

14

PSYCHOLOGICAL DISORDERS



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Abnormal Behavior: Myths, Realities, and Controversies

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"The government of the United States was overthrown more than a year ago! I'm the president of the United States of America and Bob Dylan is vice president!" So said Ed, the author of a prominent book on journalism, who was speaking to a college journalism class, as a guest lecturer. Ed also informed the class that he had killed both John and Robert Kennedy, as well as Charles de Gaulle, the former president of France. He went on to tell the class that all rock music songs were written about him, that he was the greatest karate expert in the universe, and that he had been fighting "space wars" for 2000 years. The students in the class were mystified by Ed's bizarre, disjointed "lecture," but they assumed that he was putting on a show that would eventually lead to a sensible conclusion. However, their perplexed but expectant calm was shattered when Ed pulled a hatchet from the props he had brought with him and hurled the hatchet at the class! Fortunately, he didn't hit anyone, as the hatchet sailed over the students' heads. At that point,

the professor for the class realized that Ed's irrational behavior was not a pretense. The professor evacuated the class quickly while Ed continued to rant and rave about his presidential administration, space wars, vampires, his romances with female rock stars, and his personal harem of 38 "chicks." (Adapted from Pearce, 1974)

Clearly Ed's behavior was abnormal. Even *he* recognized that when he agreed later to be admitted to a mental hospital, signing himself in as the "President of the United States of America." What causes such abnormal behavior? Does Ed have a mental illness, or does he just behave strangely? What is the basis for judging behavior as normal versus abnormal? Are people who have psychological disorders dangerous? How common are such disorders? Can they be cured? These are just a few of the questions that we will address in this chapter as we discuss psychological disorders and their complex causes.



Key Learning Goals

14.1 Evaluate the medical model, and identify the most commonly used criteria of abnormality.

14.2 List three stereotypes of people with psychological disorders.

14.3 Outline the history and structure of the DSM diagnostic system.

14.4 Discuss estimates of the prevalence of psychological disorders.

Abnormal Behavior: Myths, Realities, and Controversies

Misconceptions about abnormal behavior are common. We therefore need to clear up some preliminary issues before we describe the various types of disorders. In this section, we will discuss (1) the medical model of abnormal behavior, (2) the criteria of abnormal behavior, (3) stereotypes regarding psychological disorders, (4) the classification of psychological disorders, and (5) the prevalence of such disorders.

The Medical Model Applied to Abnormal Behavior

In Ed's case, there's no question that his behavior was abnormal. But does it make sense to view his

unusual and irrational behavior as an illness? This is a controversial question. **The medical model proposes that it is useful to think of abnormal behavior as a disease.** This point of view is the basis for many of the terms used to refer to abnormal behavior, including mental *illness*, psychological *disorder*, and *psychopathology* (*pathology* refers to manifestations of disease). The medical model gradually became the dominant way of thinking about abnormal behavior during the 18th and 19th centuries, and its influence remains strong today.

The medical model clearly represented progress over earlier models of abnormal behavior. Prior to the 18th century, most conceptions of abnormal behavior were based on superstition. People who behaved strangely were thought to be possessed by demons, to be witches in league with the devil, or to be victims of God's punishment. Their disorders were "treated" with chants, rituals, exorcisms, and such. If the people's behavior was seen as threatening, they were candidates for chains, dungeons, torture, and death (see [Figure 14.1](#)).

The rise of the medical model brought improvements in the treatment of those who exhibited abnormal behavior. As victims of an illness, they were viewed with more sympathy and less hatred and fear. Although living conditions in early asylums were deplorable, gradual progress was made toward more humane care of the mentally ill. It took time, but ineffectual approaches to treatment eventually gave way to scientific investigation of the causes and cures of psychological disorders.

However, in recent decades, some critics have suggested that the medical model may have outlived its usefulness (Boyle, 2007; Kiesler, 1999). A particularly vocal critic has been Thomas Szasz (1974, 1990). He asserts that "strictly speaking, disease or illness can affect only the body; hence there can be no mental illness. . . . Minds can be 'sick' only in the sense that jokes are 'sick' or economies are 'sick'" (1974, p. 267). He further argues that abnormal behavior usually involves a deviation from social norms rather than an illness. He contends that such deviations are "problems in living" rather than medical problems. According to Szasz, the medical model's disease analogy converts moral and social questions about what is acceptable behavior into medical questions.

Although Szasz's criticism of the medical model has some merit, we'll take the position that the disease analogy continues to be useful, although one

Figure 14.1

Historical conceptions of mental illness. In the Middle Ages people who behaved strangely were sometimes thought to be in league with the devil. The top drawing depicts some of the cruel methods used to extract confessions from suspected witches and warlocks. Some psychological disorders were also thought to be caused by demonic possession. The bottom illustration depicts an exorcism.

SOURCE: (Right) Culver Pictures, Inc. (Below) *St. Catherine of Siena Exorcising a Possessed Woman*, c. 1500–1510. Girolamo Di Benvenuto. Denver Art Museum Collection, Gift of Samuel H. Kress Foundation Collection, 1967.171 © 2001 Denver Art Museum.



should remember that it is *only* an analogy. Medical concepts such as *diagnosis*, *etiology*, and *prognosis* have proven valuable in the treatment and study of abnormality. **Diagnosis involves distinguishing one illness from another. Etiology refers to the apparent causation and developmental history of an illness. A prognosis is a forecast about the probable course of an illness.** These medically based concepts have widely shared meanings that permit clinicians, researchers, and the public to communicate more effectively in their discussions of abnormal behavior.

Criteria of Abnormal Behavior

If your next-door neighbor scrubs his front porch twice a day and spends virtually all his time cleaning and re-cleaning his house, is he normal? If your sister-in-law goes to one physician after another seeking treatment for physical ailments that appear imaginary, is she psychologically healthy? How are we to judge what's normal and what's abnormal? More important, who's to do the judging?

These are complex questions. In a sense, *all* people make judgments about normality in that they all express opinions about others' (and perhaps their own) mental health. Of course, formal diagnoses of psychological disorders are made by mental health professionals. In making these diagnoses, clinicians rely on a variety of criteria, the foremost of which are the following:

1. *Deviance*. As Szasz has pointed out, people are often said to have a disorder because their behavior deviates from what their society considers acceptable. What constitutes normality varies somewhat from one culture to another, but all cultures have such norms. When people violate these standards and expectations, they may be labeled mentally ill. For example, *transvestic fetishism* is a sexual disorder in which a man achieves sexual arousal by dressing in women's clothing. This behavior is regarded as disordered because a man who wears a dress, brassiere, and nylons is deviating from our culture's norms.

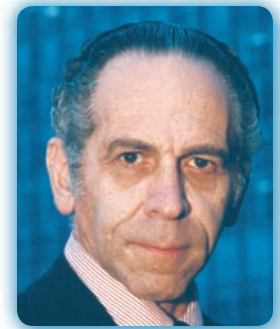
2. *Maladaptive behavior*. In many cases, people are judged to have a psychological disorder because their everyday adaptive behavior is impaired. This is the key criterion in the diagnosis of substance use (drug) disorders. In and of itself, alcohol and drug use is not all that unusual or deviant. However, when the use of cocaine, for instance, begins to interfere with a person's social or occupational functioning, a substance use disorder exists. In such cases, it is the maladaptive quality of the behavior that makes it disordered.

3. *Personal distress*. Frequently, the diagnosis of a psychological disorder is based on an individual's

report of great personal distress. This is usually the criterion met by people who are troubled by depression or anxiety disorders. Depressed people, for instance, may or may not exhibit deviant or maladaptive behavior. Such people are usually labeled as having a disorder when they describe their subjective pain and suffering to friends, relatives, and mental health professionals.

Although two or three criteria may apply in a particular case, people are often viewed as disordered when only one criterion is met. As you may have already noticed, diagnoses of psychological disorders involve *value judgments* about what represents normal or abnormal behavior (Sadler, 2005; Widiger & Sankis, 2000). The criteria of mental illness are not nearly as value-free as the criteria of physical illness. In evaluating physical diseases, people can usually agree that a malfunctioning heart or kidney is pathological, regardless of their personal values. However, judgments about mental illness reflect prevailing cultural values, social trends, and political forces, as well as scientific knowledge (Kutchins & Kirk, 1997; Mechanic, 1999).

Antonyms such as *normal* versus *abnormal* and *mental health* versus *mental illness* imply that people can be divided neatly into two distinct groups: those who are normal and those who are not. In reality, it is often difficult to draw a line that clearly separates normality from abnormality. On occasion, everybody acts in deviant ways, everyone displays some maladaptive behavior, and everyone experiences personal



Courtesy of Thomas Szasz

Thomas Szasz

"Minds can be 'sick' only in the sense that jokes are 'sick' or economies are 'sick.'"

web link 14.1



MentalHelp.Net

This is arguably the premier site to explore all aspects of mental health, including psychological disorders and treatment, professional issues, and information for consumers. It is a great starting point, with links to more than 8000 resources.



© AP Images/John Miller

This man clearly exhibits a certain type of deviance, but does that mean that he has a psychological disorder? The criteria of mental illness are more subjective and complicated than most people realize, and to some extent, judgments of mental health represent value judgments.

distress. People are judged to have psychological disorders only when their behavior becomes *extremely* deviant, maladaptive, or distressing. Thus, normality and abnormality exist on a continuum. It's a matter of degree, not an either-or proposition (see [Figure 14.2](#)).

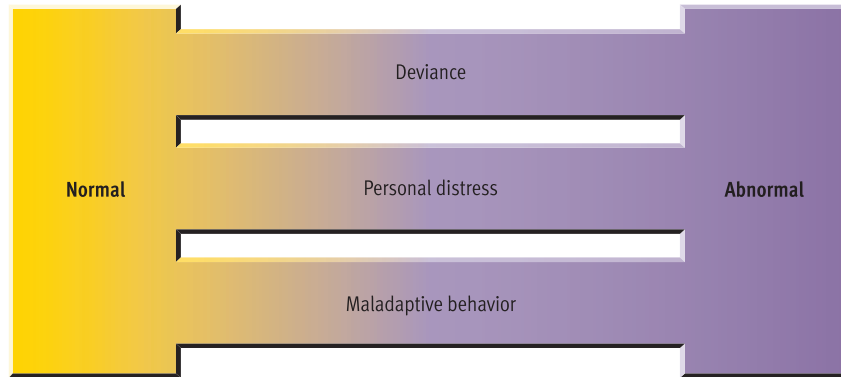


Figure 14.2
Normality and abnormality as a continuum. No sharp boundary exists between normal and abnormal behavior. Behavior is normal or abnormal in degree, depending on the extent to which one's behavior is deviant, personally distressing, or maladaptive.

concept check 14.1



Applying the Criteria of Abnormal Behavior

Check your understanding of the criteria of abnormal behavior by identifying the criteria met by each of the examples below and checking them off in the table provided. Keep in mind that a specific behavior may meet more than one criterion. The answers are in Appendix A.

Behavioral examples

1. Alan's performance at work has suffered because he has been drinking alcohol to excess. Several co-workers have suggested that he seek help for his problem, but he thinks that they're getting alarmed over nothing. "I just enjoy a good time once in a while," he says.
2. Monica has gone away to college and feels lonely, sad, and dejected. Her grades are fine, and she gets along okay with the other students in the dormitory, but inside she's choked with gloom, hopelessness, and despair.
3. Boris believes that he's Napoleon reborn. He believes that he is destined to lead the U.S. military forces into a great battle to recover California from space aliens.
4. Natasha panics with anxiety whenever she leaves her home. Her problem escalated gradually until she was absent from work so often that she was fired. She hasn't been out of her house in nine months and is deeply troubled by her problem.

