.) His behavior was unusual (relatively few people are so fearful of confinement that they avoid flying in airplanes or riding on elevators) and was associated with significant personal distress. His fear also impaired his ability to carry out his occupational and family responsibilities. But he was not hampered by faulty perceptions of reality. He recognized that his fears exceeded a realistic appraisal of danger in these situations.

What criteria of abnormality applies in the case of the woman who cowered under the blankets? She was diagnosed with *bipolar disorder* (formerly, manic-depression), a type of mood disorder in which a person experiences extreme mood swings from the heights of elation and seemingly boundless energy to the depths of depression and despair. (The vignette described the manic phase of the disorder.) Bipolar disorder, which is discussed in Chapter 8, is associated with extreme personal distress and difficulty functioning effectively in normal life. It is also linked to self-defeating and dangerous behavior, such as reckless driving or exorbitant spending during manic phases and suicide during depressive phases. In some cases, like the one presented here, people in manic phases sometimes have faulty perceptions or interpretations of reality, such as hallucinations and delusions.

Thomas, whose story was featured in the third vignette, suffered from both schizophrenia and depression. It is not unusual for people to have more than one disorder at a time. In the parlance of the psychiatric profession, these clients present with *comorbid* (co-occurring) diagnoses. Comorbidity complicates treatment because clinicians need to design a treatment approach that focuses on treating two or more disorders. Schizophrenia meets a number of criteria of abnormality in addition to statistical infrequency (it affects about 1% of the general population). The clinical features of schizophrenia include socially deviant or bizarre behavior, disturbed perceptions or interpretations of reality (delusions and hallucinations), maladaptive behavior (difficulty meeting responsibilities of daily life), and personal distress. (See Chapter 12 for

more detail on schizophrenia.) Thomas, for example, was plagued by auditory hallucinations (terrorizing voices), which were certainly a source of significant distress. His thinking was also delusional, because he believed that “a presence” in his bedroom was “torturing good forces” surrounding him and causing him to make mistakes during the day. In Thomas’s case, schizophrenia was complicated by depression that involved feelings of personal distress (irritability and feelings of dread). Depression is also associated with dampened or downcast mood, maladaptive behavior (difficulty getting to work or school or even getting out of bed in the morning), and potential dangerousness (possible suicidal behavior).

It is one thing to recognize and label behavior as abnormal; it is another to understand and explain it. Philosophers, physicians, natural scientists, and psychologists have used various approaches, or *models*, in the effort to explain abnormal behavior. Some approaches have been based on superstition; others have invoked religious explanations. Some current views are predominantly biological; others are psychological. In considering various historical and contemporary approaches to understanding abnormal behavior, let’s first look further at the importance of cultural beliefs in determining which behavior patterns are deemed abnormal.

Cultural Bases of Abnormal Behavior

As noted, behavior that is normal in one culture may be deemed abnormal in another. Australian aborigines believe they can communicate with the spirits of their ancestors and that people, especially close relatives, share their dreams. These beliefs are considered normal within Aboriginal culture. But were such beliefs to be expressed in our culture, they would likely be deemed delusions, which professionals regard as a common feature of schizophrenia. Thus, the standards we use in making judgments of abnormal behavior must take into account cultural norms.

Kleinman (1987) offers an example of “hearing voices” among Native Americans to underscore the ways in which judgments about abnormality are embedded within a cultural context:

Ten psychiatrists trained in the same assessment technique and diagnostic criteria who are asked to examine 100 American Indians shortly after the latter have experienced the death of a spouse, a parent or a child may determine with close to 100% consistency that those individuals report hearing, in the first month of grieving, the voice of the dead person calling to them as the spirit ascends to the afterworld. [Although such judgments may be consistent across observers] the determination of whether such reports are a sign of an abnormal mental state is an interpretation based on knowledge of this group’s behavioural norms and range of normal experiences of bereavement. (p. 453)

To these Native Americans, bereaved people who report hearing the spirits of the deceased calling to them as they ascend to the afterlife are normal. Behavior that is normative within the cultural setting in which it occurs should not be considered abnormal.

Concepts of health and illness have different meanings in different cultures. Traditional Native American cultures distinguish between illnesses that are believed to arise from influences outside the culture, called “White man’s sicknesses,” such as alcoholism and drug addiction, from those that emanate from a lack of harmony with traditional tribal life and thought, which are called “Indian sicknesses” (Trimble, 1991). Traditional healers, shamans, and medicine men and women are called on to treat “Indian sickness.” When the problem is thought to have its cause outside the community, help is sought from “White man’s medicine.”

Abnormal behavior patterns take different forms in different cultures (USDHHS, 1999a). Westerners experience anxiety, for example,



A traditional Native American healer. Many traditional Native Americans distinguish between illnesses believed to arise from influences external to their own culture (“white man’s sicknesses”) and those that emanate from a lack of harmony with traditional tribal life and thought (“Indian sicknesses”). Traditional healers such as the one shown here may be called on to treat “Indian sickness,” whereas “white man’s medicine” may be sought to help people deal with problems whose causes are seen as lying outside the community, such as alcoholism and drug addiction.

in the form of worrying about paying the mortgage, losing a job, and so on. Yet “in a number of African cultures, anxiety is expressed as fears of failure in procreation, in dreams and complaints about witchcraft” (Kleinman, 1987). Australian aborigines can develop intense fears of sorcery, accompanied by the belief that one is in mortal danger from evil spirits (D. J. Spencer, 1983). Trancelike states in which young aboriginal women are mute, immobile, and unresponsive are also quite common. If these women do not recover from the trance within hours or, at most, a few days, they may be brought to a sacred site for healing.

The very words that we use to describe psychological disorders—words such as *depression* or *mental health*—have different meanings in other cultures or no equivalent meaning at all. This doesn’t mean that depression doesn’t exist in other cultures. Rather, it suggests we need to learn how people in different cultures experience emotional distress, including states of depression and anxiety, rather than imposing our perspectives on their experiences. Among people in China and other countries in the Far East, depression is often expressed through the development of physical symptoms, such as headaches, fatigue, or weakness, rather than by the feelings of guilt or sadness that are more common in the West (American Psychiatric Association, 2000; Draguns & Tanaka-Matsumi, 2003; Parker, Gladstone, & Chee, 2001).

These differences demonstrate how important it is that we determine whether our concepts of abnormal behavior are valid before we apply them to other cultures (Dana, 2000). Research efforts along these lines have shown that the abnormal behavior pattern associated with our concept of schizophrenia exists in countries as far flung as Colombia, India, China, Denmark, Nigeria, and the former Soviet Union, among others (Jablensky et al., 1992). Furthermore, rates of schizophrenia appear similar among the countries studied. However, differences have been observed in some of the features of schizophrenia across cultures (Thakker & Ward, 1998).

Views about abnormal behavior vary from society to society. In our culture, models based on medical disease and psychological factors are prominent in explaining abnormal behavior. But in traditional native cultures, models of abnormal behavior often invoke supernatural causes, such as possession by demons or the devil (Lefley, 1990). In Filipino folk society, for example, psychological problems are often attributed to the influence of “spirits” or the possession of a “weak soul” (Edman & Johnson, 1999).

TRUTH or FICTION

Behavior deemed abnormal in one society may be perceived as normal in another.

✓ **TRUE.** Cultures have different customs and standards for determining when behavior is deemed abnormal.

HISTORICAL PERSPECTIVES ON ABNORMAL BEHAVIOR

Throughout the history of Western culture, concepts of abnormal behavior have been shaped, to some degree, by the prevailing worldview of the time. For hundreds of years, beliefs in supernatural forces, demons, and evil spirits held sway. (And, as we’ve just seen, these beliefs still hold true in some societies.) Abnormal behavior was often taken as a sign of possession. In modern times, the predominant—but by no means universal—worldview has shifted toward beliefs in science and reason. In our culture, abnormal behavior has come to be viewed as the product of physical and psychosocial factors, not demonic possession.

The Demonological Model

Why would anyone need a hole in the head? Archaeologists have unearthed human skeletons from the Stone Age with egg-sized cavities in the skull. One interpretation of these holes is that our prehistoric ancestors believed abnormal behavior was caused by the inhabitation of evil spirits. These holes might be the result of **trephination**—the drilling of the skull to provide an outlet for those irascible spirits. Fresh bone growth indicates that some people did survive this “medical procedure.”

Just the threat of *trephining* may have persuaded some people to comply with tribal norms. Because no written accounts of the purposes of trephination exist, other explanations are possible. For instance, perhaps trephination was simply a form of surgery to remove shattered pieces of bone or blood clots that resulted from head injuries (Maher & Maher, 1985).

trephination A harsh, prehistoric practice of cutting a hole in a person’s skull, possibly in an attempt to release demons.

The notion of supernatural causes of abnormal behavior, or demonology, was prominent in Western society until the Age of Enlightenment. The ancients explained nature in terms of the actions of the gods: The Babylonians believed the movements of the stars and the planets expressed the adventures and conflicts of the gods. The Greeks believed the gods toyed with humans, unleashed havoc on disrespectful or arrogant humans, and clouded their minds with madness.

In ancient Greece, people who behaved abnormally were sent to temples dedicated to Aesculapius, the god of healing. The Greeks believed that Aesculapius would visit the afflicted while they slept in the temple and offer them restorative advice through dreams. Rest, a nutritious diet, and exercise were also part of the treatment. Incurables were driven from the temple by stoning.

Origins of the Medical Model: In “Ill Humor”

Not all ancient Greeks believed in the demonological model. The seeds of naturalistic explanations of abnormal behavior were sown by Hippocrates and developed by other physicians in the ancient world, especially Galen.

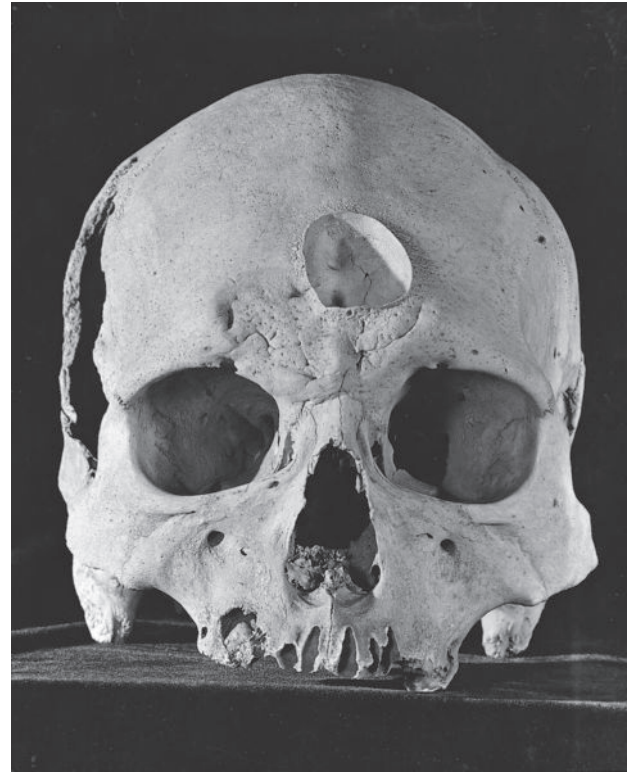
Hippocrates (ca. 460–377 B.C.E.), the celebrated physician of the Golden Age of Greece, challenged the prevailing beliefs of his time by arguing that illnesses of the body and mind were the result of natural causes, not possession by supernatural spirits. He believed the health of the body and mind depended on the balance of **humors**, or vital fluids, in the body: phlegm, black bile, blood, and yellow bile. An imbalance of humors, he thought, accounted for abnormal behavior. A lethargic or sluggish person was believed to have an excess of phlegm, from which we derive the word *phlegmatic*. An overabundance of black bile was believed to cause depression, or *melancholia*. An excess of blood created a *sanguine* disposition: cheerful, confident, and optimistic. An excess of yellow bile made people “bilious” and *choleric*—quick-tempered, that is.

Though we no longer subscribe to Hippocrates’s theory of bodily humors, his theory is important because of its break from demonology. It foreshadowed the modern medical model, the view that abnormal behavior results from underlying biological processes. Hippocrates made other contributions to modern thought and, indeed, to modern medical practice. He classified abnormal behavior patterns, using three main categories that still find equivalents today: *melancholia* to characterize excessive depression, *mania* to refer to exceptional excitement, and *phrenitis* (from the Greek “inflammation of the brain”) to characterize the bizarre behavior that might today typify schizophrenia. To this day, medical schools honor Hippocrates by having students swear an oath of medical ethics that he originated, the Hippocratic oath.

Galen (ca. 130–200 C.E.), a Greek physician who attended Roman emperor–philosopher Marcus Aurelius, adopted and expanded on the teachings of Hippocrates. Among Galen’s contributions was the discovery that arteries carry blood, not air, as had been formerly believed.

Medieval Times

The Middle Ages, or medieval times, cover the millennium of European history from about 476 C.E. through 1450 C.E. After the passing of Galen, belief in supernatural causes, especially the doctrine of possession, increased in influence and eventually dominated medieval thought. This doctrine held that abnormal behaviors were a sign of possession by evil spirits or the devil. This belief was part of the teachings of the Roman Catholic Church, the central institution in Western Europe after the decline of the Roman Empire. Although belief in possession preceded the Church and is found in ancient Egyptian and Greek writings, the Church revitalized it. The Church’s treatment of choice for possession was exorcism. Exorcists were employed to persuade evil



Trephination. Trephination refers to a procedure by which a hole is chipped into a person’s skull. Some investigators speculate that the practice represented an ancient form of surgery. Perhaps trephination was intended to release the demons responsible for abnormal behavior.

Image #283253. Photo by: Bierwert. American Museum of Natural History Library.

humors According to the ancient Hippocratic belief system, the vital bodily fluids (phlegm, black bile, blood, yellow bile).



Exorcism. This medieval woodcut illustrates the practice of exorcism, which was used to expel the evil spirits that were believed to have possessed people.



spirits that the bodies of the “possessed” were no longer habitable. Methods of persuasion included prayer, incantations, waving a cross at the victim, beating and flogging, even starving the victim. If the victim continued to display unseemly behavior, there were yet more persuasive remedies, such as the rack, a device of torture. No doubt, recipients of these “remedies” fondly wished the devil would vacate the premises immediately.

The Renaissance—a great revival of classical learning, art, and literature—began in Italy in the 1400s and spread throughout Europe. Ironically, although the Renaissance is considered the transition from the medieval to the modern world, the fear of witches also reached its height during this period.

Witchcraft

The late 15th through the late 17th centuries were especially bad times to annoy your neighbors. These were times of massive persecutions, particularly of women, who were accused of witchcraft. Church officials believed that witches made pacts with the devil, practiced satanic rituals, ate babies, and poisoned crops. In 1484, Pope Innocent VIII decreed that witches be executed. Two Dominican priests compiled a notorious manual for witch-hunting, called the *Malleus Maleficarum* (The Witches’ Hammer), to help inquisitors identify suspected witches. Many thousands were accused of witchcraft and put to death in the next two centuries.

Witch-hunting required innovative “diagnostic” tests. In the case of the water-float test, suspects were dunked in a pool to certify they were not possessed by the devil. The test was based on the principle that pure metals settle to the bottom during smelting, whereas impurities bob up to the surface. Suspects who sank and drowned were ruled pure. Suspects who kept their heads above water were judged to be in league with the devil. As the saying went, you were “Damned if you do and damned if you don’t.”

Modern scholars once believed these so-called witches were actually people with psychological disorders who were persecuted because of their abnormal behavior. Many suspected witches did confess to bizarre behaviors, such as flying or engaging in sexual intercourse with the devil, which suggests the types of disturbed behavior associated with modern conceptions of schizophrenia. Yet these confessions must be discounted because they were extracted under torture by inquisitors who were bent on finding evidence to support accusations of witchcraft (Spanos, 1978). We know today that the threat of torture and other forms of intimidation are sufficient to extract false confessions. Although some of those who were persecuted as witches probably did show abnormal behavior patterns, most did not (Schoenman, 1984). Rather, accusations of witchcraft appeared to be a convenient means of disposing of social nuisances and political rivals, of seizing property,

The water-float test. This so-called test was one way in which medieval authorities sought to detect possession and witchcraft. Managing to float above the water line was deemed a sign of impurity. In the lower right-hand corner, you can see the bound hands and feet of one poor unfortunate who failed to remain afloat, but whose drowning would have cleared away any suspicions of possession.

and of suppressing heresy (Spanos, 1978). In English villages, many of the accused were poor, unmarried elderly women who were forced to beg their neighbors for food. If misfortune befell the people who declined to give help, the beggar might be accused of having cast a curse on the household. If the woman was generally unpopular, the accusation of witchcraft was likely to follow.

Demons were believed to play roles in both abnormal behavior and witchcraft. However, although some victims of demonic possession were perceived to be afflicted as retribution for their own wrongdoing, others were considered to be innocent victims—possessed by demons through no fault of their own. Witches, on the other hand, were believed to have renounced God and voluntarily entered into a pact with the devil. Witches were generally seen as more deserving of torture and execution (Spanos, 1978).

Historical trends do not follow straight lines. Although the demonological model held sway during the Middle Ages and much of the Renaissance, it did not completely supplant belief in naturalistic causes. In medieval England, for example, demonic possession was only rarely invoked in cases in which a person was held to be insane by legal authorities (Neugebauer, 1979). Most explanations for unusual behavior involved natural causes, such as physical illness or trauma to the brain. In England, in fact, some disturbed people were kept in hospitals until they were restored to sanity (Allderidge, 1979). The Renaissance Belgian physician Johann Weyer (1515–1588) also took up the cause of Hippocrates and Galen by arguing that abnormal behavior and thought patterns were caused by physical problems.



“Bedlam.” The bizarre antics of the patients at St. Mary’s of Bethelhem Hospital in London in the 18th century were a source of entertainment for the well-heeled gentry of the town, such as the two well-dressed women in the middle of the painting.

Asylums

By the late 15th and early 16th centuries, asylums, or madhouses, began to crop up throughout Europe. Many were former leprosariums, which were no longer needed because of the decline in leprosy after the late Middle Ages. Asylums often gave refuge to beggars as well as the mentally disturbed, and conditions were appalling. Residents were chained to their beds and left to lie in their own waste or to wander about unassisted. Some asylums became public spectacles. In one asylum in London, St. Mary’s of Bethlehem Hospital—from which the word *bedlam* is derived—the public could buy tickets to observe the antics of the inmates, much as we would pay to see a circus sideshow or animals at the zoo.

The Reform Movement and Moral Therapy

The modern era of treatment begins with the efforts of the Frenchmen Jean-Baptiste Pussin and Philippe Pinel in the late 18th and early 19th centuries. They argued that people who behave abnormally suffer from diseases and should be treated humanely. This view was not popular at the time; mentally disturbed people were regarded as threats to society, not as sick people in need of treatment.

From 1784 to 1802, Pussin, a layman, was placed in charge of a ward for people considered “incurably insane” at La Bicêtre, a large mental hospital in Paris. Although Pinel is often credited with freeing the inmates of La Bicêtre from their chains, Pussin was actually the first official to unchain a group of the “incurably insane.” These unfortunates had been considered too dangerous and unpredictable to be left unchained. But Pussin believed that if they were treated with kindness, there would be no need for chains. As he predicted, most of the shut-ins were manageable and calm after their chains were removed. They could walk the hospital grounds and take in fresh air. Pussin also forbade the staff from treating the residents harshly, and he fired employees who ignored his directives.

TRUTH or FICTION

A night’s entertainment in London a few hundred years ago might have included gawping at the inmates at the local asylum.

✓ TRUE. A night on the town for the gentry of London sometimes included a visit to a local asylum, St. Mary’s of Bethlehem Hospital, to gawk at the patients. We derive the word *bedlam* from Bethlehem Hospital.



The unchaining of inmates at La Bicêtre by 18th-century French reformer Philippe Pinel. Continuing the work of Jean-Baptiste Pussin, Pinel stopped harsh practices, such as bleeding and purging, and moved inmates from darkened dungeons to sunny, airy rooms. Pinel also took the time to converse with inmates, in the belief that understanding and concern would help restore them to normal functioning.

the American physician Benjamin Rush (1745–1813)—also a signatory to the Declaration of Independence and an early leader of the antislavery movement (Farr, 1994). Rush, considered the father of American psychiatry, penned the first American textbook on psychiatry in 1812: *Medical Inquiries and Observations Upon the Diseases of the Mind*. He believed that madness is caused by engorgement of the blood vessels of the brain. To relieve pressure, he recommended bloodletting, purging, and ice-cold baths. But he did advance humane treatment by encouraging the staff of his Philadelphia Hospital to treat patients with kindness, respect, and understanding. He also favored the therapeutic use of occupational therapy, music, and travel (Farr, 1994). His hospital became the first in the United States to admit patients for psychological disorders.

Dorothea Dix (1802–1887), a Boston schoolteacher, traveled about the country decrying the deplorable conditions in the jails and almshouses where mentally disturbed people were placed. As a result of her efforts, 32 mental hospitals devoted to treating people with psychological disorders were established throughout the United States.

A Step Backward

In the latter half of the 19th century, the belief that abnormal behaviors could be successfully treated or cured by moral therapy fell into disfavor (USDHHS, 1999a). A period of apathy ensued in which patterns of abnormal behavior were deemed incurable (Grob, 1994). Mental institutions in the United States grew in size but provided little more than custodial care. Conditions deteriorated. Mental hospitals became frightening places. It was not uncommon to find residents “wallowing in their own excrements,” in the words of a New York State official of the time (Grob, 1983). Straitjackets, handcuffs, cribs, straps, and other devices were used to restrain excitable or violent patients.

Deplorable hospital conditions remained commonplace through the middle of the 20th century. By the mid-1950s, the population in mental hospitals had risen to half a million patients. Although some state hospitals provided decent and humane care, many were described as little more than human snakepits. Residents were crowded into wards that lacked even rudimentary sanitation. Mental patients in back wards were essentially *warehoused*; that is, they were left to live out their lives with little hope or expectation of recovery or return to the community. Many received little professional care and were abused by poorly trained and supervised staffs. Finally, these appalling conditions led to calls for reforms of the mental health system.

Pinel (1745–1826) became medical director for the incurables’ ward at La Bicêtre in 1793 and continued the humane treatment Pussin had begun. He stopped harsh practices, such as bleeding and purging, and moved patients from darkened dungeons to well-ventilated, sunny rooms. Pinel also spent hours talking to inmates, in the belief that showing understanding and concern would help restore them to normal functioning.

The philosophy of treatment that emerged from these efforts was labeled *moral therapy*. It was based on the belief that providing humane treatment in a relaxed and decent environment could restore functioning. Similar reforms were instituted at about this time in England by William Tuke and later in the United States by Dorothea Dix. Another influential figure was

The Community Mental Health Movement: The Exodus from State Hospitals

In response to the growing call for reform, Congress in 1963 established a nationwide system of community mental health centers (CMHCs) that was intended to offer an alternative to long-term custodial care in bleak institutions. CMHCs were charged with providing continuing support and care to former hospital residents who were released from state mental hospitals under a policy of deinstitutionalization. Another factor that laid the groundwork for the mass exodus from mental hospitals was the development of a new class of drugs—the *phenothiazines*. This group of antipsychotic drugs, which helped quell the most flagrant behavior patterns associated with schizophrenia, was introduced in the 1950s. *Phenothiazines* reduced the need for indefinite hospital stays and permitted many people with schizophrenia to be discharged to halfway houses, group homes, and independent living. The mental hospital population across the United States plummeted from 559,000 in 1955 to fewer than 100,000 by the 1990s (Grob, 2001). Some mental hospitals were closed entirely.