Criteria met by each example

	Maladaptive behavior	Deviance	Personal distress
1. Alan	_____	_____	_____
2. Monica	_____	_____	_____
3. Boris	_____	_____	_____
4. Natasha	_____	_____	_____

Stereotypes of Psychological Disorders

We've seen that mental illnesses are not diseases in a strict sense and that judgments of mental health are not value-free. However, still other myths about abnormal behavior need to be exposed as such. Let's examine three stereotypes about psychological disorders that are largely inaccurate:

1. *Psychological disorders are incurable.* Admittedly, there are mentally ill people for whom treatment is largely a failure. However, they are greatly outnumbered by people who do get better, either spontaneously or through formal treatment (Lambert & Ogles, 2004). The vast majority of people who are diagnosed as mentally ill eventually improve and lead normal, productive lives. Even the most severe psychological disorders can be treated successfully.

2. *People with psychological disorders are often violent and dangerous.* Only a modest association has been found between mental illness and violence-prone tendencies (Monahan, 1997; Tardiff, 1999). This stereotype exists because incidents of violence involving the mentally ill tend to command media attention. For example, our opening case history, which described Ed's breakdown and the episode with the hatchet, was written up in a national news magazine. People such as John Hinckley, Jr., whose mental illness led him to attempt an assassination of President Ronald Reagan in 1981, and Seung-Hui Cho, whose mental disorder led him to massacre 32 fellow students at Virginia Tech University, receive enormous publicity. However, these individuals are not representative of the immense number of people who have struggled with psychological disorders.

3. *People with psychological disorders behave in bizarre ways and are very different from normal people.* This is true only in a small minority of cases, usually involving relatively severe disorders. As noted earlier, the line between normal and abnormal behavior can be difficult to draw. At first glance, people with psychological disorders are usually indistinguishable from those without disorders. A classic study by David Rosenhan (1973) showed that even mental health professionals may have difficulty distinguishing normality from abnormality. To study diagnostic accuracy, Rosenhan arranged for a number of normal people to seek admission to mental hospitals. These "pseudopatients" arrived at the hospitals complaining of one false symptom—hearing voices. Except for this single symptom, they acted as they normally would and gave accurate information when interviewed about their personal histories. *All* the pseudopatients were admitted, and the average length of their hospi-

talization was 19 days! As you might imagine, Rosenhan's study evoked quite a controversy about our diagnostic system for mental illness. Let's take a look at how this diagnostic system has evolved.

Psychodiagnosis: The Classification of Disorders

Lumping all psychological disorders together would make it extremely difficult to understand them better. A sound taxonomy of mental disorders can facilitate empirical research and enhance communication among scientists and clinicians (First, 2003; Zimmerman & Spitzer, 2005). Thus, a great deal of effort has been invested in devising an elaborate system for classifying psychological disorders (see [Figure 14.3](#) on the next page).

Guidelines for psychodiagnosis were extremely vague and informal prior to 1952 when the American Psychiatric Association unveiled its *Diagnostic and Statistical Manual of Mental Disorders* (Nathan & Langenbucher, 2003). This classification scheme described about 100 disorders. Revisions intended to improve the system were incorporated into the second edition (DSM-II) published in 1968, but the diagnostic guidelines were still pretty sketchy. However, the third edition (DSM-III), published in 1980, represented a major advance, as the diagnostic criteria were made much more explicit, concrete, and detailed to facilitate more consistent diagnoses across clinicians (Blacker & Tsuang, 1999). The current, fourth edition (DSM-IV), which was released in 1994, and revised slightly in 2000, made use of intervening research to refine the criteria introduced in DSM-III. Each revision of the DSM system has expanded the list of disorders covered. The current version describes about three times as many types of psychological disorders as DSM-I (Houts, 2002).

The publication of DSM-III in 1980 introduced a new multiaxial system of classification, which asks for judgments about individuals on five separate dimensions, or "axes." [Figure 14.3](#) provides an overview of the axes. The diagnoses of disorders are made on Axes I and II. Clinicians record most types of disorders on Axis I. They use Axis II to list long-running personality disorders or mental retardation. People may receive diagnoses on both Axes I and II. The remaining axes are used to record supplemental information. A patient's physical disorders are listed on Axis III (General Medical Conditions). On Axis IV (Psychosocial and Environmental Problems), the clinician makes notations regarding the types of stress experienced by the individual in the past year. On Axis V (Global Assessment of Functioning), estimates are made of the individual's cur-

rent level of adaptive functioning (in social and occupational behavior, viewed as a whole) and of the individual's highest level of functioning in the past year. [Figure 14.4](#) on page 581 shows an example of a multiaxial evaluation. Most theorists agree that the multiaxial system is a step in the right direction because it recognizes the importance of information besides a traditional diagnostic label.

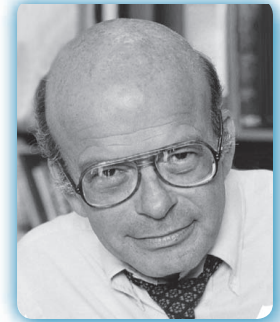
Work is currently underway to formulate the next edition (DSM-V) of the diagnostic system (e.g., Banzato, 2004; Spitzer, First, & Wakefield, 2007; Widiger & Simonsen, 2005), which is tentatively scheduled for publication in 2011. Clinical researchers are collecting data, holding conferences, and formulating arguments about whether various syndromes should be added, eliminated, redefined, or renamed. Should complicated grief reactions become a standard diagnostic option (Lichtenthal, Cruess, & Prigerson, 2004)? Should the diagnostic system use the term *drug dependence* or *drug addiction* (O'Brien, Volkow, & Li, 2006)? Should pathological gambling be lumped with impulse-control disorders or addictive disorders (Potenza, 2006)? Should the category of somatoform disorders (see pp. 586–588) be eliminated (Fava et al., 2007)? Should Internet addiction be added to the official list of disorders (Sandoz, 2004)? Vigorous debates about issues such as these will occupy clinical researchers in the upcoming years, and DSM-V may look somewhat different from its predecessors.

The Prevalence of Psychological Disorders

How common are psychological disorders? What percentage of the population is afflicted with mental illness? Is it 10%? Perhaps 25%? Could the figure range as high as 40% or 50%?

Such estimates fall in the domain of **epidemiology—the study of the distribution of mental or physical disorders in a population**. The 1980s and 1990s brought major advances in psychiatric epidemiology, as a number of large-scale investigations provided a huge, new database on the distribution of mental disorders (Murphy, Tohen, & Tsuang, 1999). In epidemiology, **prevalence refers to the percentage of a population that exhibit a disorder during a specified time period**. In the case of mental disorders, the most interesting data are the estimates of *lifetime prevalence*, the percentage of people who endure a specific disorder at any time in their lives.

Studies published in the 1980s and early 1990s found psychological disorders in roughly *one-third* of the population (Regier & Kaelber, 1995; Robins, Locke, & Regier, 1991). Subsequent research, which focused on a somewhat younger sample (ages 18–54 instead



Stanford University News Service

David Rosenhan

"How many people, one wonders, are sane but not recognized as such in our psychiatric institutions?"

web link 14.2



National Alliance for the Mentally Ill (NAMI)

NAMI describes itself as "a grassroots, self-help support and advocacy organization of families and friends of people with serious mental illness, and those persons themselves." Its online site responds to their needs with extensive and current information about schizophrenia, bipolar disorder, and other severe disorders.

Figure 14.3

Overview of the DSM diagnostic system. Published by the American Psychiatric Association, the *Diagnostic and Statistical Manual of Mental Disorders* is the formal classification system used in the diagnosis of psychological disorders. It is a *multiaxial system*, which means that information is recorded on the five axes described here.

SOURCE: Adapted with permission from the *Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (DSM-TR)*. Copyright © 2000 American Psychiatric Association.



of over age 18), suggested that about 44% of the adult population will struggle with some sort of psychological disorder at some point in their lives (Kessler & Zhao, 1999; Regier & Burke, 2000). The most recent large-scale epidemiological study estimated the lifetime risk of a psychiatric disorder to be 51% (Kes-

sler et al., 2005a). Obviously, all these figures are *estimates* that depend to some extent on the sampling methods and assessment techniques used (Wakefield, 1999b). The progressively higher estimates in recent years have begun to generate some controversy in the field. Some experts believe that recent estimates are

A DSM multiaxial evaluation (patient 49-year-old male)	
Axis I	Major depressive disorder Cocaine abuse
Axis II	Borderline personality disorder (provisional, rule out dependent personality disorder)
Axis III	Hypertension
Axis IV	Psychosocial stressors: recent divorce, permitted to see his children only infrequently, job is in jeopardy
Axis V	Current global assessment of functioning (GAF): 46

Figure 14.4
Example of a multiaxial evaluation. A multiaxial evaluation for a depressed man with a cocaine problem might look like this.

implausibly high and that they may trivialize psychiatric diagnoses (Wakefield & Spitzer, 2002). The debate centers on where to draw the line between normal difficulties in functioning and full-fledged mental illness—that is, when symptoms qualify as a disease (Regier, Narrow, & Rae, 2004).

In any event, whether one goes with conservative or liberal estimates, the prevalence of psychological disorders is quite a bit higher than most people assume. The data that yielded the 44% estimate of total lifetime prevalence are summarized in **Figure 14.5**, which shows prevalence estimates for the most common classes of disorders. As you can see, the most common types of psychological disorders are (1) substance (alcohol and drug) use disorders, (2) anxiety disorders, and (3) mood disorders.

The high prevalence of psychological disorders means that the economic costs of mental illness in modern societies are enormous. The annual cost of treating psychiatric illness in the United States was estimated to be about \$150 billion in a 2003 report (New Freedom Commission on Mental Health, 2003). Another study estimated that more than 1.3 billion days of role performance (being able to go to work, function as a homemaker, and so forth) are lost each year in the U.S. to mental disorders (Merikangas et al., 2007). To put this exorbitant number in perspective, psychological disorders cause about three times as many disability days as cardiovascular diseases and vastly more than cancer. And there is no way to put a price on the extraordinary anguish suffered by the families of the mentally ill. Thus, the socioeconomic costs of psychological disorders are staggering.

We are now ready to start examining the specific types of psychological disorders. Obviously, we cannot cover all of the disorders listed in DSM-IV. However, we will introduce most of the major categories

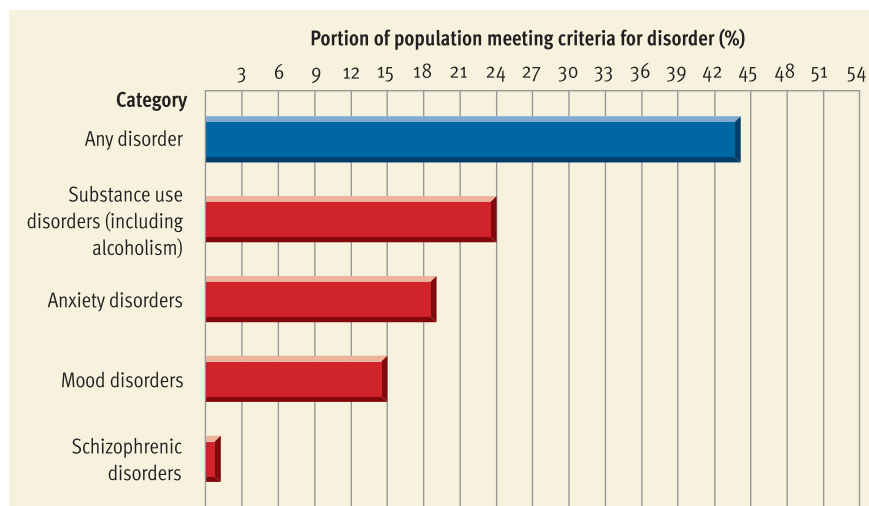


Figure 14.5
Lifetime prevalence of psychological disorders. The estimated percentage of people who have, at any time in their life, suffered from one of four types of psychological disorders or from a disorder of any kind (top bar) is shown here. Prevalence estimates vary somewhat from one study to the next, depending on the exact methods used in sampling and assessment. The estimates shown here are based on pooling data from Wave 1 and 2 of the Epidemiological Catchment Area studies and the National Comorbidity Study, as summarized by Regier and Burke (2000) and Dew, Bromet, and Switzer (2000). These studies, which collectively evaluated over 28,000 subjects, provide the best data to date on the prevalence of mental illness in the United States.

of disorders to give you an overview of the many forms abnormal behavior takes (see Chapter 5 for a discussion of substance abuse). In discussing each set of disorders, we will begin with brief descriptions of the specific syndromes or subtypes that fall in the category. Then we'll focus on the *etiology* of the disorders in that category.