The community mental health movement and the policy of deinstitutionalization were developed with the hope that mental patients could return to their communities and assume more independent and fulfilling lives. However, the exodus from state hospitals left tens of thousands of marginally functioning people in communities that lacked adequate housing and other forms of support. Even today, many of the homeless we see wandering city streets and sleeping in bus terminals and train stations are discharged mental patients. (In Chapter 4, we take a closer look at the policy of deinstitutionalization and the problems faced by the psychiatric homeless population.)

Contemporary Perspectives on Abnormal Behavior

Beliefs in possession or demonology persisted until the 18th century, when society began to turn toward reason and science to explain natural phenomena and human behavior. The nascent sciences of biology, chemistry, physics, and astronomy promised knowledge derived from scientific methods of observation and experimentation. Scientific observation in turn uncovered the microbial causes of some kinds of diseases and gave rise to preventive measures. Scientific models of abnormal behavior also began to emerge, including models representing biological, psychological, sociocultural, and biopsychosocial perspectives. We briefly discuss each of these models here, particularly in terms of their historical background, which will lead to a fuller discussion in Chapter 2.

The Biological Perspective Against the backdrop of advances in medical science, the German physician Wilhelm Griesinger (1817–1868) argued that abnormal behavior was rooted in diseases of the brain. Griesinger’s views influenced another German physician, Emil Kraepelin (1856–1926), who wrote an influential textbook on psychiatry in 1883 in which he likened mental disorders to physical diseases. Griesinger and Kraepelin paved the way for the modern medical model, which attempts to explain abnormal behavior on the basis of underlying biological defects or abnormalities, not evil spirits. According to the medical model, people behaving abnormally suffer from mental illnesses or disorders that can be classified, like physical illnesses, according to their distinctive causes and symptoms. Adopters of the medical model don’t necessarily believe that every mental disorder is a product of defective biology, but they maintain that it is useful to classify patterns of abnormal behavior as disorders that can be identified on the basis of their distinctive features or symptoms.

Kraepelin specified two main groups of mental disorders or diseases: **dementia praecox** (from roots meaning “precocious [premature] insanity”), which we now call schizophrenia, and manic–depressive psychosis, which is now labeled *bipolar disorder*. Kraepelin believed that dementia praecox was caused by a biochemical imbalance and

dementia praecox The term given by Kraepelin to the disorder now called schizophrenia.

general paresis A degenerative brain disease occurring when the bacterium that causes syphilis directly invades brain tissue.

manic–depressive psychosis by an abnormality in body metabolism. His major contribution was the development of a classification system that forms the cornerstone of current diagnostic systems.

The medical model gained support in the late 19th century with the discovery that an advanced stage of *syphilis*—in which the bacterium that causes the disease directly invades the brain itself—led to a form of disturbed behavior called **general paresis** (from the Greek *parienai*, meaning “to relax”). General paresis is associated with physical symptoms and psychological impairment, including personality and mood changes, and with progressive deterioration of memory functioning and judgment. With the advent of antibiotics for treating syphilis, general paresis has become extremely uncommon.

General paresis is of interest to us mostly for historical reasons. With the discovery of the connection between general paresis and syphilis, scientists became optimistic that other biological causes would soon be discovered for many other types of disturbed behavior. The later discovery of Alzheimer’s disease (discussed in Chapter 15), a brain disease that is the major cause of dementia, lent further support to the medical model. Yet we realize today that the great majority of psychological disorders involve a complex web of factors we are still struggling to understand.

Much of the terminology used in abnormal psychology has been “medicalized.” Because of the medical model, we commonly speak of people whose behavior is abnormal as being mentally ill. Because of the medical model we commonly refer to the symptoms of abnormal behavior, rather than the features or characteristics of abnormal behavior. Other terminological offspring of the medical model include *mental health, syndrome, diagnosis, patient, mental patient, mental hospital, prognosis, treatment, therapy, cure, relapse, and remission*.

The medical model is a major advance over demonology. It inspired the idea that abnormal behavior should be treated by learned professionals, not punished. Compassion supplanted hatred, fear, and persecution. But the medical model has also led to controversy over the extent to which certain behavior patterns should be considered forms of mental illness. We address this issue in *Controversies in Abnormal Psychology* on page 18.



Charcot’s teaching clinic. Parisian neurologist Jean-Martin Charcot presents a woman patient who exhibits the highly dramatic behavior associated with hysteria, such as falling faint at a moment’s notice. Charcot was an important influence on the young Sigmund Freud.

The Psychological Perspective Even as the medical model was gaining influence in the 19th century, some scientists argued that organic factors alone could not explain the many forms of abnormal behavior. In Paris, a respected neurologist, Jean-Martin Charcot (1825–1893), experimented with the use of hypnosis in treating *hysteria*, a condition characterized by paralysis or numbness that cannot be explained by any underlying physical cause. [Interestingly, cases of hysteria were common in the Victorian period, but are rare today (Spitzer et al., 1989).] The thinking at the time was that people with hysteria must have an affliction of the nervous system, which caused their symptoms. Yet Charcot and his associates demonstrated that these symptoms could be removed in hysterical patients or, conversely, induced in normal patients, by means of hypnotic suggestion.

Among those who attended Charcot’s demonstrations was a young Austrian physician named Sigmund Freud (1856–1939). Freud reasoned that if hysterical symptoms could be made to disappear or appear through hypnosis—the mere “suggestion of ideas”—they must be psychological, not biological,



Sigmund Freud and Bertha Pappenheim (Anna O.). Freud is shown here at around age 30. Pappenheim (1859–1936) is known more widely in the psychological literature as “Anna O.” Freud believed that her hysterical symptoms represented the transformation of blocked-up emotions into physical complaints.

in origin (E. Jones, 1953). He concluded that whatever psychological factors give rise to hysteria, they must lie outside the range of conscious awareness. This insight underlies the first psychological perspective on abnormal behavior—the **psychodynamic model**. “I received the proudest impression,” Freud wrote of his experience with Charcot, “of the possibility that there could be powerful mental processes which nevertheless remained hidden from the consciousness of men” (as cited in Sulloway, 1983, p. 32).

Freud was also influenced by the Viennese physician Joseph Breuer (1842–1925), 14 years his senior. Breuer too had used hypnosis to treat a 21-year-old woman, Anna O., with hysterical complaints for which there was no apparent medical basis, such as paralysis in her limbs, numbness, and disturbances of vision and hearing (E. Jones, 1953). A “paralyzed” muscle in her neck prevented her from turning her head. Immobilization of the fingers of her left hand made it all but impossible for her to feed herself. Breuer believed there was a strong psychological component to her symptoms. He encouraged her to talk about her symptoms, sometimes under hypnosis. Recalling and talking about events connected with the appearance of the symptoms—especially events that evoked feelings of fear, anxiety, or guilt—provided symptom relief, at least for a time. Anna referred to the treatment as the “talking cure” or, when joking, as “chimney sweeping.”

The hysterical symptoms were taken to represent the transformation of these blocked-up emotions, forgotten but not lost, into physical complaints. In Anna’s case, the symptoms disappeared once the emotions were brought to the surface and “discharged.” Breuer labeled the therapeutic effect *catharsis*, or emotional discharge of feelings (from the Greek word *kathairein*, meaning to clean or to purify).

Freud’s theoretical model was the first major psychological model of abnormal behavior. As we’ll see in Chapter 2, other psychological perspectives on abnormal behavior soon followed based on behavioral, humanistic, and cognitive models. Each of these perspectives, as well as the contemporary medical model, spawned particular forms of therapy to treat psychological disorders.

psychodynamic model The theoretical model of Freud and his followers, in which abnormal behavior is viewed as the product of clashing forces within the personality.



CONTROVERSIES IN ABNORMAL PSYCHOLOGY

What Is Abnormal Behavior?

The question of where to draw the line between “normal” and “abnormal” behavior continues to be a subject of debate within the mental health field and the broader society. Unlike medical illness, a psychological or mental disorder cannot be identified by a spot on an X-ray or from a blood sample. Classifying these disorders involves clinical judgments, not findings of fact; and as we have noted, these judgments can change over time and can vary from culture to culture. For example, medical professionals once considered masturbation a form of mental illness. Although some people today may object to masturbation on moral grounds, professionals no longer regard it as a mental disturbance.

Consider other behaviors that may blur the boundaries between normal and abnormal: Is body-piercing abnormal, or is it simply a fashion statement? (How much piercing do you consider “normal?”) Might excessive shopping behavior or overuse of the Internet be forms of mental illness? Is bullying a symptom of an underlying disorder, or is it just “bad behavior?” Mental health professionals base their judgments on the kinds of criteria we outlined in this text. But even in professional circles, debate continues about whether some forms of behavior should be classified as forms of abnormal behavior or mental disorders.

One of the longest of these debates concerns homosexuality. Until 1973, the American Psychiatric Association classified homosexuality as a mental disorder. In that year, however, the organization voted to drop homosexuality from its listing of classified mental disorders in its diagnostic manual, the *Diagnostic and Statistical Manual of Mental Disorders*, or *DSM* (discussed in Chapter 3). The *DSM* retained, however, a diagnostic classification that could be applied to individuals who are distressed or confused about their sexual orientation.

The decision to declassify homosexuality as a mental disorder was not unanimous among the nation’s psychiatrists. Many argued that the decision was motivated more by political reasons than by good science. Some objected to basing such a decision on a vote. After all, would it be reasonable to drop cancer as a recognized medical illness based on a vote? Shouldn’t scientific criteria determine these kinds of judgments, rather than a popular vote?

What do you think? Is homosexuality a variation in the normal spectrum of sexual orientation, or is it a form of abnormal behavior? What is the basis of your judgment? What criteria did you apply in forming a judgment? What evidence do you have to support your beliefs?



Is homosexuality a mental disorder? Do you consider homosexuality abnormal? Until 1973, homosexuality was classified as a mental disorder by the American Psychiatric Association. What criteria should be used to form judgments about determining whether particular patterns of behavior comprise a mental or psychological disorder?

TRUTH or FICTION

Despite changing attitudes in society toward homosexuality, the psychiatric profession still continues to classify homosexuality as a mental disorder.

FALSE. The psychiatric profession dropped homosexuality from its listing of mental disorders in 1973.

Within the *DSM* system, mental disorders are recognized on the basis of behavior patterns associated with either emotional distress and/or significant impairment in psychological functioning. Researchers have found that people with a gay male or lesbian sexual orientation tend to have a greater frequency of suicide and of states of emotional distress, especially anxiety and depression, than people with a heterosexual orientation (Bagley & D’Augelli, 2000; Cochran, Sullivan, & Mays, 2003; Skegg et al., 2003).

Even if gay males and lesbians are more prone to develop psychological problems, it doesn’t necessarily follow that these problems are the result of their sexual orientation. Gay adolescents in our society come to terms with their sexuality against a backdrop of deep-seated prejudices and resentment toward gays. The process of achieving a sense of self-acceptance against this backdrop of societal intolerance can be so difficult that many gay adolescents seriously consider or attempt suicide (Bagley & D’Augelli, 2000; Simonsen et al., 2000). As adults, gay men and lesbians often continue to bear the brunt of prejudice and negative attitudes toward them, including negative reactions from family members that often follow the disclosure of their sexual orientation. The social stress associated with stigma, prejudice, and discrimination that gay people encounter may directly cause mental health problems (Meyer, 2003).

Understood in this context, it is little wonder that many gay males and lesbians develop psychological problems. As a leading authority in the field, psychologist J. Michael Bailey (1999) wrote, “Surely, it must be difficult for young people to come to grips with their homosexuality in a world where homosexual people are often scorned, mocked, mourned, and feared.”

Should we then accept the claim that societal intolerance is the root cause of psychological problems in people with a homosexual orientation? As critical thinkers, we should recognize that other factors may be involved. We need more evidence before we can arrive at any judgments concerning why gay males and lesbians are more prone to psychological problems, especially suicide.

One of these other factors may be lifestyle choice. A classic study of gay couples showed that those living in committed, close relationships were as well adjusted as married heterosexual couples (Bell & Weinberg, 1978). Differences in psychological adjustment or mental health may be more of a reflection of lifestyle factors than sexual orientation.

Imagine a society in which homosexuality was the norm and heterosexual people were shunned, scorned, or ridiculed. Would we find that heterosexual people are more likely to have psychological problems? Would this evidence lead us to assume that heterosexuality is a mental disorder? What do you think?

Critical Thinking

- How do you decide when any behavior, such as social drinking or even shopping or Internet use, crosses the line from “normal” to “abnormal”?
- Is there a set of criteria you use in all cases? How does your criteria differ from the criteria specified in the text?
- Do you believe that homosexuality is abnormal? Why or why not?

The Sociocultural Perspective Mustn't we also consider the broader social context in which behavior occurs to understand the roots of abnormal behavior? Sociocultural theorists believe the causes of abnormal behavior may be found in the failures of society rather than in the person. Accordingly, psychological problems may be rooted in the ills of society, such as unemployment, poverty, family breakdown, injustice, ignorance, and the lack of opportunity. Sociocultural factors also focus on relationships between mental health and social factors such as gender, social class, ethnicity, and lifestyle.

Sociocultural theorists also observe that once a person is called “mentally ill,” the label is hard to remove. It also distorts other people's responses to the “patient.” Mental patients are stigmatized and marginalized. Job opportunities may disappear, friendships may dissolve, and the “patient” may feel increasingly alienated from society. Sociocultural theorists focus our attention on the social consequences of becoming labeled as a “mental patient.” They argue that we need to provide access to meaningful societal roles, as workers, students, and colleagues to people with long-term mental health problems, rather than shunt them aside.

The Biopsychosocial Perspective Aren't patterns of abnormal behavior too complex to be understood from any one model or perspective? Many mental health professionals endorse the view that abnormal behavior is best understood by taking into account multiple causes representing the biological, psychological, and sociocultural domains (Levine & Schmelkin, 2006). The **biopsychosocial model**, or interactionist model, informs this text's approach toward understanding the origins of abnormal behavior. We believe it's essential to consider the interplay of biological, psychological, and sociocultural factors in the development of psychological disorders. Although our understanding of these factors may be incomplete, we must consider all possible pathways and account for multiple factors, influences, and interactions.

Perspectives on psychological disorders provide a framework not only for explanation but also for treatment (see Chapter 4). The perspectives we use also lead to the predictions, or *hypotheses*, that guide our research or inquiries into the causes and treatments of abnormal behavior. The medical model, for example, fosters inquiry into genetic and biochemical treatment methods. In the next section, we consider the ways in which psychologists and other mental health professionals study abnormal behavior.

biopsychosocial model An integrative model for explaining abnormal in terms of the interactions of biological, psychological, and sociocultural factors.

RESEARCH METHODS IN ABNORMAL PSYCHOLOGY

Abnormal psychology is a branch of the scientific discipline of psychology. Research in the field is based on the application of the **scientific method**. Before we explore the basic steps in the scientific method, let us consider the four overarching objective of science: description, explanation, prediction, and control.

scientific method A systematic method of conducting scientific research in which theories or assumptions are examined in the light of evidence.

Description, Explanation, Prediction, and Control: The Objectives of Science

To understand abnormal behavior, we must first learn to describe it. Description allows us to recognize abnormal behavior and provides the basis for explaining it. Descriptions should be clear, unbiased, and based on careful observation. Let us pose a vignette that challenges you put yourself in the position of graduate student in psychology who is asked to describe the behavior of a laboratory rat the professor places on the desk in front of you:

Imagine you are a brand-new graduate student in psychology and are sitting in your research methods class on the first day of the term. The professor, a distinguished woman of about 50, enters the class. She is carrying a small wire-mesh cage containing a white rat. The professor removes the rat from the cage and places it on the desk. She asks the class to observe its behavior. As a serious student, you attend closely. The animal moves to the edge of the desk, pauses, peers over the edge, and seems to jiggle its whiskers at the floor below.

It maneuvers along the edge of the desk, tracking the perimeter. Now and then the rat pauses and vibrates its whiskers downward in the direction of the floor.

The professor picks up the rat and returns it to the cage. She asks the class to describe the animal's behavior.

A student responds, "The rat seems to be looking for a way to escape."

Another student says, "It is reconnoitering its environment, examining it." "Reconnoitering?" you think. That student has seen too many war movies.

The professor writes each response on the blackboard. Another student raises her hand. "The rat is making a visual search of the environment," she says. "Maybe it's looking for food."

The professor prompts other students for their descriptions.

"It's looking around," says one.

"Trying to escape," says another.

Your turn arrives. Trying to be scientific, you say, "We can't say what its motivation might be. All we know is that it's scanning its environment."

"How so?" the professor asks.

"Visually," you reply, confidently.

The professor writes the response and then turns to the class, shaking her head. "Each of you observed the rat," she said, "but none of you described its behavior. Instead, you made inferences that the rat was 'looking for a way down' or 'scanning its environment' or 'looking for food,' and the like. These are not unreasonable inferences, but they are inferences, not descriptions. They also happen to be wrong. You see, the rat is blind. It's been blind since birth. It couldn't possibly be looking around, at least not in a visual sense."

The vignette about the blind rat illustrates that our descriptions of behavior may be influenced by our expectations. Our expectations reflect our preconceptions or models of behavior, and they may incline us to perceive events—such as the rat's movements and other people's behavior—in certain ways. Describing the rat in the classroom as "scanning" and "looking" for something is an inference, or conclusion, we draw from our observations based on our model of how animals explore their environments. In contrast, description would involve a precise accounting of the animal's movements around the desk, measuring how far in each direction it moves, how long it pauses, how it bobs its head from side to side, and so on.

Nevertheless, inference is important in science. Inference allows us to jump from the particular to the general—to suggest laws and principles of behavior that can be woven into a model or **theory** of behavior. Without a way of organizing our descriptions of phenomena in terms of models and theories, we would be left with a buzzing confusion of unconnected observations.

Theories help scientists explain puzzling data and predict future data. Prediction entails the discovery of factors that anticipate the occurrence of events. Geology, for example, seeks clues in the forces affecting the earth that can forecast natural events such as earthquakes and volcanic eruptions. Scientists who study abnormal behavior seek clues in overt behavior, biological processes, family interactions, and so forth, to predict the development of abnormal behaviors as well as factors that might predict response to various treatments. It is not sufficient for theoretical models to help us explain or make sense of events or behaviors that have already occurred. Useful theories must allow us to predict the occurrence of particular behaviors.

The idea of controlling human behavior—especially the behavior of people with serious problems—is controversial. The history of societal response to abnormal behaviors, including abuses such as exorcism and cruel forms of physical restraint, render the idea particularly distressing. Within science, however, the word *control* does not imply that people are coerced into doing the bidding of others, like puppets dangling on strings. Psychologists, for example, are committed to the dignity of the individual, and the concept of human dignity requires that people be free to make decisions and exercise choices. Within this context, *controlling behavior* means using scientific knowledge to help people shape their own goals and more efficiently use their resources to accomplish them. Today, in the United States, even when helping

theory A formulation of the relationships underlying observed events.

professionals restrain people who are violently disturbed, their goal is to assist them to overcome their agitation and regain the ability to exercise meaningful choices in their lives. Ethical standards prohibit the use of injurious techniques in research or practice.

Psychologists and other scientists use the *scientific method* to advance the description, explanation, prediction, and control of abnormal behavior.

The Scientific Method

The scientific method tests assumptions and theories about the world through gathering objective evidence. Gathering evidence that is objective requires thoughtful observational and experimental methods. Here let us focus on the basic steps involved in using the scientific method in experimentation.

1. *Formulating a research question.* Scientists derive research questions from previous observations and current theories. For instance, based on their clinical observations and theoretical understanding of the underlying mechanisms in depression, psychologists may formulate questions about whether certain experimental drugs or particular types of psychotherapy help people overcome depression.
2. *Framing the research question in the form of a hypothesis.* A **hypothesis** is a prediction tested in an experiment. For example, scientists might hypothesize that people who are clinically depressed will show greater improvement on measures of depression if they are given an experimental drug than if they receive an inert placebo (a “sugar pill”).
3. *Testing the hypothesis.* Scientists test hypotheses through experiments in which variables are controlled and the differences observed. For instance, they can test the hypothesis about the experimental drug by giving the drug to one group of people with depression and giving another group the placebo. They can then test to see if the people who received the active drug showed greater improvement over a period of time than those who received the placebo.
4. *Drawing conclusions about the hypothesis.* In the final step, scientists draw conclusions from their findings about the accuracy of their hypotheses. Psychologists use statistical methods to determine the likelihood that differences between groups are significant, as opposed to chance fluctuations. Psychologists can be reasonably confident that group differences are significant—that is, not due to chance—when the probability that chance alone can explain the difference is less than 5%. When well-designed research findings fail to bear out hypotheses, scientists rethink the theories from which the hypotheses are derived. Research findings often lead to modifications in theory, new hypotheses, and in turn, subsequent research.

Let us consider the major research methods used by psychologists and others in studying abnormal behavior. Before we do so, let us consider some of the principles that guide ethical conduct in research.

Ethics in Research

Ethical principles are designed to promote the dignity of the individual, protect human welfare, and preserve scientific integrity (APA, 2002). Psychologists are prohibited by the ethical standards of their profession from using methods that cause psychological or physical harm to subjects or clients. Psychologists also must follow ethical guidelines that protect animal subjects in research.

Institutions such as universities and hospitals have review committees, called *institutional review boards* (IRBs), that review proposed research studies in the light of ethical guidelines. Investigators must receive IRB approval before they are permitted to begin their studies. Two of the major principles on which ethical guidelines are based are (a) *informed consent* and (b) *confidentiality*.

The principle of **informed consent** requires that people be free to choose whether they want to participate in research studies. They must be given sufficient information in advance about the study’s purposes and methods, and its risks and benefits, in order

hypothesis An assumption that is tested through experimentation.

informed consent The principle that subjects should receive enough information about an experiment beforehand to decide freely whether to participate.

confidentiality Protection of the identity of participants by keeping records secure and not disclosing their identities.

naturalistic observation A form of research in which behavior is observed and measured in its natural environment.

correlational method A scientific method of study that examines the relationships between factors or variables expressed in statistical terms.

correlation coefficient A statistical measure of the strength of the relationship between two variables expressed along a continuum that varies between -1.00 and $+1.00$.

to make an informed decision about their participation. Subjects must also be free to withdraw from a study at any time without penalty. In some cases, researchers may withhold certain information until all the data are collected. For instance, subjects in placebo control studies of experimental drugs are told that they may receive an inert placebo rather than the active drug. In studies in which information was withheld or deception was used, subjects must be debriefed afterward. That is, they must receive an explanation of the true methods and purposes of the study and why it was necessary to keep them in the dark. After the study is concluded, participants who received the placebo would be given the option of receiving the active treatment, if warranted.

Subjects also have a right to expect that their identities will not be revealed. Investigators are required to protect their **confidentiality** by keeping the records of their participation secure and by not disclosing their identities to others.

We now turn to discussion of the research methods used to investigate abnormal behavior.