REVIEW of Key Points

14.1 The medical model assumes that it is useful to view abnormal behavior as a disease. This view has been criticized on the grounds that it turns questions about deviance into medical questions, but the model has proven useful. Three criteria are used in deciding whether people suffer from psychological disorders: deviance, personal distress, and maladaptive behavior. Judgments about abnormality reflect cultural values. Often it is difficult to clearly draw a line between normality and abnormality.

14.2 Contrary to popular stereotypes, people with psychological disorders are not particularly bizarre or dangerous, and even the most severe disorders are treatable. Research by David Rosenhan showed that pseudopatients were routinely admitted to mental hospitals, where staff were unable to detect the patients' normalcy. His study showed that the distinction between normality and abnormality is not clear-cut.

14.3 Originally introduced in 1952, the DSM is the official psychodiagnostic classification system in the United States. Since DSM-III, the system has asked for information about patients on five axes, or dimensions. The current version is DSM-IV, but work is under way on DSM-V.

14.4 It is difficult to obtain good data on the prevalence of psychological disorders. Nonetheless, it is clear that they are more common than widely believed. Recent studies suggest that 44% of the population will struggle with a disorder over the course of their lives. The most common types of disorders are substance use, anxiety, and mood disorders.

web link 14.3



Mental Health: A Report of the Surgeon General

In late 1999, the Surgeon General issued the first comprehensive survey of the state of mental health in the United States. This report has provided a crucial foundation of statistics and other information for understanding the needs for mental health care in the 21st century.



Key Learning Goals

14.5 Identify five anxiety disorders and the symptoms associated with each.

14.6 Discuss the role of biological factors and conditioning in the etiology of anxiety disorders.

14.7 Explain how cognitive factors and stress can contribute to the development of anxiety disorders.

Anxiety Disorders

SIM 9



Everyone experiences anxiety from time to time. It is a natural and common reaction to many of life's difficulties. For some people, however, anxiety becomes a chronic problem. These people experience high levels of anxiety with disturbing regularity. **Anxiety disorders are a class of disorders marked by feelings of excessive apprehension and anxiety.** There are five principal types of anxiety disorders: generalized anxiety disorder, phobic disorder, panic disorder, obsessive-compulsive disorder, and posttraumatic stress disorder. They are not mutually exclusive, as many people who develop one anxiety syndrome often suffer from another at some point in their lives (Merikangas, 2005). Studies suggest that anxiety disorders are quite common, occurring in roughly 19% of the population (Dew, Bromet, & Switzer, 2000; Regier & Burke, 2000).

behavior. Phobic reactions tend to be accompanied by physical symptoms of anxiety, such as trembling and palpitations (Rapee & Barlow, 2001). The following case provides an example of a phobic disorder:

Hilda is 32 years of age and has a rather unusual fear. She is terrified of snow. She cannot go outside in the snow. She cannot even stand to see snow or hear about it on the weather report. Her phobia severely constricts her day-to-day behavior. Probing in therapy revealed that her phobia was caused by a traumatic experience at age 11. Playing at a ski lodge, she was buried briefly by a small avalanche of snow. She had no recollection of this experience until it was recovered in therapy. (Adapted from Laughlin, 1967, p. 227)

As Hilda's unusual snow phobia illustrates, people can develop phobic responses to virtually anything. Nonetheless, certain types of phobias are more common than others. Particularly common are acrophobia (fear of heights), claustrophobia (fear of small, enclosed places), brontophobia (fear of storms), hydrophobia (fear of water), and various animal and insect phobias (Antony & McCabe, 2003). People troubled by phobias typically realize that their fears are irrational, but they still are unable to calm themselves when confronted by a phobic object. Among many of them, even *imagining* a phobic object or situation can trigger great anxiety (Thorpe & Salkovskis, 1995).

Generalized Anxiety Disorder

11a



Generalized anxiety disorder is marked by a chronic, high level of anxiety that is not tied to any specific threat. People with this disorder worry constantly about yesterday's mistakes and tomorrow's problems. They worry about minor matters related to family, finances, work, and personal illness. They hope that their worrying will help to ward off negative events (Beidel & Stipelman, 2007), but they nonetheless worry about how much they worry (Barlow et al., 2003). They often dread making decisions and brood over them endlessly. Their anxiety is commonly accompanied by physical symptoms, such as trembling, muscle tension, diarrhea, dizziness, faintness, sweating, and heart palpitations. Generalized anxiety disorder tends to have a gradual onset, has a lifetime prevalence of about 5%, and is seen more frequently in females than males (Brown, 1999; Merikangas, 2005).

Panic Disorder and Agoraphobia

11a



A panic disorder is characterized by recurrent attacks of overwhelming anxiety that usually occur suddenly and unexpectedly. These paralyzing panic attacks are accompanied by physical symptoms of anxiety. After a number of panic attacks, victims often become apprehensive, wondering when their next panic will occur. Their concern about exhibiting panic in public may escalate to the point where they are afraid to leave home. This creates a condition called *agoraphobia*, which is a common complication of panic disorders.

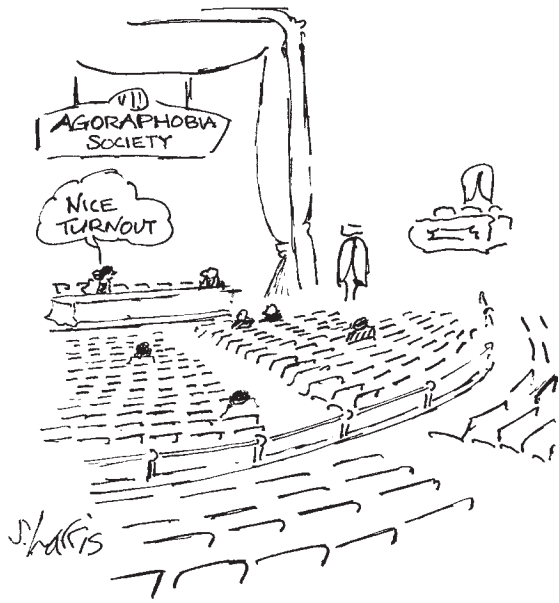
Agoraphobia is a fear of going out to public places (its literal meaning is "fear of the marketplace or open places"). Because of this fear, some people become prisoners confined to their homes, although many will venture out if accompanied by a trusted companion (Hollander & Simeon, 2003). As its name

Phobic Disorder

11a



In a phobic disorder, an individual's troublesome anxiety has a specific focus. **A phobic disorder is marked by a persistent and irrational fear of an object or situation that presents no realistic danger.** Although mild phobias are extremely common, people are said to have a phobic disorder only when their fears seriously interfere with their everyday



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suggests, agoraphobia has traditionally been viewed as a phobic disorder. However, more recent evidence suggests that agoraphobia is mainly a complication of panic disorder. About two-thirds of people who are diagnosed with panic disorder are female (Horwath & Weissman, 2000). The onset of panic disorder typically occurs during late adolescence or early adulthood (Pine & McClure, 2005).

Obsessive-Compulsive Disorder



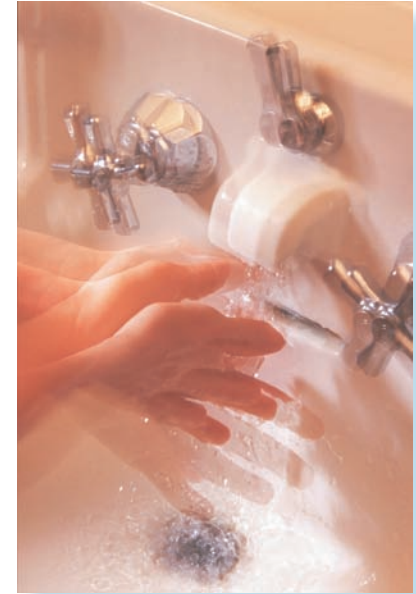
Obsessions are *thoughts* that repeatedly intrude on one's consciousness in a distressing way. Compulsions are *actions* that one feels forced to carry out. Thus, **an obsessive-compulsive disorder (OCD) is marked by persistent, uncontrollable intrusions of unwanted thoughts (obsessions) and urges to engage in senseless rituals (compulsions).** To illustrate, let's examine the bizarre behavior of a man once reputed to be the wealthiest person in the world:

The famous industrialist Howard Hughes was obsessed with the possibility of being contaminated by germs. This led him to devise extraordinary rituals to minimize the possibility of such contamination. He would spend hours methodically cleaning a single telephone. He once wrote a three-page memo instructing assistants on exactly how to open cans of fruit for him. The following is just a small portion of the instructions that Hughes provided for a driver who delivered films to his bungalow. "Get out of the car on the traffic side. Do not at any time be on the side of the car between the car and the curb. . . . Carry only one can of film at a time. Step over

the gutter opposite the place where the sidewalk dead-ends into the curb from a point as far out into the center of the road as possible. Do not ever walk on the grass at all, also do not step into the gutter at all. Walk to the bungalow keeping as near to the center of the sidewalk as possible." (Adapted from Barlett & Steele, 1979, pp. 227–237)

Obsessions often center on inflicting harm on others, personal failures, suicide, or sexual acts. People troubled by obsessions may feel that they have lost control of their mind. Compulsions usually involve stereotyped rituals that temporarily relieve anxiety. Common examples include constant handwashing; repetitive cleaning of things that are already clean; endless rechecking of locks, faucets, and such; and excessive arranging, counting, and hoarding of things (Pato, Eisen, & Phillips, 2003). Specific types of obsessions tend to be associated with specific types of compulsions. For example, obsessions about contamination tend to be paired with cleaning compulsions, and obsessions about symmetry tend to be paired with ordering and arranging compulsions (Leckman et al., 1997).

Although many of us can be compulsive at times, full-fledged obsessive-compulsive disorders occur in roughly 2.5% of the population (Turner et al., 2001). The typical age of onset for OCD is late adolescence,



© Jeffrey MacMillan/U.S. News & World Report

Repetitive handwashing is an example of a common compulsive behavior.



© Bertmann/Corbis



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As a young man (shown in the photo), Howard Hughes was a handsome, dashing daredevil pilot and movie producer who appeared to be reasonably well adjusted. However, as the years went by, his behavior gradually became more and more maladaptive, as obsessions and compulsions came to dominate his life. In his later years (shown in the drawing), he spent most of his time in darkened rooms, naked, unkempt, and dirty, following bizarre rituals to alleviate his anxieties. (The drawing was done by an NBC artist and was based on descriptions from men who had seen Hughes.)

web link 14.4



Obsessive Compulsive Foundation

The Obsessive Compulsive Foundation was created to support research, educate the public, and provide help for people suffering from OCD. The site houses newsletters, brochures, and videos on the subject of OCD. Of particular interest are reviews of many books on OCD.

with most cases (75%) emerging before the age of 30 (Kessler et al., 2005a). OCD can be a particularly severe disorder, as it is often associated with serious social and occupational impairments (Torres et al., 2006).

Posttraumatic Stress Disorder

Posttraumatic stress disorder (PTSD) involves enduring psychological disturbance attributed to the experience of a major traumatic event. PTSD was first recognized as a disorder in the 1970s in the aftermath of the Vietnam war, when a great many veterans were traumatized by their combat experiences. Research eventually showed that PTSD can be caused by a variety of traumatic events besides harrowing war experiences. For example, PTSD is often seen after a rape or assault, a severe automobile accident, a natural disaster, or the witnessing of someone's death (Koren, Arnon, & Klein, 1999; Stein et al., 1997; Vernberg et al., 1996). Unfortunately, traumatic experiences such as these appear to be much more common than widely assumed. Research suggests that 7%–8% of people have suffered from PTSD at some point in their lives, with prevalence higher among women (10%) than men (5%) (Ozer et al., 2003). Currently, there is great concern about the number of military returnees from the Afghanistan and Iraq wars who will develop PTSD (Friedman, 2006). Similar to the experiences of Vietnam veterans, the preliminary data suggest that these troops are showing greatly elevated rates of PTSD (Hoge et al., 2007). Common symptoms in PTSD include reexperiencing the traumatic event in the form of nightmares and flashbacks, emotional numbing, alienation, problems in social relations, an increased sense of vulnerability, and elevated arousal, anxiety, anger, and guilt (Flannery, 1999; Shalev, 2001).

A variety of factors are predictors of individuals' risk for PTSD (McNally, 1999; Keane, Marshall, & Taft, 2006; Norris et al., 2001). As you might expect, increased vulnerability is associated with greater personal injuries and losses, greater intensity of exposure to the traumatic event, and more exposure to the grotesque aftermath of the event. One key predictor of vulnerability that emerged in a recent review of the relevant research is the *intensity of one's reaction at the time of the traumatic event* (Ozer et al., 2003). Individuals who have especially intense emotional reactions during or immediately after the traumatic event go on to show elevated vulnerability to PTSD. Vulnerability seems to be greatest among people whose reactions are so intense that they report dissociative experiences (a sense that things are not real, that time is stretching out, that one is watching oneself in a movie).

web link 14.5



National Center for PTSD

This site offers numerous resources devoted to post-traumatic stress disorder (PTSD). Browsers also have access to the PILOTS database, a free searchable guide to the worldwide literature on traumatic stress.

Etiology of Anxiety Disorders



11a

Like most psychological disorders, anxiety disorders develop out of complicated interactions among a variety of biological and psychological factors.

Biological Factors



11a

In studies that assess the impact of heredity on psychological disorders, investigators look at *concordance rates*. **A concordance rate indicates the percentage of twin pairs or other pairs of relatives who exhibit the same disorder.** If relatives who share more genetic similarity show higher concordance rates than relatives who share less genetic overlap, this finding supports the genetic hypothesis. The results of both *twin studies* (see Figure 14.6) and *family studies* (see Chapter 3 for discussions of both methods) suggest that there is a moderate genetic predisposition to anxiety disorders (Hettema, Neale, & Kendler, 2001; McMahon & Kassem, 2005). These findings are consistent with the idea that inherited differences in temperament might make some people more vulnerable than others to anxiety disorders. As we discussed in Chapter 11, Jerome Kagan and his colleagues (1992) have found that about 15%–20% of infants display an *inhibited temperament*, characterized by shyness, timidity, and wariness, which appears to have a strong genetic basis. Research suggests that this temperament is a risk factor for the development of anxiety disorders (Coles, Schofield, & Pietrefesa, 2006).

Another line of research suggests that *anxiety sensitivity* may make people vulnerable to anxiety disorders (McWilliams et al., 2007; Reiss, 1991; Schmidt, Zvolensky, & Maner, 2006). According to this notion, some people are highly sensitive to the internal physiological symptoms of anxiety and are prone to overreact with fear when they experience these symptoms. Anxiety sensitivity may fuel an inflationary spiral in which anxiety breeds more anxiety, which eventually spins out of control in the form of an anxiety disorder.

Recent evidence suggests that a link may exist between anxiety disorders and neurochemical activity in the brain. As you learned in Chapter 3, *neurotransmitters* are chemicals that carry signals from one neuron to another. Therapeutic drugs (such as Valium) that reduce excessive anxiety appear to alter neurotransmitter activity at GABA synapses. This finding and other lines of evidence suggest that disturbances in the neural circuits using GABA may play a role in some types of anxiety disorders (Skol-

nick, 2003). Abnormalities in neural circuits using serotonin have been implicated in PTSD and panic and obsessive-compulsive disorders (Stein & Hugo, 2004). Thus, scientists are beginning to unravel the neurochemical bases for anxiety disorders.

Conditioning and Learning

11a



Many anxiety responses may be *acquired through classical conditioning and maintained through operant conditioning* (see Chapter 6). According to Mowrer (1947), an originally neutral stimulus (the snow in Hilda's case, for instance) may be paired with a frightening event (the avalanche) so that it becomes a conditioned stimulus eliciting anxiety (see [Figure 14.7a](#)). Once a fear is acquired through classical conditioning, the person may start avoiding the anxiety-producing stimulus. The avoidance response is negatively reinforced because it is followed by a reduction in anxiety. This process involves operant conditioning (see [Figure 14.7b](#)). Thus, separate conditioning processes may create and then sustain specific anxiety responses (Levis, 1989). Consistent with this view, studies find that a substantial portion of people suffering from phobias can identify a traumatic conditioning experience that probably contributed to their anxiety disorder (Antony & McCabe, 2003; Mineka & Zinbarg, 2006).

The tendency to develop phobias of certain types of objects and situations may be explained by Martin Seligman's (1971) concept of *preparedness*. He suggests that people are biologically prepared by their evolutionary history to acquire some fears much more easily than others. His theory would explain why people develop phobias of ancient sources of threat (such as snakes and spiders) much more readily than modern sources of threat (such as electrical outlets or hot irons). As we noted in Chapter 6, Arne Öhman and Susan Mineka (2001) have updated the notion of preparedness, which they call an *evolved module for fear learning*. They maintain that this evolved module is automatically activated by stimuli related to past survival threats in evolutionary history and that it is relatively resistant to intentional efforts to suppress the resulting fears. Consistent with this view, phobic stimuli associated with evolutionary threats tend to produce more rapid conditioning of fears and stronger fear responses (Mineka & Öhman, 2002).

Critics note a number of problems with conditioning models of phobias (Rachman, 1990). For instance, many people with phobias cannot recall or identify a traumatic conditioning experience that led to their phobia. Conversely, many people endure extremely traumatic experiences that should create

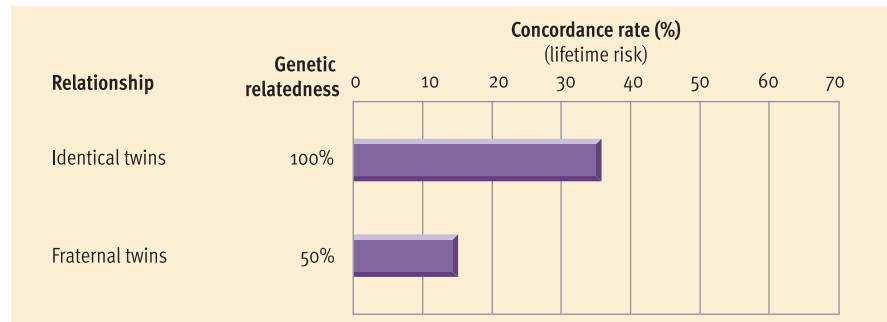


Figure 14.6

Twin studies of anxiety disorders. The concordance rate for anxiety disorders in identical twins is higher than that for fraternal twins, who share less genetic overlap. These results suggest that there is a genetic predisposition to anxiety disorders. (Data based on Noyes et al., 1987; Slater & Shields, 1969; Torgersen, 1979, 1983)

a phobia but do not. To provide better explanations for these complexities, conditioning models of anxiety disorders are currently being revised to include a larger role for cognitive factors (de Jong & Merckelbach, 2000), much like conditioning theories in general, as we saw in Chapter 6.

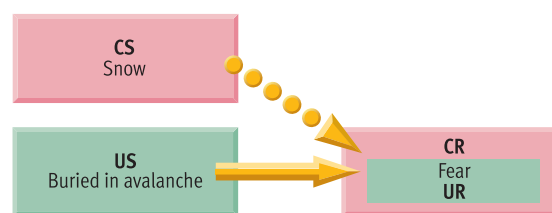
Cognitive Factors

11a



Cognitive theorists maintain that certain styles of thinking make some people particularly vulnerable to anxiety disorders (Craske & Waters, 2005). According to these theorists, some people are more likely to suffer from problems with anxiety because they tend to (a) misinterpret harmless situations as threatening, (b) focus excessive attention on perceived threats, and (c) selectively recall information that seems threatening (Beck, 1997; McNally, 1994, 1996). In one intriguing test of the cognitive view, anxious and nonanxious subjects were asked to read 32 sentences that could be interpreted in either a threatening or a nonthreatening manner (Eysenck et al., 1991). For instance, one such sentence was "The doctor examined little Emma's growth," which could mean that the doctor checked her height or the growth of a tumor. As [Figure 14.8](#) on the next page shows, the anxious participants interpreted the sentences in a threatening way more often than the

(a) Classical conditioning: Acquisition of phobic fear



(b) Operant conditioning: Maintenance of phobic fear (negative reinforcement)

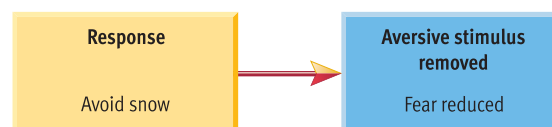


Figure 14.7

Conditioning as an explanation for phobias.

(a) Many phobias appear to be acquired through classical conditioning when a neutral stimulus is paired with an anxiety-arousing stimulus. (b) Once acquired, a phobia may be maintained through operant conditioning. Avoidance of the phobic stimulus reduces anxiety, resulting in negative reinforcement.

Figure 14.8
Cognitive factors in anxiety disorders. Eysenck and his colleagues (1991) compared how subjects with anxiety problems and nonanxious subjects tended to interpret sentences that could be viewed as threatening or nonthreatening. Consistent with cognitive models of anxiety disorders, anxious subjects were more likely to interpret the sentences in a threatening light.

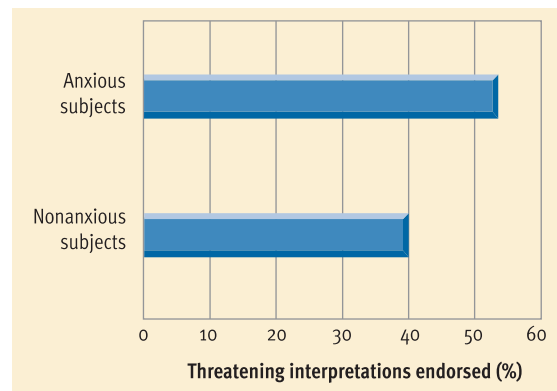
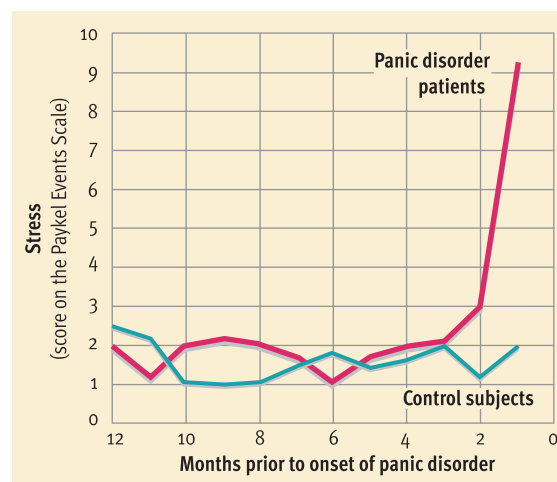


Figure 14.9
Stress and panic disorder. Faravelli and Pallanti (1989) assessed the amount of stress experienced during the 12 months before the onset of panic disorder in a group of 64 patients with this disorder and in a control group drawn from hospital employees and their friends. As you can see, a dramatic increase occurred in stress in the month prior to the onset of the patients' panic disorders. These data suggest that stress may contribute to the development of panic disorders.