Naturalistic Observation

In **naturalistic observation**, the investigator observes behavior in the field, where it happens. Anthropologists have observed behavior patterns in preliterate societies to study human diversity. Sociologists have followed the activities of adolescent gangs in inner cities. Psychologists have spent weeks observing the behavior of homeless people in train stations and bus terminals. They have even observed the eating habits of slender and overweight people in fast-food restaurants, searching for clues to obesity.

Scientists try to ensure that their naturalistic observations are unobtrusive, so as to minimize interference with the behavior they observe. Nevertheless, the presence of the observer may distort the behavior that is observed, and this must be taken into consideration.

Naturalistic observation provides information on how subjects behave, but it does not reveal why they do so. It may reveal, for example, that men who frequent bars and drink often get into fights. But such observations do not show that alcohol *causes* aggression. As we shall see, questions of cause and effect are best approached by means of controlled experiments.

The Correlational Method

One of the primary methods used to study abnormal behavior is the **correlational method**, which involves the use of statistical methods to examine relationships between two or more factors that can vary, which are called *variables*. For example, in Chapter 8 we will see that there is a statistical relationship, or *correlation*, between the variables of negative thinking and depressive symptoms. The statistical measure used to express the association or correlation between two variables is called the **correlation coefficient**, which can vary along a continuum ranging from -1.00 to $+1.00$. When higher values in one variable (negative thinking) are associated with higher values in the other variable (depressive symptoms), there is a *positive correlation* between the variables. If higher levels of one variable are associated with lower values of another variable, there is a *negative correlation* between the variables. Positive correlations carry positive signs; negative correlations carry negative signs. The higher the correlation coefficient—meaning the closer it is to either -1.00 or $+1.00$ —the stronger the relationship is between the variables.

The correlational method does not involve manipulation of the variables of interest. In the previous example, the experimenter does not manipulate people's depressive symptoms or negative thoughts. Rather, the investigator uses statistical techniques to determine whether these variables tend to be associated with each other. Because the experimenter does not directly manipulate the variables, a correlation between two variables does not prove that they are causally related to each other. It may be the case

that two variables are correlated but have no causal connection. For example, children's foot size is correlated with their vocabulary, but growth in foot size does not cause the growth of vocabulary. Depressive symptoms and negative thoughts are correlated, as we shall see in Chapter 8. Though negative thinking may be a causative factor in depression, it is also possible that the direction of causality works the other way—that depression gives rise to negative thinking. Or perhaps the direction of causality works both ways, with negative thinking contributing to depression and depression in turn influencing negative thinking. Then again, depression and negative thinking may both reflect a common causative factor, such as stress, and not be causally related to each other at all. In sum, we cannot tell from a correlation alone whether or not variables are causally linked. To address questions of cause and effect, we need to use experimental methods in which the experimenter manipulates one or more variables of interest and observes their effects on other variables or outcomes under controlled conditions.

Although the correlational method cannot determine cause-and-effect relationships, it does serve the scientific objective of prediction. When two variables are correlated, we can use one to predict the other. Knowledge of correlations among alcoholism, family history, and attitudes toward drinking helps us predict which adolescents are at great risk of developing problems with alcohol, although causal connections are complex and somewhat nebulous. Knowing which factors predict future problems helps direct preventive efforts toward high-risk groups.

The Longitudinal Study The **longitudinal study** is a type of correlational study in which individuals are periodically tested or evaluated over lengthy periods of time, perhaps for decades. By studying people over time, researchers seek to identify factors or events in people's lives that predict the later development of abnormal behavior patterns, such as depression or schizophrenia. Prediction is based on the *correlation* between events or factors that are separated in time. However, this type of research is time consuming and costly. It requires a commitment that may literally outlive the original investigators. Therefore, long-term longitudinal studies are relatively uncommon. In Chapter 12 we examine one of the best-known longitudinal studies, the Danish high-risk study that has tracked, since 1962, a group of children whose mothers had schizophrenia and who were themselves at increased risk of developing the disorder (Mednick, Parnas, & Schulsinger, 1987; Parnas et al., 1993).

The Experimental Method

The **experimental method** allows scientists to demonstrate causal relationships by manipulating the causal factor and measuring its effects under controlled conditions that minimize the risk of other factors explaining the results.

The term *experiment* can cause some confusion. Broadly speaking, an experiment is a trial or test of a hypothesis. From this vantage point, any method that seeks to test a hypothesis could be considered experimental—including naturalistic observation and correlational studies. But investigators usually limit the use of the term *experimental method* to refer to studies in which researchers seek to uncover cause-and-effect relationships by directly manipulating possible causal factors.

The factors or variables hypothesized to play a causal role are manipulated or controlled by the investigator in experimental research. These are called the **independent variables**. The observed effects are labeled **dependent variables** because changes in them are believed to depend on the independent or manipulated variable. Dependent variables are observed and measured, not manipulated, by the experimenter. Examples of independent and dependent variables of interest to investigators of abnormal behavior are shown in Table 1.1.

In an experiment, subjects are exposed to an *independent variable*, for example, the type of beverage (alcoholic vs. nonalcoholic) they consume in a laboratory setting. They are then observed or examined to determine whether the independent variable makes a difference in their behavior, or more precisely, whether the independent variable affects



Naturalistic observation. Psychologists take their research into the streets when they conduct naturalistic observation studies—and into the homes, restaurants, schools, and other settings where behavior can be directly observed. For example, psychologists have unobtrusively positioned themselves in school playgrounds to observe how aggressive or socially anxious children interact with peers.

longitudinal study A research study in which subjects are followed over time.

experimental method A scientific method that aims to discover cause-and-effect relationships by manipulating independent variables and observing the effects on the dependent variables.

independent variables Factors that are manipulated in experiments.

dependent variables Outcomes of an experiment believed to be dependent on the effects of an independent variable.

TABLE 1.1

Examples of Independent and Dependent Variables in Experimental Research

Independent Variables	Dependent Variables
Type of treatment: for example, different types of drug treatments or psychological treatments	Behavioral variables: for example, measures of adjustment, activity levels, eating behavior, smoking behavior
Treatment factors: for example, brief vs. long-term treatment, inpatient vs. outpatient treatment	Physiological variables: for example, measures of physiological responses such as heart rate, blood pressure, and brain wave activity
Experimental manipulations: for example, types of beverage consumed (alcoholic vs. nonalcoholic)	Self-report variables: for example, measures of anxiety, mood, or marital or life satisfaction

the dependent variable—for example, whether they behave more aggressively if they consume alcohol. Studies need to have a sufficient number of participants (subjects) to be able to detect statistically meaningful differences between experimental groups.

Experimental and Control Groups Well-controlled experiments randomly assign subjects to experimental and control groups. The **experimental group** is given the experimental treatment, whereas the **control group** is not. Care is taken to hold other conditions constant for each group. By using **random assignment** and holding other conditions constant, experimenters can be reasonably confident that the experimental treatment, and not uncontrolled factors, such as room temperature or differences between the types of subjects in the experimental and control groups, brought about the differences in outcome between the experimental and control groups.

Why should experimenters assign subjects to experimental and control groups at random? Consider a study intended to investigate the effects of alcohol on behavior. Let's suppose we allowed subjects themselves to decide whether or not they wanted to be in an experimental group that drank alcohol or a control group that drank a non-alcoholic beverage. If this were the case, differences between the groups might be due to an underlying **selection factor** rather than the experimental manipulation.

For example, subjects who *chose* the alcoholic beverage might differ in their personalities from those who chose the control beverage. They might be more willing to explore or to take risks, for example. Therefore, we would not know whether the independent variable (type of beverage) or a selection factor (difference in the kinds of subjects making up the groups) was ultimately responsible for observed differences in behavior. Random assignment controls for selection factors by ensuring that subject characteristics are randomly distributed across groups. Thus it is reasonable to assume that differences between groups result from the treatments they receive rather than from differences between the subjects making up the groups. Still, it is possible that apparent treatment effects stem from subjects' expectancies about the treatments they receive rather than from the active components in the treatments themselves. In other words, knowing you are being given an alcoholic beverage to drink might affect your behavior, quite apart from the alcoholic content of the beverage itself.

Controlling for Subject Expectancies To control for subject expectancies, experimenters rely on procedures that render subjects **blind**, or uninformed about the treatments they are receiving. For example, participants in a study designed to test an investigational medication for depression would be kept uninformed about whether they are receiving the actual drug or a **placebo**, an inert drug that physically resembles the active drug. We use placebos to control for the possibility that positive treatment outcomes result from hopeful expectancies people hold, rather than the chemical properties of the drug or specific features of the treatment (Dar, Stronguin, & Etter, 2005).

experimental group In an experiment, a group that receives the experimental treatment.

control group In an experiment, a group that does not receive the experimental treatment.

random assignment A method of assigning research subjects at random to experimental or control groups to balance these groups on the characteristics of people that comprise them.

selection factor A type of bias in which differences between experimental and control groups result from differences in the types of participants in the group, not from the independent variable.

blind A state of being unaware of whether one has received an experimental treatment.

placebo An inert medication or bogus treatment that is intended to control for expectancy effects.

In a *single-blind placebo-control study*, subjects are randomly assigned to treatment conditions in which they receive either an active drug (experimental condition) or an inert placebo (placebo-control condition), but are kept blind, or uninformed, about which drug they receive. It is also helpful to keep the researchers blind as to which substances the subjects receive, so as to prevent the researchers' own expectations from affecting the results. So in the case of a *double-blind placebo design*, neither the researcher nor the subject is told whether an active drug or a placebo is administered.

Double-blind studies are used to control for both subject and experimenter expectancies. But a major limitation of single-blind and double-blind studies is that subjects and experimenters can sometimes “see through” the blind (Mooney, White, & Hatsukami, 2004). Telltale side effects or obvious drug effects can break the blind, making it seem more like a Venetian blind with the slats slightly open. Still, the double-blind placebo control is among the strongest and most popular experimental designs, especially in drug treatment research (Leber, 2000).

Although placebos are routinely used in clinical research, evidence indicates that the effects of placebos are generally weak (Bailar, 2001; Hrobjartsson & Gotzsche, 2001). Placebo effects are generally strongest in pain studies, presumably because pain is a subjective experience that may be influenced more by the power of suggestion than other physiological factors that rely on objective measures, such as blood pressure.

Placebo-control groups are also used in psychotherapy research to control for subject expectancies. Assume you were to study the effects of therapy method A on mood. You could randomly assign research participants to either an experimental group in which they receive the new therapy or to a (no-treatment) waiting-list control group. But in that case, the experimental group might show greater improvement because participation in treatment engendered hopeful expectations, not because of the particular therapy method used. Although a “waiting-list” control group might control for positive effects due simply to the passage of time, it would not account for placebo effects, such as the benefits of therapy resulting from instilling a sense of hope and expectations of success.

To control for placebo effects, we might use an *attention-placebo* control group in which participants are exposed to a believable or credible treatment that contains the nonspecific factors that all therapies share—such as the attention and emotional support of a therapist—but not the specific therapeutic ingredients represented in the active treatment. Attention-placebo treatments commonly substitute general discussions of participants' problems for the specific ingredients of therapy contained in the experimental treatment. Unfortunately, although we may keep attention-placebo subjects blind as to whether they are receiving the experimental treatment, their therapists are generally aware of which treatment is being administered. Therefore, the attention-placebo method may not control for therapists' expectations.

Experimental Validity Experimental studies are judged on whether they are valid, or sound. There are many aspects of validity, including *internal validity*, *external validity*, and *construct validity*. We will see in Chapter 3 that the term *validity* is also applied in the context of tests and measures to refer to the degree to which these instruments measure what they purport to measure.

Experiments have **internal validity** when the observed changes in the dependent variable(s) can be causally related to the independent or treatment variable. Assume a group of depressed subjects is treated with a new antidepressant medication (the independent variable), and changes in their mood and behavior (the dependent variables) are tracked over time. After several weeks of treatment, the researcher finds most subjects have improved and claims the new drug is an effective treatment for depression. Not so fast! How does the experimenter know that the independent variable and not some other factor was causally responsible for the improvement? Perhaps the subjects improved naturally as time passed, or perhaps they were exposed to other events responsible for their improvement. Experiments lack internal validity to the extent



The real thing or a placebo? Placebos are inert pills that physically resemble active drugs. What are the two major types of placebo-control studies? What are they intended to control? What is the major limitation of these designs?

internal validity The degree to which manipulation of the independent variables can be causally related to changes in the dependent variables.

they fail to control for other factors (called *confounds*, or threats to validity) that might pose rival hypotheses for the results.

Experimenters *randomly assign* subjects to treatment and control groups to help control for such rival hypotheses. Random assignment helps ensure that subjects' attributes—intelligence, motivation, age, race, and so on—are randomly distributed across the groups and are not likely to favor one group over the other. Through the random assignment to groups, researchers can be reasonably confident that significant differences between the treatment and control groups reflect the effects of independent (treatment) variables and not confounding selection factors. Studies need to include large enough samples of subjects to be able to randomize sufficient numbers of participants to experimental conditions and to be able to discern significant statistical differences between groups.

External validity refers to the generalizability of results of an experimental study to other subjects, settings, and times. In most cases, researchers are interested in generalizing the results of a specific study (for example, effects of a new antidepressant medication on a sample of people who are depressed) to a larger population (people in general who are depressed). The external validity of a study is strengthened to the degree that the *sample* is representative of the target population. In studying the problems of the urban homeless, it is essential to recruit a representative sample of the homeless population, for example, rather than focusing on a few homeless people who happen to be available. One way of obtaining a representative sample is by means of random sampling. In a *random sample*, every member of the target population has an equal chance of being selected.

Researchers may seek to extend the results of a particular study by means of replication, which refers to the process of repeating the experiment in other settings, with samples drawn from other populations, or at other times. A treatment for hyperactivity may be helpful with economically deprived children in an inner-city classroom but not with children in affluent suburbs or rural areas. The external validity of the treatment may be limited if its effects do not generalize to other samples or settings. That does not mean the treatment is less effective, but rather that its range of effectiveness may be limited to certain populations or situations.

Construct validity is a conceptually higher level of validity. It is the degree to which treatment effects can be accounted for by the theoretical mechanisms or constructs represented in the independent variables. A drug, for example, may have predictable effects but not for the theoretical reasons claimed by the researchers.

Consider a hypothetical experimental study of a new antidepressant medication. The research may have internal validity in the form of solid controls and external validity in the form of generalizability across samples of seriously depressed people. However, it may lack construct validity if the drug does not work for the reasons proposed by the researchers. Perhaps the researchers assumed that the drug would work by raising the levels of certain chemicals in the nervous system, whereas the drug actually works by increasing the sensitivity of receptors for those chemicals. “So what?” we may ask. After all, the drug still works. True enough—in terms of immediate clinical applications. However, a better understanding of why the drug works can advance theoretical knowledge of depression and give rise to the development of yet more effective treatments.

We can never be certain about the construct validity of research. Scientists recognize that their current theories about why their results occurred may eventually be toppled by other theories that better account for the findings.

Epidemiological Studies

Epidemiological studies examine the rates of occurrence of abnormal behavior in various settings or population groups. One type of epidemiological study is the **survey method**, which relies on interviews or questionnaires. Surveys are used to ascertain the rates of occurrence of various disorders in the population as a whole and in various subgroups classified according to such factors as race, ethnicity, gender, or social class. Rates of occurrence of a given disorder are expressed in terms of

external validity The degree to which experimental results can be generalized to other settings and conditions.

construct validity The degree to which treatment effects can be accounted for by the theoretical mechanisms (constructs) represented in the independent variables.

epidemiological studies Research studies that track rates of occurrence of particular disorders among different population groups.

survey method A research method in which large samples of people are questioned by means of a survey instrument.

incidence, the number of new cases occurring during a specific period of time, and **prevalence**, the overall number of cases of a disorder existing in the population during a given period of time. Prevalence rates, then, include both new and continuing cases.

Epidemiological studies may point to potential causal factors in medical illnesses and psychological disorders, even though they lack the power of experiments. By finding that illnesses or disorders “cluster” in certain groups or locations, researchers can identify distinguishing characteristics that place these groups or regions at higher risk. Yet such epidemiological studies cannot control for selection factors—that is, they cannot rule out the possibility that other unrecognized factors might play a causal role in putting a certain group at greater risk. Therefore they must be considered suggestive of possible causal influences that must be tested further in experimental studies.

Samples and Populations In the best of possible worlds, we would conduct surveys in which every member of the population of interest would participate. In that way, we could be sure the survey results accurately represent the population we want to study. In reality, unless the population of interest is rather narrowly defined (say, for example, designating the population of interest as the students living on your dormitory floor), surveying every member of a given population is extremely difficult, if not impossible. Even census takers can’t count every head in the general population. Consequently, most surveys are based on a sample, or subset, of the population. Researchers must take steps when constructing a sample to ensure that it *represents* the target population. For example, a researcher who sets out to study smoking rates in a local community by interviewing people drinking coffee in late-night cafés will probably overestimate its true prevalence.

One method of obtaining a representative sample is random sampling. A **random sample** is drawn in such a way that each member of the population of interest has an equal probability of selection. Epidemiologists sometimes construct random samples by surveying at random a given number of households within a target community. By repeating this process in a random sample of U.S. communities, the overall sample can approximate the general U.S. population, based on even a tiny percentage of the overall population.

Random sampling is often confused with random assignment. *Random sampling* refers to the process of randomly choosing individuals within a target population to participate in a survey or research study. By contrast, *random assignment* refers to the process by which members of a research sample are assigned at random to different experimental conditions or treatments.

Kinship Studies

Kinship studies attempt to disentangle the roles of heredity and environment in determining behavior. Heredity plays a critical role in determining a wide range of traits. The structures we inherit make our behavior possible (humans can walk and run) and at the same time place limits on us (humans cannot fly without artificial equipment). Heredity plays a role in determining not only our physical characteristics (hair color, eye color, height, and the like) but also many of our psychological characteristics. The science of heredity is called *genetics*.

Genes are the basic building blocks of heredity. They regulate the development of traits. *Chromosomes*, rod-shaped structures that house our genes, are found in the nuclei of the body’s cells. A normal human cell contains 46 chromosomes, organized into 23 pairs. Chromosomes consist of large complex molecules of deoxyribonucleic acid (DNA). Genes occupy various segments along the length of chromosomes. Scientists believe there are about 20,000 to 25,000 genes in the nucleus of a human body cell (Lupski, 2007; Volkow, 2006).

The set of traits specified by our genetic code is referred to as our **genotype**. Our appearance and behavior are not determined by our genotype alone. We are also influenced by environmental factors such as nutrition, learning, exercise, accidents and illnesses, and culture. The constellation of observable or expressed traits is called a **phenotype**. Our phenotype represents the interaction of genetic and environmental

incidence The number of new cases of a disorder that occurs within a specific period of time.

prevalence The overall number of cases of a disorder in a population within a specific period of time.

random sample A sample that is drawn in such a way that every member of a population has an equal chance of being included.

TRUTH or FICTION

Recent evidence shows there are literally millions of genes in the nucleus of every cell in the body.

❑ **FALSE.** Although no one yet knows the precise number, scientists believe there are about 20,000 to 25,000 genes in the nucleus of each body cell, but certainly not millions.

genotype The set of traits specified by an individual’s genetic code.

phenotype An individual’s actual or expressed traits.

proband The case first diagnosed of a given disorder.

TRUTH or FICTION

Fraternal twins share the same genetic inheritance as do pairs of other siblings who are not twins.

✓ **TRUE.** True, fraternal twins share 50% of their genes in common, as do other siblings who are not twins.

influences. People who possess genotypes for particular psychological disorders are said to have a *genetic predisposition* that makes them more likely to develop the disorder in response to stress or other factors, such as physical or psychological trauma.

The more closely people are related, the more genes they have in common. Children receive half their genes from each parent. Thus there is a 50% overlap in genetic heritage between each parent and his or her offspring. Siblings (brothers and sisters) similarly share half their genes in common.

To determine whether abnormal behavior runs in a family, as we would expect if genetics plays a role, researchers locate a person with the disorder and then study how the disorder is distributed among the person's family members. The case first diagnosed is referred to as the index case, or **proband**. If the distribution of the disorder among family members of the proband approximates their degree of kinship, there may be a genetic involvement in the disorder. However, the closer their kinship, the more likely people also are to share environmental backgrounds. For this reason, twin and adoptee studies are of particular value.

Twin Studies Sometimes a fertilized egg cell (or *zygote*) divides into two cells that separate, so each develops into a separate person. In such cases, there is a 100% overlap in genetic makeup, and the offspring are known as identical twins, or monozygotic (MZ) twins. Sometimes a woman releases two egg cells, or ova, in the same month, and they are both fertilized. In such cases, the *zygotes* develop into fraternal twins, or dizygotic (DZ) twins. DZ twins overlap 50% in their genetic heritage, just as other siblings do.

Identical, or MZ, twins are important in the study of the relative influences of heredity and environment because differences between MZ twins are the result of environmental rather than genetic influences. In twin studies, researchers identify individuals with a specific disorder who are members of MZ or DZ twin pairs and then study the other twins in the pairs. A role for genetic factors is suggested when MZ twins (who have 100% genetic overlap) are more likely than DZ twins (who have 50% genetic overlap) to share a disorder in common. The term *concordance rate* refers to the percentage of cases in which both twins have the same trait or disorder. As we shall see, investigators find higher concordance rates for MZ twins than DZ twins for some forms of abnormal behavior, such as schizophrenia and major depression.



Twin studies. Identical twins have 100% of their genes in common, as compared to 50% overlap among fraternal twins or any two other siblings. Establishing that identical twins are more likely to share a given disorder than are fraternal twins provides strong evidence for a genetic contribution to the disorder.

Even among MZ twins, though, environmental influences cannot be ruled out. Parents and teachers, for example, often encourage MZ twins to behave in similar ways. Put in another way: If one twin does X, everyone expects the other to do X also. Expectations have a way of influencing behavior and making for self-fulfilling prophecies. We should also note that twins might not be typical of the general population, so we need to be cautious when generalizing the results of twin studies to the larger population.

Adoptee Studies **Adoptee studies** provide powerful arguments for or against a role for genetic factors in the appearance of psychological traits and disorders. Assume that children are reared by adoptive parents from a very early age—perhaps from birth. The children share environmental backgrounds with their adoptive parents but not their genetic heritages. Then assume we compare the traits and behavior patterns of these children to those of their biological parents and their adoptive parents. If the children show a greater similarity to their biological parents than their adoptive parents on certain traits or disorders, we have strong evidence for genetic factors in these traits and disorders.

The study of monozygotic twins reared apart can provide even more dramatic testimony to the relative roles of genetics and environment in shaping abnormal behavior. However, this situation is so uncommon that few examples exist in the literature. Although adoptee studies may represent the strongest source of evidence for genetic factors in explaining abnormal behavior patterns, we should recognize that adoptees, like twins, may not be typical of the general population. In later chapters we explore the role that adoptee and other kinship studies play in ferreting out genetic and environmental influences in many psychological disorders.

Case Studies

Case studies have been important influences in the development of theories and treatment of abnormal behavior. Freud developed his theoretical model primarily on the basis of case studies, such as that of Anna O. Therapists representing other theoretical viewpoints have also reported cases studies.

Types of Case Studies **Case studies** are intensive studies of individuals. Some case studies are based on historical material, involving subjects who have been dead for hundreds of years. Freud, for example, conducted a case study of the Renaissance artist and inventor Leonardo da Vinci. More commonly, case studies reflect an in-depth analysis of an individual's course of treatment. They typically include detailed histories of the subject's background and response to treatment. The therapist attempts to glean information from a particular client's experience in therapy that may be of help to other therapists treating similar clients.