SOURCE: Adapted from Faravelli, C., & Pallanti, S. (1989). Recent life events and panic disorders. *American Journal of Psychiatry*, 146, 622–626. Copyright © 1989 by the American Psychiatric Association.

nonanxious participants did. Thus, consistent with our theme that human experience is highly subjective, the cognitive view holds that some people are prone to anxiety disorders because they see threat

in every corner of their lives (Aikens & Craske, 2001; Riskind, 2005).

Stress



Finally, studies have supported the long-held suspicion that anxiety disorders can be stress-related (Beidel & Stipelman, 2007; Sandin et al., 2004). For instance, Faravelli and Pallanti (1989) found that patients with panic disorder had experienced a dramatic increase in stress in the month prior to the onset of their disorder (see Figure 14.9). In another study, Brown et al. (1998) found an association between stress and the development of social phobia. Thus, there is reason to believe that high stress often helps to precipitate the onset of anxiety disorders.

REVIEW of Key Points

14.5 Generalized anxiety disorder is marked by chronic, high anxiety, whereas phobic disorder involves irrational fears of specific objects or situations. Panic disorder is marked by recurrent panic attacks and agoraphobia. Obsessive-compulsive disorder is dominated by intrusions of unwanted thoughts and urges, whereas posttraumatic stress disorder consists of disturbance due to the experience of a major traumatic event.

14.6 Twin studies suggest that there is a weak genetic predisposition to anxiety disorders. These disorders may be more likely in people who are especially sensitive to the physiological symptoms of anxiety. Abnormalities in neurotransmitter activity at GABA synapses or serotonin synapses may also play a role. Many anxiety responses, especially phobias, may be caused by classical conditioning and maintained by operant conditioning, with preparedness influencing which phobias condition most readily.

14.7 Cognitive theorists maintain that certain styles of thinking—especially a tendency to overinterpret harmless situations as threatening—make some people more vulnerable to anxiety disorders. Stress may also predispose people to anxiety disorders.



Key Learning Goals

14.8 Distinguish among three somatoform disorders.

14.9 Analyze how personality, cognitive factors, and the sick role contribute to somatoform disorders.

Somatoform Disorders

Chances are, you have met people who always seem to be complaining about aches, pains, and physical maladies of doubtful authenticity. You may have thought to yourself, “It’s all in his head” and concluded that the person exhibited a “psychosomatic” condition. However, as we discussed in Chapter 13, the term *psychosomatic* has been widely misused. *Psychosomatic diseases* involve *genuine* physical ailments caused in part by psychological factors, especially reactions to stress. These diseases, which include mal-

adies such as ulcers, asthma, and high blood pressure, are not imagined ailments. They are recorded on the DSM axis for physical problems (Axis III). When physical illness appears *largely* psychological in origin, we are dealing with somatoform disorders, which are recorded on Axis I. **Somatoform disorders are physical ailments that cannot be fully explained by organic conditions and are largely due to psychological factors.** Although their symptoms are more imaginary than real, victims of somato-

form disorders are *not* simply faking illness. Deliberate feigning of illness for personal gain is another matter altogether, called *malingering*.

People with somatoform disorders typically seek treatment from physicians practicing neurology, internal medicine, or family medicine, instead of from psychologists or psychiatrists. Making accurate diagnoses of somatoform disorders can be difficult, because the causes of physical ailments are sometimes hard to identify. In some cases, somatoform disorders are misdiagnosed when a genuine organic cause for a person's physical symptoms goes undetected in spite of extensive medical examinations and tests (Yutzy, 2003). Diagnostic ambiguities such as these have led some theorists to argue that the category of somatoform disorders should be eliminated in DSM-V (Mayou et al., 2005), but other theorists have expressed vigorous disagreement (Rief, Henningsen, & Hiller, 2006).

Subtypes and Symptoms

We will discuss three specific types of somatoform disorders: somatization disorder, conversion disorder, and hypochondriasis. Diagnostic difficulties make it hard to obtain sound data on the prevalence of somatoform disorders (Bouman, Eifert, & Lejuez, 1999).

Somatization Disorder

Individuals with somatization disorder are often said to “cling to ill health.” **A somatization disorder is marked by a history of diverse physical complaints that appear to be psychological in origin.** Somatization disorder occurs mostly in women (Guggenheim, 2000) and often coexists with depression and anxiety disorders (Gureje et al., 1997). Victims report an endless succession of minor physical ailments that seem to wax and wane in response to the stress in their lives (Servan-Schreiber, Kolb, & Tabas, 1999). They usually have a long and complicated history of medical treatment from many doctors. The distinguishing feature of this disorder is the diversity of the victims' physical complaints. Over the years, they report a mixed bag of cardiovascular, gastrointestinal, pulmonary, neurological, and genitourinary symptoms. The unlikely nature of such a smorgasbord of symptoms occurring together often alerts a physician to the possible psychological basis for the patient's problems. However, somatization patients are typically very resistant to the suggestion that their symptoms might be the result of psychological distress (Hollifield, 2005).

Conversion Disorder

Conversion disorder is characterized by a significant loss of physical function (with no apparent organic basis), usually in a single organ system. Common symptoms include partial or complete loss of vision, partial or complete loss of hearing, partial paralysis, severe laryngitis or mutism, and loss of feeling or function in limbs. People with conversion disorder are usually troubled by more severe ailments than people with somatization disorder. In some cases of conversion disorder, telltale clues reveal the psychological origins of the illness because the patient's symptoms are not consistent with medical knowledge about their apparent disease. For instance, the loss of feeling in one hand that is seen in “glove anesthesia” is inconsistent with the known facts of neurological organization (see Figure 14.10). Conversion disorders tend to have an acute onset triggered by stress (Kirmayer & Looper, 2007).

Hypochondriasis

Hypochondriacs constantly monitor their physical condition, looking for signs of illness. Any tiny alteration from their physical norm leads them to conclude that they have contracted a disease. **Hypochondriasis (more widely known as hypochondria) is characterized by excessive preoccupation with health concerns and incessant worry about developing physical illnesses.** When hypochondriacs are assured by their physician that they do not have any real illness, they often are skeptical and disbelieving (Starcevic, 2001). They frequently assume that the physician must be incompetent, and they go shopping for another doctor. Hypochondriacs don't subjectively suffer from physical distress so much as they *overinterpret* every conceivable sign of illness. Hypochondria frequently appears alongside other



Figure 14.10
Glove anesthesia. In conversion disorders, the physical complaints are sometimes inconsistent with the known facts of physiology. For instance, given the patterns of nerve distribution in the arm shown in (a), it is impossible that a loss of feeling in the hand exclusively, as shown in (b), has a physical cause, indicating that the patient's problem is psychological in origin.



“Assuming I am a hypochondriac, couldn't that condition be brought on by a brain tumor?”

© by Patrick Hardin, www.CartoonStock.com

psychological disorders, especially anxiety disorders and depression (Iezzi, Duckworth, & Adams, 2001). For example, Howard Hughes's obsessive-compulsive disorder was coupled with profound hypochondria.

Etiology of Somatoform Disorders

Inherited aspects of physiological functioning, such as an elevated sensitivity to bodily sensations, may predispose some people to somatoform disorders (Kirmayer & Looper, 2007), but genetic factors do *not* appear to make much of a contribution to the development of these disorders (Hollifield, 2005). The available evidence suggests that these disorders are largely a function of personality and learning.

Personality Factors

People with certain types of personality traits seem to develop somatoform disorders more readily than others. The prime candidates appear to be people with *histrionic* personality characteristics (Nemiah, 1985; Slavney, 1990). The histrionic personality tends to be self-centered, suggestible, excitable, highly emotional, and overly dramatic. The personality trait of *neuroticism* also seems to elevate individuals' susceptibility to somatoform disorders (Noyes et al., 2005). In addition, research suggests

that the pathological care-seeking behavior seen in these disorders may be caused by *insecure attachment styles* (see Chapter 11) that are rooted in early experiences with caregivers (Noyes et al., 2003).

Cognitive Factors

In recent years, theorists have devoted increased attention to how cognitive peculiarities might contribute to somatoform disorders. For example, Barsky (2001) asserts that some people focus excessive attention on their internal physiological processes and amplify normal bodily sensations into symptoms of distress, which lead them to pursue unnecessary medical treatment. Recent evidence suggests that people with somatoform disorders tend to draw catastrophic conclusions about minor bodily complaints (Salkovskis & Warwick, 2001). They also seem to apply a faulty standard of good health, equating health with a complete absence of symptoms and discomfort, which is unrealistic (Barsky et al., 1993; Rief, Hiller, & Margraf, 1998).

The Sick Role

Another consideration is that some people grow fond of the role associated with being sick (Hotopf, 2004; Pilowsky, 1993). Their complaints of physical symptoms may be reinforced by indirect benefits derived from their illness (Schwartz, Slater, & Birchler, 1994). What benefits might be derived from physical illness? One payoff is that becoming ill is a superb way to avoid having to confront life's challenges. Many people with somatoform disorders are avoiding facing up to marital problems, career frustrations, family responsibilities, and the like. After all, when you're sick, others cannot place great demands on you. Another benefit is that physical problems can provide a convenient excuse when people fail, or worry about failing, in endeavors that are critical to their self-esteem (Organista & Miranda, 1991). Attention from others is another payoff that may reinforce complaints of physical illness. When people become ill, they command the attention of family, friends, co-workers, neighbors, and doctors.

web link 14.6



National Institute of Mental Health: For the Public

A wealth of information on psychological disorders is available at this subpage of the National Institute of Mental Health's massive website. Visitors will find detailed online booklets on generalized anxiety disorder, obsessive-compulsive disorder, panic disorder, depression, bipolar disorder, and other psychological disorders. Brief fact sheets, dense technical reports, and many other resources can also be found here.

concept check 14.2



Distinguishing Anxiety and Somatoform Disorders

Check your understanding of the nature of anxiety and somatoform disorders by making preliminary diagnoses for the cases described below. Read each case summary and write your tentative diagnosis in the space provided. The answers are in Appendix A.

1. Malcolm religiously follows an exact schedule every day. His showering and grooming ritual takes two hours. He follows the same path in walking to his classes every day, and he always sits in the same seat in each class. He can't study until his apartment is arranged perfectly. Although he tries not to, he thinks constantly about flunking out of school. Both his grades and his social life are suffering from his rigid routines.

Preliminary diagnosis: _____

2. Jane has been unemployed for the last eight years because of poor health. She has suffered through a bizarre series of illnesses of mysterious origin. Troubles with devastating headaches were followed by months of chronic back pain. Then she developed respiratory problems, frequently gasping for breath. Her current problem is stomach pain. Physicians have been unable to find any physical basis for her maladies.