Despite the richness of material that case studies can provide, they are much less rigorous as research designs than experiments. Distortions or gaps in memory are bound to occur when people discuss historical events, especially those of their childhoods. Some people may intentionally color events to make a favorable impression on the interviewer; others aim to shock the interviewer with exaggerated or fabricated recollections. Interviewers themselves may unintentionally guide subjects into reporting histories that mirror their theoretical preconceptions.

Single-Case Experimental Designs The lack of control available in the traditional case-study method led researchers to develop more sophisticated methods, called **single-case experimental designs** (sometimes called *single-participant research designs*), in which subjects serve as the own controls (Morgan & Morgan, 2001). One of the most common forms of the single-case experimental design is the A-B-A-B, or **reversal design** (see Figure 1.2). This method involves repeated measurement of behavior across four successive phases:

1. A baseline phase (A). This phase occurs prior to treatment and allows the experimenter to establish a baseline rate for the behavior before treatment begins.
2. A treatment phase (B). Now the target behaviors are measured as the client undergoes treatment.

adoptee studies Studies that compare the traits and behavior patterns of adopted children to those of their biological parents and their adoptive parents.

case study A carefully drawn biography based on clinical interviews, observations, and psychological tests.

TRUTH or FICTION

Case studies have been conducted on dead people.

✓ **TRUE.** Case studies have been conducted on people who have been dead for hundreds of years. An example is Freud's study of Leonardo da Vinci. Such studies rely on historical records rather than interviews.

single-case experimental design A type of case study in which the subject is used as his or her own control.

reversal design An experimental design that consists of repeated measurement of a subject's behavior through a sequence of alternating baseline and treatment phases.

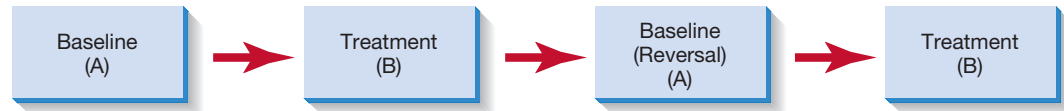


FIGURE 1.2 Diagram of an A-B-A-B reversal design.

3. A second baseline phase (A, again). Treatment is now temporarily withdrawn or suspended. This is the reversal in the reversal design, and it is expected that the positive effects of treatment should now be reversed because the treatment has been withdrawn.
4. A second treatment phase (B, again). Treatment is reinstated, and the target behaviors are assessed yet again.

The investigator looks for evidence that change in the observed behavior occurs coincident with treatment. If the behavior improves whenever treatment is introduced (during the first and second treatment phases) but returns (or is reversed) to baseline levels during the reversal phase, the experimenter can be reasonably confident the treatment had the intended effect.

A reversal design is illustrated by a case in which Azrin and Peterson (1989) used a controlled blinking treatment to eliminate a severe eye tic—a form of squinting the eyes shut tightly for a fraction of a second—in a 9-year-old girl. The tic occurred about 20 times a minute when the girl was at home. In the clinic, the rate of eye tics or squinting was measured for 5 minutes during a baseline period (A). Then the girl was prompted to blink her eyes softly every 5 seconds (B). The experimenters reasoned that voluntary “soft” blinking would activate motor (muscle) responses incompatible with those producing the tic, thereby suppressing the tic. As you can see in Figure 1.3, the tic

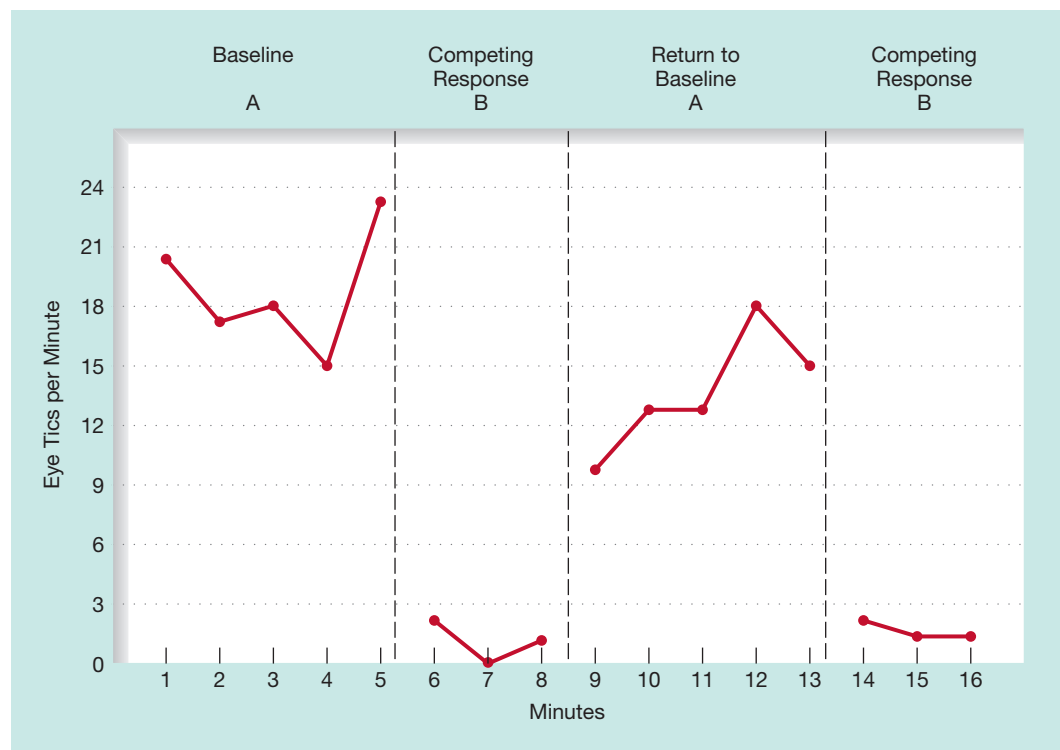


FIGURE 1.3 Use of an A-B-A-B reversal design in the Azrin and Peterson study.

Notice how the target response, eye tics per minute, decreased when the competing response was introduced in the first “B” phase. The rate then increased to near baseline levels when the competing response was withdrawn during the second “A” phase. It decreased again when the competing response was reinstated in the second “B” phase.

was virtually eliminated in but a few minutes of practicing the incompatible, or competing, response (“soft” blinking) but returned to near baseline levels during the reversal phase (A), when the competing response was withdrawn. The positive effects were quickly reinstated during the second treatment period (B). The child was also taught to practice the blinking response at home during scheduled 3-minute practice periods and whenever the tic occurred or she felt an urge to squint. The tic was eliminated during the first 6 weeks of the treatment program and remained absent at a follow-up evaluation 2 years later.



A CLOSER LOOK

Thinking Critically About Abnormal Psychology

We are exposed to a flood of information about mental health streaming through the popular media—television, radio, and print media, including books, magazines, and newspapers, and increasingly, the Internet. We may hear a news report touting a new drug as a “breakthrough” in the treatment of anxiety, depression, or obesity, only to later learn that the so-called breakthrough doesn’t live up to expectations or carries serious side effects. Some reports in the media are accurate and reliable, whereas others are misleading, biased, or contain half-truths, exaggerated claims, or unsupported conclusions.

Some therapies offered to the general public are nothing but pure shams. In the nearby *Controversies in Abnormal Psychology* feature, two leading clinical psychologists, John Norcross and Gerald Koocher, take a critical look at the problem of *psychoquackery*.

To sort through the welter of confusion, we need to ready ourselves with the skills of critical thinking, to adopt a questioning attitude toward the information we hear and read. Critical thinkers weigh evidence to see if claims stand up to scrutiny. Becoming a critical thinker means never taking claims at face value. It means looking at both sides of the argument. Most of us take certain “truths” for granted. Critical thinkers, however, evaluate assertions and claims for themselves.

We encourage you to apply critical-thinking skills as you study this book. Adopt a skeptical attitude toward information you receive. Carefully examine the definitions of terms. Evaluate the logical bases of arguments. Evaluate claims in the light of available evidence. Here are some key features of critical thinking:

1. **Maintain a skeptical attitude.** Don’t take anything at face value, not even claims made by respected scientists or textbook authors. Consider the evidence yourself. Seek additional information. Investigate the credibility of your sources.
2. **Consider the definitions of terms.** Statements may be true or false depending on how the terms they use are defined. Consider the statement, “Stress is bad for you.” If we define *stress* in terms of hassles and work or family pressures that stretch to the max our ability to cope, then there is substance to the statement. However, if we define stress (see Chapter 5) as conditions that require us to adjust, which may include such positive life events as a new marriage or the birth of a child, then certain types of stress can be positive, even if they are stressful. Perhaps, as we’ll see, we all need some amount of stress to be energized and alert.
3. **Weigh the assumptions or premises on which arguments are based.** Consider a case in which we are comparing differences in the rates of psychological disorders across racial or ethnic groups in our society. Assuming we find differences, should we conclude that ethnicity or racial identity accounts for these differences? This conclusion might be valid if

we can assume that all other factors that distinguish one racial or ethnic group from another are held constant. However, ethnic or racial minorities in the United States and Canada are disproportionately represented among the poor, and the poor are more apt to develop more severe psychological disorders. Thus, differences we find among racial or ethnic groups may be a function of poverty, not race or ethnicity. These differences may also be due to stereotyping of minorities by clinicians in making diagnostic judgments, rather than to true differences in underlying rates of the disorder.

4. **Bear in mind that correlation is not causation.** Consider the relationship between depression and stress. Evidence shows a positive correlation between these variables, which means depressed people tend to encounter high levels of stress (e.g., Drieling, Calker, & Hecht, 2006; Kendler et al., 2004; Monroe et al., 2001). But does stress cause depression? Perhaps it does. Or perhaps depression leads to greater stress. After all, depressive symptoms are stressful in themselves and may lead to additional stress as the person finds it increasingly difficult to meet life responsibilities, such as keeping up with work at school or on the job. Perhaps the two variables are not causally linked at all but are linked through a third variable, such as an underlying genetic factor. Is it possible that people inherit clusters of genes that make them more prone to both depression and stress?
5. **Consider the kinds of evidence on which conclusions are based.** Some conclusions, even seemingly “scientific” conclusions, are based on anecdotes and personal endorsements, not sound research. There is much controversy today about so-called recovered memories that are said to suddenly resurface in adulthood, usually during psychotherapy or hypnosis, and usually involving incidents of sexual abuse committed during childhood by the person’s parents or family members. Are recovered memories accurate? (See Chapter 7.)
6. **Do not oversimplify.** Consider the statement “Alcoholism is inherited.” In Chapter 9, we review evidence suggesting that genetic factors may create a predisposition to alcoholism, at least in males. But the origins of alcoholism, as well as of schizophrenia, depression, and physical health problems such as cancer and heart disease, are complex and reflect the interplay of biological and environmental factors. For instance, people may inherit a predisposition to develop a particular disorder but may be able to avoid developing it if they live in a healthy environment or learn to manage stress effectively.
7. **Do not overgeneralize.** In Chapter 7, we consider evidence showing that a history of severe abuse in childhood figures prominently in the great majority of cases of people who later develop multiple personalities. Does this mean that most abused children go on to develop multiple personalities? Actually, very few do.

critical thinking Adoption of a questioning attitude and careful scrutiny of claims and arguments in the light of evidence.

No matter how well controlled the design, or how impressive the results, single-case designs suffer from weak external validity because they cannot show whether a treatment effective for one person is effective for others. Replication with other individuals can help strengthen external validity. But results from controlled experiments on groups of individuals are needed to provide more convincing evidence of treatment effectiveness and generalizability.

Scientists use different methods to study phenomena of interest to them. But all scientists share a skeptical, hard-nosed way of thinking called **critical thinking**. When thinking critically, we adopt a willingness to challenge the conventional wisdom that many of us take for granted. We find *reasons* to support beliefs rather than relying on feelings or gut impressions. We maintain an open mind and seek evidence to support or refute beliefs or claims. In the nearby “A Closer Look” section, we examine the features of critical thinking and how they can be applied to our study of abnormal psychology.



CONTROVERSIES IN ABNORMAL PSYCHOLOGY

Psychoquackery: Discredited Psychological Treatments in Mental Health

—JOHN C. NORCROSS AND GERALD P. KOOCHER

Psychologists have an ethical commitment to offer treatments and relationships that work (Koocher & Keith-Spiegel, 2007). The *evidence-based practice* (EBP) movement in mental health attempts to identify, implement, and disseminate treatments that have been proven effective according to clinical and research evidence (APA Task Force, 2006). Although in principle all psychologists dedicate themselves to effective practice, the EBP movement has provoked enormous controversy on the decision rules to determine what works and what qualifies as evidence (Norcross, Beutler, & Levant, 2005). (See Chapter 4 for a discussion of evidence-based treatment.)

We believe that it might prove as useful and probably easier to establish what does *not* work—discredited psychological treatments. Or, as we prefer to call them, *psychoquackery*.

Pioneering efforts to identify pseudoscientific treatments (e.g., Della Sala, 1999; Eisner, 2000; Lilienfeld, Lynn, & Lohr, 2003) suffer from a prominent limitation. None of them systematically relied on expert consensus to determine which treatments to include. Instead, the authors selected ineffective treatments on the basis of their own opinions or assumed a professional consensus already existed. To remedy this problem, we conducted a poll of 101 mental health professionals to secure a professional consensus on what does not work (Norcross, Koocher, & Garofalo, 2006).

For the purpose of our expert poll, we defined *discredited treatments* as those unable to consistently produce success beyond that obtained by the passage of time alone, positive expectancies of change, or credible placebo. (The term *discredited* includes ineffective, detrimental, and disproven interventions.)

The experts showed considerable agreement in identifying a number of treatments they considered “certainly discredited.” These included use of pyramid structures, the orgone accumulator, crystal healing, past lives therapy, future lives therapy, treatments for PTSD caused by alien abduction, rebirthing therapies, color therapy, primal scream therapy, chiropractic manipulation, thought field therapy, prefrontal lobotomy, and aroma therapy. A number of other treatments were designated as “probably discredited,” including age-regression methods, sexual reorientation/repairative therapy for

homosexuality, treatments for mental disorders resulting from Satanic ritual abuse, healing touch, and reparenting therapies.

Consider the discredited practice of using a device called the *orgone energy accumulator*, in which we sit in the accompanying photograph. Wilhelm Reich (1897–1957), an Austrian psychoanalyst who trained with Sigmund Freud, claimed to have discovered a physical form of energy he called *orgone*, which he believed is naturally present in all living things. Reich argued that orgone is the bio-energy basis for Freud’s theory of neurosis. He claimed that traumatic experiences blocked the natural flow of this life-energy in the body, leading to physical and mental disease. In 1940, Reich constructed a device to accumulate orgone energy: a six-sided box constructed of alternating layers of organic materials (to attract the energy) and metallic materials (to radiate the energy toward the center of the box). Patients sit inside the accumulator and allegedly absorb orgone energy through the skin and lungs. Reich claimed that the accumulator had a healthy effect on blood and body tissue by improving the flow of life-energy and by releasing energy blocks. But the Food and Drug Administration (FDA), the U.S. government watchdog agency, thought otherwise. In 1954, the FDA sought an injunction against Reich, charging violation of the Food, Drug, and Cosmetic Act by selling misbranded and adulterated devices in interstate commerce and making false and misleading claims. The FDA called accumulators a sham and orgone energy nonexistent. A judge issued an injunction ordering all accumulators destroyed and prohibiting all labeling referring to orgone energy. The court ordered some of Reich’s writings burned as well.

Experts widely consider orgone therapy, and the other psychological treatments previously mentioned, as discredited. We should interpret these results carefully, because consensus does not equal truth; even experts can be and have been wrong. A treatment considered discredited for one purpose might prove credible for another. We should take care not to threaten innovation and creativity in practice. And we must also avoid hubris by bearing in mind that contemporary therapies we consider effective today may be discredited at some point in the future.

At the same time, the consensus emerging from the poll leaves us feeling encouraged. Psychological science tends to behave in a self-correcting manner in that its foundation lies in empirical evidence. Mature professions

(continued)

should have the ability to publicly shun discredited practices. As a field, we are making progress in differentiating science from pseudoscience in the practice of psychology.

The listing of discredited practices offers a cogent first step in consensually identifying the psychoquackery of modern mental health. The President's New Freedom Commission on Mental Health (2003; www.mentalhealthcommission.gov) called attention to both the *underuse* of proven treatments and the *overuse* of treatments for which little evidence exists. We can simultaneously use (inclusively defined) evidence-based practices to promote what *does* work and avoid (consensually identified) discredited procedures to eradicate what does *not* work.

Critical Thinking

- How would you decide if a particular treatment method was effective? Would you base your decision on clinical experience, research evidence, and/or the patient's reports?
- If you were to publish a list of discredited or quack treatments, what would be the advantages and disadvantages of securing a group consensus on the list?
- The FDA regulates medications but does not regulate psychological treatments. Should they be legally regulated? Why or why not?

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Drs. John Norcross (top) and Gerald Koocher (bottom) are pictured here in an orgone accumulator. The identity of the parrot remains unknown.

SUMMING UP

How Do We Define Abnormal Behavior?

What criteria do mental health professionals use to determine that behavior is abnormal? Psychologists consider behavior abnormal when it meets some combination of the following criteria: when behavior is (a) unusual or statistically infrequent, (b) socially unacceptable or in violation of social norms, (c) fraught with misperceptions or misinterpretations of reality, (d) associated with states of severe personal distress, (e) maladaptive or self-defeating, or (f) dangerous. Psychological disorders are patterns of abnormal behavior associated with disturbances in states of emotional distress or impaired functioning.

How do views about abnormal behavior vary across cultures? Behaviors deemed normal in one culture may be considered abnormal in another. Concepts of health and illness are different in different cultures. Abnormal behavior patterns also take different forms in different cultures, and societal views or models explaining abnormal behavior also vary across cultures.

Historical Perspectives on Abnormal Behavior

How have views about abnormal behavior changed over time? Ancient societies attributed abnormal behavior to divine or supernatural forces. In medieval times, abnormal behavior was a sign of possession by the devil, and exorcism was intended to rid the possessed of the evil spirits that afflicted them. The 19th-century German physician Wilhelm Griesinger argued that abnormal behavior was caused by diseases of the brain. He and another German physician who followed him, Emil Kraepelin, were influential in the development of the modern medical model, which likens abnormal behavior patterns to physical illnesses.

How has the treatment of people with mental disorders changed over time? Asylums, or madhouses, arose throughout Europe in the late 15th and early 16th centuries. Conditions in these asylums were dreadful. With the rise of moral therapy in the 19th century, conditions in mental hospitals improved. Proponents of moral therapy believed that mental patients

could be restored to functioning if they were treated with dignity and understanding. The decline of moral therapy in the latter part of the 19th century led to the belief that the “insane” could not be treated successfully. During this period of apathy, mental hospitals deteriorated, offering little more than custodial care. Not until the middle of the 20th century did public concern about the plight of mental patients lead to the development of community mental health centers as alternatives to long-term hospitalization.

What are the major contemporary models of abnormal behavior? The medical model conceptualizes abnormal behavior patterns, like physical diseases, in terms of clusters of symptoms, called syndromes, which have distinctive causes presumed to be biological in nature. Psychological models focus on the psychological roots of abnormal behavior and derive from psychoanalytic, behavioral, humanistic, and cognitive perspectives. The sociocultural model emphasizes a broader perspective that takes into account the social contexts in which abnormal behavior occurs. Today, many theorists subscribe to a biopsychosocial model that posits that multiple causes—representing biological, psychological, and sociocultural domains—interact in the development of abnormal behavior patterns.

Research Methods in Abnormal Psychology

What are the basic objectives of the scientific method, and what steps are involved in applying it? The scientific approach focuses on four general objectives: description, explanation, prediction, and control. There are four steps to the scientific method: formulating a research question, framing the research question in the form of a hypothesis, testing the hypothesis, and drawing conclusions about the correctness of

the hypothesis. Psychologists follow the ethical principles of the profession that govern research.

What are the methods psychologists use to study abnormal behavior? In naturalistic observation, the investigator carefully observes behavior under naturally occurring conditions. The correlational method of research explores relationships between variables, which may help predict future behavior and suggest possible underlying causes of behavior. However, correlational research cannot directly demonstrate cause-and-effect relationships. Longitudinal research is a correlational method in which a sample of subjects is repeatedly studied at periodic intervals over long periods of time, sometimes spanning decades.

In the experimental method, the investigator manipulates or controls the independent variable under controlled conditions to reveal cause-and-effect relationships. Experiments use random assignment as the basis for determining which subjects (called experimental subjects) receive an experimental treatment and which others (called control subjects) do not. Experiments are evaluated in terms of internal, external, and construct validity.

Epidemiological studies examine the rates of occurrence of abnormal behavior in various population groups or settings. Kinship studies, such as twin studies and adoptee studies, attempt to differentiate the contributions of environment and heredity.

Case studies provide rich material, but are limited by difficulties obtaining accurate and unbiased client histories, by possible therapist biases, and by the lack of control groups. Single-case experimental designs are intended to help researchers overcome some of the limitations of the case-study method.

KEY TERMS

psychological disorder (p. 4)
 abnormal psychology (p. 4)
 medical model (p. 5)
 trephination (p. 10)
 humors (p. 11)
 dementia praecox (p. 15)
 general paresis (p. 16)
 psychodynamic model (p. 17)
 biopsychosocial model (p. 19)
 scientific method (p. 19)
 theory (p. 20)
 hypothesis (p. 21)
 informed consent (p. 21)
 confidentiality (p. 22)
 naturalistic observation (p. 22)

correlational method (p. 22)
 correlation coefficient (p. 22)
 longitudinal study (p. 23)
 experimental method (p. 23)
 independent variables (p. 23)
 dependent variables (p. 23)
 experimental group (p. 24)
 control group (p. 24)
 random assignment (p. 24)
 selection factor (p. 24)
 blind (p. 24)
 placebo (p. 24)
 internal validity (p. 25)
 external validity (p. 26)
 construct validity (p. 26)

epidemiological studies (p. 26)
 survey method (p. 26)
 incidence (p. 27)
 prevalence (p. 27)
 random sample (p. 27)
 genotype (p. 27)
 phenotype (p. 27)
 proband (p. 28)
 adoptee studies (p. 29)
 case study (p. 29)
 single-case experimental designs (p. 29)
 reversal design (p. 29)
 critical thinking (p. 32)

MEDIA TOOLS

A variety of digital and online learning tools are available to enrich your learning experience and help you succeed in the course. These resources include:

- **MyPSYCHLAB**, an online learning system for your course in abnormal psychology that allows you to test your mastery of concepts in the book by using chapter-by-chapter diagnostic tests. Results from the diagnostic tests help you build a customized study plan. To access **MyPsycLab**, visit www.prenhall.com/mypsychlab and follow the instructions on the site.
- **“SPEAKING OUT” PATIENT INTERVIEWS**, a set of video case examples of actual patients you can access on the companion CD-ROM included with the text. Icons in the margins of the chapter highlight the video case examples included on the CD-ROM.
- **COMPANION WEB SITE**, an online study center that offers computer-scored quizzes you can use to test your knowledge, along with other study tools and links to related sites to enhance your learning of abnormal psychology. To access the companion web site, visit www.prenhall.com/nevid and use the various tabs and links on the site to access these learning resources.