Preliminary diagnosis: _____

3. Nathan owns a small restaurant that's in deep financial trouble. He dreads facing the possibility that his restaurant will fail. One day, he suddenly loses all feeling in his right arm and the ability to control the arm. He's hospitalized for his condition, but physicians can't find any organic cause for his arm trouble.

Preliminary diagnosis: _____

REVIEW of Key Points

14.8 Somatoform disorders are physical ailments that cannot be fully explained by organic conditions. Somatization disorder is characterized by a history of diverse physical complaints, whereas conversion disorder involves a loss of physical function in a single organ system. Hypochondriasis is marked by incessant worry about health concerns.

14.9 These disorders often emerge in people with highly suggestible, histrionic personalities, those high in neuroticism, and those who focus excess attention on their internal physiological processes. Somatoform disorders may be a learned avoidance strategy wherein the sick role is reinforced by attention and sympathy.

Dissociative Disorders

Dissociative disorders are probably the most controversial set of disorders in the diagnostic system, sparking heated debate among normally subdued researchers and clinicians (Loewenstein & Putnam 2005). **Dissociative disorders are a class of disorders in which people lose contact with portions of their consciousness or memory, resulting in disruptions in their sense of identity.** We'll describe three dissociative syndromes—dissociative amnesia, dissociative fugue, and dissociative identity disorder—all of which appear to be relatively uncommon, although good data on the prevalence of these disorders are scarce (Kihlstrom, 2005b).

Dissociative Amnesia and Fugue

Dissociative amnesia and fugue are overlapping disorders characterized by serious memory deficits. **Dissociative amnesia is a sudden loss of memory for important personal information that is too extensive to be due to normal forgetting.** Memory losses may occur for a single traumatic event (such as an automobile accident or home fire) or for an extended period of time surrounding the event. Cases of amnesia have been observed after people have experienced disasters, accidents, combat stress, physical abuse, and rape, or after they have witnessed the violent death of a parent, among other things (Arrigo & Pezdek, 1997; Cardena & Gleaves, 2007). **In dissociative fugue, people lose their memory for their entire lives along with their sense of personal identity.** These people forget their name, their family, where they live, and where they work! Despite this wholesale forgetting, they remember matters unrelated to their identity, such as how to drive a car and how to do math.

Dissociative Identity Disorder

Dissociative identity disorder (DID) involves the coexistence in one person of two or more largely complete, and usually very different, personalities. The name for this disorder used to be **multiple personality disorder**, which still enjoys informal use. In dissociative identity disorder, the divergences in behavior go far beyond those that people normally display in adapting to different roles in life. People with “multiple personalities” feel that they have more than one identity. Each personality has his or her own name, memories, traits, and physical mannerisms. Although rare, this “Dr. Jekyll and Mr.

Hyde” syndrome is frequently portrayed in novels, television shows, and movies, such as the *Three Faces of Eve*, a classic 1957 film starring Joanne Woodward, and the satirical film *Me, Myself, and Irene*, a 2000 release starring Jim Carrey. In popular media portrayals, the syndrome is often mistakenly called *schizophrenia*. As you will see later, schizophrenic disorders are entirely different.

In dissociative identity disorder, the various personalities generally report that they are unaware of each other (Eich et al., 1997), although doubts have been raised about the accuracy of this assertion (Allen & Iacono, 2001). The alternate personalities commonly display traits that are quite foreign to the original personality. For instance, a shy, inhibited person might develop a flamboyant, extraverted alternate personality. Transitions between identities often occur suddenly. The disparities between identities can be bizarre, as different personalities may assert that they are different in age, race, gender, and sexual orientation (Kluft, 1996). Dissociative identity disorder rarely occurs in isolation. Most DID patients also have a history of anxiety, mood, or personality disorders (Ross, 1999).

Starting in the 1970s, a dramatic increase was seen in the diagnosis of multiple-personality disorder (Kihlstrom, 2001, 2005b). Only 79 well-documented cases had accumulated up through 1970, but by the late-1990s about 40,000 cases were estimated to have been reported (Lilienfeld & Lynn, 2003). Some theorists believe that these disorders used to be underdiagnosed—that is, they often went undetected (Maldonado & Spiegel, 2003a). However, other theorists argue that a handful of clinicians have begun overdiagnosing the condition and that some clinicians even *encourage and contribute* to the emergence of DID (McHugh, 1995; Powell & Gee, 1999). Consistent with this view, a survey of all the psychiatrists in Switzerland found that 90% of them had never seen a case of dissociative identity disorder, whereas three of the psychiatrists had each seen more than 20 DID patients (Modestin, 1992). The data from this study suggest that 6 psychiatrists (out of 655 surveyed) accounted for two-thirds of the dissociative identity disorder diagnoses in Switzerland.

Etiology of Dissociative Disorders

Psychogenic amnesia and fugue are usually attributed to excessive stress. However, relatively little is known



Key Learning Goals

14.10 Distinguish among three dissociative disorders.

14.11 Discuss the etiology of dissociative identity disorder.

about why this extreme reaction to stress occurs in a tiny minority of people but not in the vast majority who are subjected to similar stress. Some theorists speculate that certain personality traits—fantasy proneness and a tendency to become intensely absorbed in personal experiences—may make some people more susceptible to dissociative disorders, but adequate evidence is lacking on this line of thought (Kihlstrom, Glisky, & Angiulo, 1994).

The causes of dissociative identity disorders are particularly obscure. Some skeptical theorists, such as Nicholas Spanos (1994, 1996) and others (Gee, Allen, & Powell, 2003; Lilienfeld et al., 1999), believe that people with multiple personalities are engaging in intentional role playing to use mental illness as a face-saving excuse for their personal failings. Spanos also argues that a small minority of therapists help create multiple personalities in their patients by subtly encouraging the emergence of alternate personalities. According to Spanos, dissociative identity disorder is a creation of modern North American culture, much as demonic possession was a creation of early Christianity. To bolster his argument, he discusses how multiple-personality patients' symptom presentations seem to have been influenced by popular media. For example, the typical patient with dissociative identity disorder used to report having two or three personalities, but since the publication of *Sybil* (Schreiber, 1973) and other books describing patients with many personalities, the average number of alternate personalities has climbed to about 15.

Despite these concerns, some clinicians are convinced that DID is an authentic disorder (Cardena &

Gleaves, 2007). They argue that there is no incentive for either patients or therapists to manufacture cases of multiple personalities, which are often greeted with skepticism and outright hostility. They maintain that most cases of dissociative identity disorder are rooted in severe emotional trauma that occurred during childhood (Draijer & Langeland, 1999). A substantial majority of people with dissociative identity disorder report a childhood history of rejection from parents and physical and sexual abuse (Scropo et al., 1998; Foote et al., 2006). In the final analysis, little is known about the causes of dissociative identity disorder, which remains a controversial diagnosis (Barry-Walsh, 2005). In one survey of American psychiatrists, only one-quarter of the respondents indicated that they felt there was solid evidence for the scientific validity of the DID diagnosis (Pope et al., 1999). Consistent with this finding, a more recent study found that scientific interest in DID has dwindled since the mid-1990s (Pope et al., 2006).

REVIEW of Key Points

14.10 Dissociative amnesia involves sudden memory loss that is too extensive to be due to normal forgetting. In dissociative fugue people also lose their sense of identity. Dissociative identity disorder is marked by the coexistence of two or more very different personalities. Since the 1970s there has been a dramatic and controversial increase in the diagnosis of dissociative identity disorder.

14.11 Some theorists believe that people with dissociative identity disorder are engaging in intentional role playing to use an exotic mental illness as a face-saving excuse for their personal failings. Other theorists view DID as an authentic disorder rooted in emotional trauma that occurred during childhood.



Key Learning Goals

14.12 Describe the two major mood disorders and their relation to suicide.

14.13 Clarify how genetic, neurochemical, and neuro-anatomical factors are related to the development of mood disorders.

14.14 Explain how cognitive factors can promote depression, and describe the Featured Study on negative thinking and depression.

14.15 Outline the role of interpersonal factors and stress in the development of mood disorders.

Mood Disorders

SIM9



What did Abraham Lincoln, Leo Tolstoy, Marilyn Monroe, Vincent Van Gogh, Ernest Hemingway, Winston Churchill, Virginia Wolff, Janis Joplin, Irving Berlin, Kurt Cobain, Francis Ford Coppola, Carrie Fisher, Ted Turner, Sting, Mike Wallace, Larry Flynt, Jane Pauley, and Ben Stiller have in common? Yes, they all achieved great prominence, albeit in different ways at different times. But, more pertinent to our interest, they all suffered from severe mood disorders. Although mood disorders can be terribly debilitating, people with mood disorders may still achieve greatness, because such disorders tend to be *episodic*. In other words, mood disturbances often come and go, interspersed among periods of normality.

Emotional fluctuations are natural, but some people are subject to extreme and sustained distortions of mood. **Mood disorders are a class of disorders marked by emotional disturbances of varied kinds that may spill over to disrupt physical, perceptual, social, and thought processes.** There are two basic types of mood disorders: unipolar and bipolar (see [Figure 14.11](#)). People with *unipolar disorder* experience emotional extremes at just one end of the mood continuum, as they are troubled only by *depression*. People with *bipolar disorder* are vulnerable to emotional extremes at both ends of the mood continuum, going through periods of both *depression* and *mania* (excitement and elation).

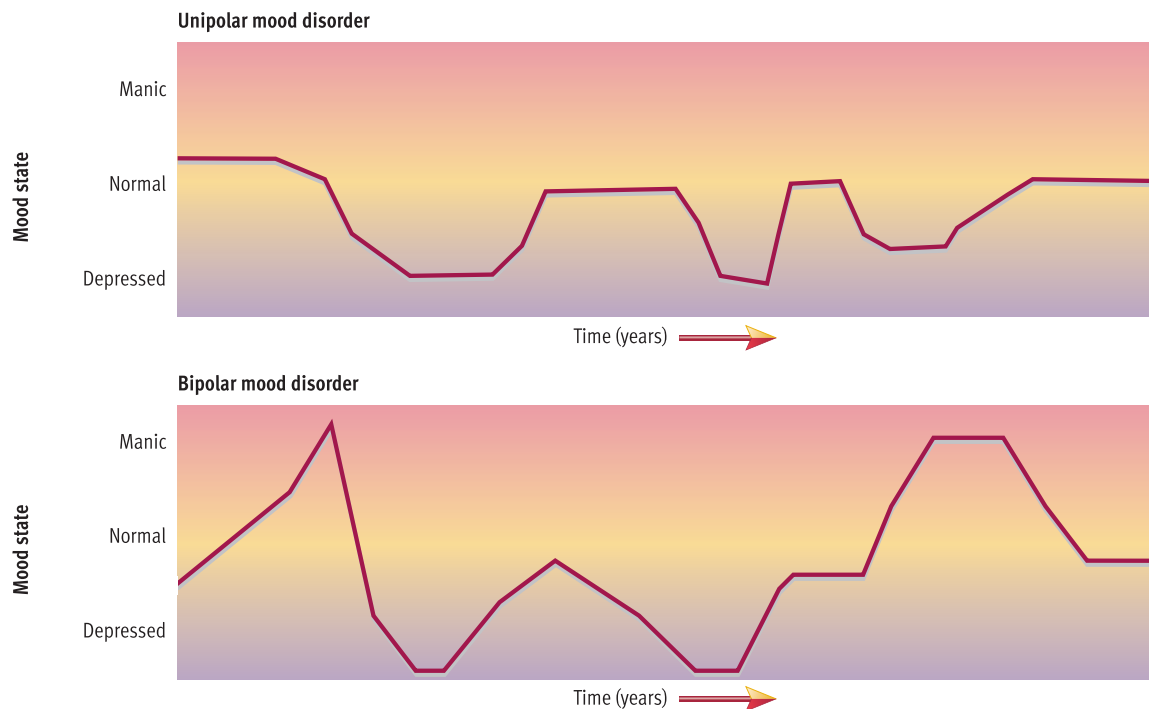


Figure 14.11
Episodic patterns in mood disorders. Time-limited episodes of emotional disturbance come and go unpredictably in mood disorders. People with unipolar disorders suffer from bouts of depression only, whereas people with bipolar disorders experience both manic and depressive episodes. The time between episodes of disturbance varies greatly with the individual and the type of disorder.

Major Depressive Disorder 11b



The line between normal dejection and unhappiness and abnormal depression can be difficult to draw (Kendler & Gardner, 1998). Ultimately, it requires a subjective judgment. Crucial considerations in this judgment include the duration of the depression and its disruptive effects. When a depression significantly impairs everyday adaptive behavior for more than a few weeks, there is reason for concern.

In major depressive disorder people show persistent feelings of sadness and despair and a loss of interest in previous sources of pleasure. Negative emotions form the heart of the depressive syndrome, but many other symptoms may also appear. The most common symptoms of major depression are summarized and compared with the symptoms of mania in [Table 14.1](#). Depressed people often give up activities that they used to find enjoyable. For example, a depressed person might quit going bowling or might give up a favorite hobby such as photography. Alterations in appetite and sleep patterns are common. People with depression often lack energy. They tend to move sluggishly and talk slowly. Anxiety, irritability, and brooding are commonly observed. Self-esteem tends to sink as the depressed person begins to feel worthless. Depression plunges people into feelings of hopelessness, dejection, and boundless guilt. To make matters worse, people who suffer from depression often exhibit other disorders as well. Coexisting anxiety disorders and substance use disorders are particularly frequent (Boland & Keller, 2002).

The onset of depression can occur at any point in the life span, but a substantial majority of cases emerge before age 40 (Hammen, 2003). Depression occurs in children as well as adolescents and adults (Gruenberg & Goldstein, 2003). The vast majority (75%–95%) of people who suffer from depression experience more than one episode over the course of their lifetime (Dubovsky, Davies, & Dubovsky, 2003). In one longitudinal study, after recovery from a first episode of depression, the cumulative probability of recurrence was 25% after 1 year, 42% after two years, and 60% after 5 years (Solomon et al., 2000). The average number of depressive episodes is 5 to 6, and the average length of these episodes is about six months (Akiskal, 2005). The severity of depressive disorders varies considerably. When people display relatively mild symptoms of depression, they're

Table 14.1 Comparisons of Common Symptoms in Manic and Depressive Episodes

Characteristics	Manic Episode	Depressive Episode
Emotional	Elated, euphoric, very sociable, impatient at any hindrance	Gloomy, hopeless, socially withdrawn, irritable
Cognitive	Characterized by racing thoughts, flight of ideas, desire for action, and impulsive behavior; talkative, self-confident; experiencing delusions of grandeur	Characterized by slowness of thought processes, obsessive worrying, inability to make decisions, negative self-image, self-blame and delusions of guilt and disease
Motor	Hyperactive, tireless, requiring less sleep than usual, showing increased sex drive and fluctuating appetite	Less active, tired, experiencing difficulty in sleeping, showing decreased sex drive and decreased appetite

Source: Sarason, I. G., & Sarason, B. G. (1987). *Abnormal psychology: The problem of maladaptive behavior*. Upper Saddle River, NJ: Prentice-Hall. © 1987 Prentice-Hall, Inc. Reprinted by permission.



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Mood disorders are common and have affected many successful, well-known people, such as Sheryl Crow and Harrison Ford.

given a diagnosis of **dysthymic disorder**, which consists of chronic depression that is insufficient in severity to justify diagnosis of a major depressive episode.

How common are depressive disorders? Well, estimates of the prevalence of depression vary quite a bit from one study to another because of the previously mentioned difficulty in drawing a line between normal dejection and abnormal depression. That said, depression is clearly a common disorder. The pooled data from the large-scale studies cited in **Figure 14.5** yielded a lifetime prevalence estimate of 13%–14%. A recent study of a nationally representative sample of over 9000 adults estimated that the lifetime prevalence of depressive disorder was 16.2% (Kessler et al., 2003a). That estimate suggests that over 30 million people in the United States have suffered or will suffer from depression!

Research indicates that the prevalence of depression is about twice as high in women as it is in men (Rihmer & Angst, 2005). The many possible explanations for this gender gap are the subject of considerable debate. The gap does *not* appear to be attributable to differences in genetic makeup (Kessler et al., 2003a). A small portion of the disparity may be the result of women's elevated vulnerability to depression at certain points in their reproductive life cycle (Kornstein & Sloan, 2006). Obviously, only women have to worry about the phenomena of postpartum and postmenopausal depression. Susan Nolen-Hoeksema (2001) argues that women experience more depression than men because they are far more likely to be victims of sexual abuse and somewhat more likely to endure poverty, sexual harassment, role constraints, and excessive pressure to be thin and attractive. In other words, she attributes the higher prevalence

of depression among women to their experience of greater stress and adversity. Nolen-Hoeksema also believes that women have a greater tendency than men to *rumin*ate about setbacks and problems. Evidence suggests that this tendency to dwell on one's difficulties elevates vulnerability to depression, as we will discuss momentarily.

Bipolar Disorder



Bipolar disorder (formerly known as **manic-depressive disorder**) is characterized by the experience of one or more manic episodes as well as periods of depression. One manic episode is sufficient to qualify for this diagnosis. The symptoms seen in manic periods generally are the opposite of those seen in depression (see **Table 14.1** for a comparison). In a manic episode, a person's mood becomes elevated to the point of euphoria. Self-esteem skyrockets as the person bubbles over with optimism, energy, and extravagant plans. He or she becomes hyperactive and may go for days without sleep. The individual talks rapidly and shifts topics wildly, as his or her mind races at breakneck speed. Judgment is often impaired. Some people in manic periods gamble impulsively, spend money frantically, or become sexually reckless. Like depressive disorders, bipolar disorders vary considerably in severity. People are given a diagnosis of **cyclothymic disorder** when they exhibit chronic but relatively mild symptoms of bipolar disturbance.

You may be thinking that the euphoria in manic episodes sounds appealing. If so, you are not entirely wrong. In their milder forms, manic states can seem attractive. The increases in energy, self-esteem, and optimism can be deceptively seductive. Because of the increase in energy, many bipolar patients report temporary surges of productivity and creativity (Goodwin & Jamison, 1990).

Although manic episodes may have some positive aspects, these periods often have a paradoxical negative undercurrent of irritability and depression (Dilsaver et al., 1999). Moreover, mild manic episodes usually escalate to higher levels that become scary and disturbing. Impaired judgment leads many victims to do things that they greatly regret later, as you'll see in the following case history:

Robert, a dentist, awoke one morning with the idea that he was the most gifted dental surgeon in his tristate area. He decided that he should try to provide services to as many people as possible, so that more people could benefit from his talents. Thus, he decided to remodel his two-chair dental office, installing 20 booths so that he could simultaneously attend to 20 patients. That same day he

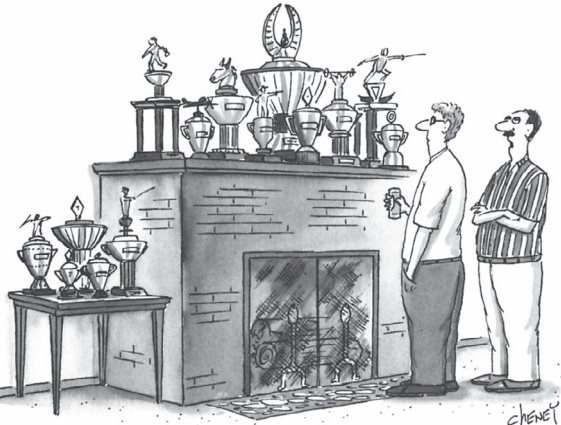
web link 14.7



Dr. Ivan's Depression Central

Some might suggest psychiatrist Ivan Goldberg's site would be better titled "Everything You Ever Wanted to Know About Depression." He offers a great depth of resources regarding mood disorders.

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"Those? Oh, just a few souvenirs from my bipolar-disorder days."

drew up plans for this arrangement, telephoned a number of remodelers, and invited bids for the work. Later that day, impatient to get rolling on his remodeling, he rolled up his sleeves, got himself a sledgehammer, and began to knock down the walls in his office. Annoyed when that didn't go so well, he smashed his dental tools, washbasins, and X-ray equipment. Later, Robert's wife became concerned about his behavior and summoned two of her adult daughters for assistance. The daughters responded quickly, arriving at the family home with their husbands. In the ensuing discussion, Robert—after bragging about his sexual prowess—made advances toward his daughters. He had to be subdued by their husbands. (Adapted from Kleinmuntz, 1980, p. 309)

Although not rare, bipolar disorders are much less common than unipolar disorders. Bipolar disorder affects about 1%–2.5% of the population (Dubovsky et al., 2003). Unlike depressive disorder, bipolar disorder is seen equally often in males and females (Rihmer & Angst, 2005). As **Figure 14.12** shows, the onset of bipolar disorder is age-related, with the age of 25 being the median age of onset (Miklowitz & Johnson, 2007). The mood swings in bipolar disorder can be patterned in many ways. About 20% of bipolar patients exhibit a *rapid-cycling pattern*, which means they go through four or more manic or depressive episodes within a year.

Mood Disorders and Suicide

A tragic, heartbreaking problem associated with mood disorders is suicide, which is the eleventh leading cause of death in the United States, accounting for about 30,000 deaths annually. Official statistics may underestimate the scope of the problem, as many suicides are disguised as accidents, either by the suicidal person or by the survivors who try to cover up afterward. Moreover, experts estimate

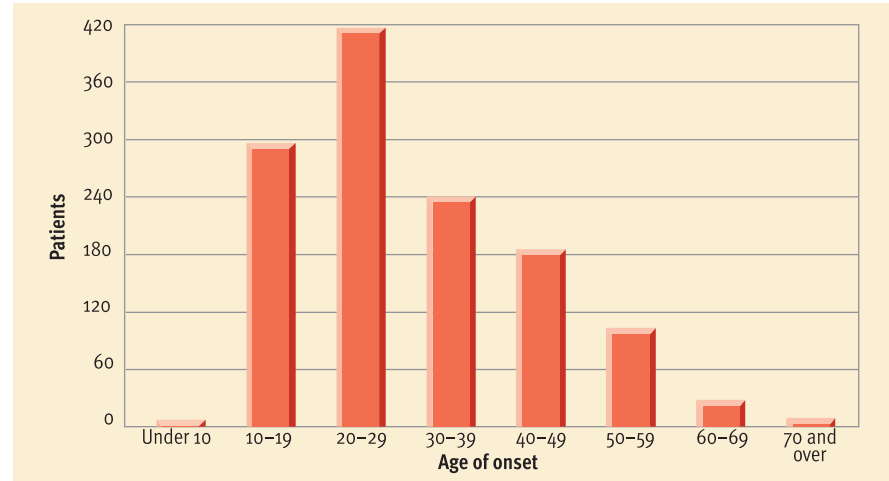


Figure 14.12
Age of onset for bipolar mood disorder. The onset of bipolar disorder typically occurs in adolescence or early adulthood. The data graphed here, which were combined from 10 studies, show the distribution of age of onset for 1304 bipolar patients. As you can see, bipolar disorder emerges most frequently during the 20s decade.

SOURCE: Goodwin, F. K., & Jamison, K. R. (1990). *Manic-depressive illness* (p. 132). New York: Oxford University Press. Copyright © 1990 Oxford University Press, Inc. Reprinted by permission.

that suicide attempts may outnumber completed suicides by a ratio of as much as 20 to 1 (Sudak, 2005). Anyone can commit suicide, but some groups are at higher risk than others (Carroll-Ghosh, Victor, & Bourgeois, 2003). Evidence suggests that women *attempt* suicide three times more often than men. But men are more likely to actually kill themselves in an attempt, so they *complete* four times as many suicides as women. In regard to age, completed suicides peak in the over-75 age bracket.

With the luxury of hindsight, it is recognized that about 90% of the people who complete suicide suffer from some type of psychological disorder, although in some cases this disorder may not be readily apparent beforehand (Dawkins, Golden, & Fawcett, 2003). As you might expect, suicide rates are highest for people with mood disorders, who account for about 60% of completed suicides (Mann & Currier, 2006). Both bipolar disorder and depression are associated with dramatic elevations in suicide rates. Studies suggest that the lifetime risk of completed suicide is about 15%–20% in people with bipolar disorder and about 10% in those who have grappled with depression (Sudak, 2005). Smaller elevations in suicide rates are seen among people who suffer from schizophrenia, alcoholism, and substance abuse (Mann & Currier, 2006). Unfortunately, there is no foolproof way to prevent suicidal persons from taking their own life, but some useful tips are compiled in **Figure 14.13** (on the next page).

Etiology of Mood Disorders 11b



Quite a bit is known about the etiology of mood disorders, although the puzzle certainly hasn't been assembled completely. There appear to be a number of routes into these disorders, involving intricate interactions among psychological and biological factors.

Figure 14.13

Preventing suicide. As Sudak (2005) notes, “it is not possible to prevent all suicides or to totally and absolutely protect a given patient from suicide. What is possible is to reduce the likelihood of suicide” (p. 2449). Hence, the advice summarized here may prove useful if you ever have to help someone through a suicidal crisis. (Based on American Association of Suicidology, 2007; American Foundation for Suicide Prevention, 2007; Fremouw et al., 1990; Rosenthal, 1988; Shneidman, Farberow, & Litman, 1994)

Suicide Prevention Tips

1. *Take suicidal talk seriously.* When people talk about suicide in vague generalities, it's easy to dismiss it as idle talk and let it go. However, people who talk about suicide are a high-risk group, and their veiled threats should not be ignored. The first step in suicide prevention is to directly ask such people if they're contemplating suicide.
2. *Provide empathy and social support.* It is important to show the suicidal person that you care. People often contemplate suicide because they see the world around them as indifferent and uncaring. Thus, you must demonstrate to the suicidal person that you are genuinely concerned. Suicide threats are often a last-ditch cry for help. It is therefore imperative that you offer to help.
3. *Identify and clarify the crucial problem.* The suicidal person is often confused and feels lost in a sea of frustration and problems. It is a good idea to try to help sort through this confusion. Encourage the person to try to identify the crucial problem. Once it is isolated, the problem may not seem quite so overwhelming.
4. *Do not promise to keep someone's suicidal ideation secret.* If you really feel like someone's life is in danger, don't agree to keep his or her suicidal plans secret to preserve your friendship.
5. *In an acute crisis, do not leave a suicidal person alone.* Stay with the person until additional help is available. Try to remove any guns, drugs, sharp objects, and so forth that might provide an available means to commit suicide.
6. *Encourage professional consultation.* Most mental health professionals have some experience in dealing with suicidal crises. Many cities have suicide prevention centers with 24-hour hotlines. These centers are staffed with people who have been specially trained to deal with suicidal problems. It is important to try to get a suicidal person to seek professional assistance.

ity to mood disorders (Caspi et al., 2003; Holmans et al., 2007). However, results have been disturbingly inconsistent, and scientists do *not* appear to be on the verge of unraveling the genetic code for mood disorders, which probably depend on subtle variations in constellations of many genes (Kendler, 2005a, 2005b; Merikangas & Risch, 2003).

Neurochemical and Neuroanatomical Factors

11b



Heredity may influence susceptibility to mood disorders by creating a predisposition toward certain types of neurochemical abnormalities in the brain. Correlations have been found between mood disorders and abnormal levels of two neurotransmitters in the brain: norepinephrine and serotonin (Sher & Mann, 2003), although other neurotransmitter disturbances may also contribute (Thase, Jindal, & Howland, 2002). The details remain elusive, but low levels of serotonin appear to be a crucial factor underlying most forms of depression (Flores et al., 2004). A variety of drug therapies are fairly effective in the treatment of severe mood disorders. Most of these drugs are known to affect the availability (in the brain) of the neurotransmitters that have been related to mood disorders (Dubovsky et al., 2003). Since this effect is unlikely to be a coincidence, it bolsters the plausibility of the idea that neurochemical changes produce mood disturbances. That said, after 40 years of enormous research effort, the neurochemical bases of mood disorders remain more mysterious than scientists would like (Delgado & Moreno, 2006).

Studies have also found some interesting correlations between mood disorders and a variety of structural abnormalities in the brain (Flores et al., 2004). Perhaps the best documented correlation is the association between depression and *reduced hippocampal volume* (Campbell et al., 2004; Videbeck, 2006). The *hippocampus*, which is known to play a major role in memory consolidation (see Chapter 7), tends to be about 8%–10% smaller in depressed subjects than in normal subjects (Videbeck & Ravnkilde, 2004). A fascinating new theory of the biological bases of depression may be able to account for this finding. The springboard for this theory is the recent discovery that the human brain continues to generate new neurons in adulthood, especially in the hippocampal formation (Gage, 2002). As noted elsewhere (see Chapters 3, 7, and 13), this process is called *neurogenesis*. Recent evidence suggests that depression occurs when major life stress causes neurochemical reactions that suppress neurogenesis, resulting in reduced hippocampal volume (Jacobs, 2004; Warner-Schmidt & Duman, 2006). According to this view,

Figure 14.14

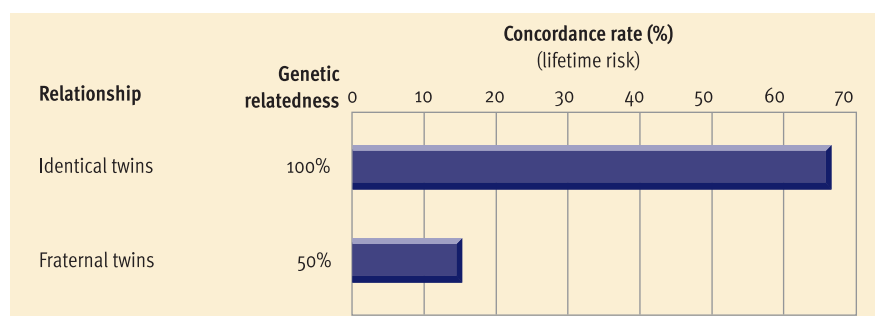
Twin studies of mood disorders. The concordance rate for mood disorders in identical twins is much higher than that for fraternal twins, who share less genetic overlap. These results suggest that there must be a genetic predisposition to mood disorders. (Data from Berrettini, 2006)

Genetic Vulnerability

11b



Twin studies suggest that genetic factors are involved in mood disorders (Berrettini, 2006; Kelsoe, 2005). Concordance rates average around 65% for identical twins but only 14% for fraternal twins, who share less genetic similarity (see Figure 14.14). Thus, evidence suggests that heredity can create a *predisposition* to mood disorders. Environmental factors probably determine whether this predisposition is converted into an actual disorder. The influence of genetic factors appears to be stronger for bipolar disorders than for unipolar disorders (Kiesseppa et al., 2004). Some promising results have been reported in *genetic mapping* studies that have attempted to pinpoint the specific genes that shape vulnerabil-



it is the suppression of neurogenesis that is the central cause of depression and antidepressant drugs are successful because they promote neurogenesis (Duman & Monteggia, 2006). A great deal of additional research will be required to fully test this innovative new model of the biological bases of depressive disorders.



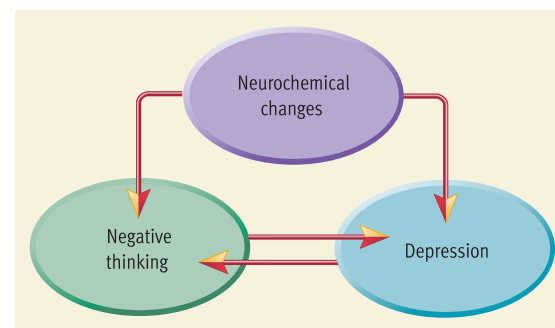
Cognitive Factors

A variety of theories emphasize how cognitive factors contribute to depressive disorders (Christensen, Carney, & Segal, 2006). We will discuss Aaron Beck's (1976, 1987) influential cognitive theory of depression in Chapter 15, where his approach to therapy is described. In this section, we'll examine Martin Seligman's *learned helplessness model* of depression. Based largely on animal research, Seligman (1974) proposed that depression is caused by *learned helplessness*—passive “giving up” behavior produced by exposure to unavoidable aversive events (such as uncontrollable shock in the laboratory). He originally considered learned helplessness to be a product of conditioning but eventually revised his theory, giving it a cognitive slant. The reformulated theory of learned helplessness asserts that the roots of depression lie in how people explain the setbacks and other negative events that they experience (Abramson, Seligman, & Teasdale, 1978). According to Seligman (1990), people who exhibit a *pessimistic explanatory style* are especially vulnerable to depression. These people tend to attribute their setbacks to their personal flaws instead of situational factors, and they tend to draw global, far-reaching conclusions about their personal inadequacies based on these setbacks.

In accord with this line of thinking, Susan Nolen-Hoeksema (1991, 2000) has found that depressed people who *ruminate* about their depression remain

depressed longer than those who try to distract themselves. People who respond to depression with rumination repetitively focus their attention on their depressing feelings, thinking constantly about how sad, lethargic, and unmotivated they are. According to Nolen-Hoeksema (1995), excessive rumination tends to extend and amplify individuals' episodes of depression. As we noted earlier, she believes that women are more likely to ruminate than men and that this disparity may be one of the primary reasons why depression is more prevalent in women.

In sum, cognitive models of depression maintain that negative thinking is what leads to depression in many people. The principal problem with cognitive theories is their difficulty in separating cause from effect (Feliciano & Arean, 2007). Does negative thinking cause depression? Or does depression cause negative thinking (see Figure 14.15)? A clear demonstration of a causal link between negative thinking and depression is not possible because it would require manipulating people's cognitive style (which is not easy to change) in sufficient degree to produce full-fledged depressive disorders (which would not be ethical). However, the research reported in our Featured Study provided impressive evidence consistent with a causal link between negative thinking and vulnerability to depression.



Courtesy of Susan Nolen-Hoeksema

Susan Nolen-Hoeksema

“By adolescence, girls appear to be more likely than boys to respond to stress and distress with rumination—focusing inward on feelings of distress and personal concerns rather than taking action to relieve their distress.”

Figure 14.15 Interpreting the correlation between negative thinking and depression.

Cognitive theories of depression assume that consistent patterns of negative thinking cause depression. Although these theories are highly plausible, depression could cause negative thoughts, or both could be caused by a third factor, such as neurochemical changes in the brain.

Does Negative Thinking Cause Depression?

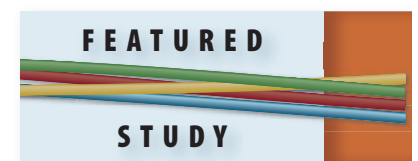
This article describes a series of studies conducted at Temple University and at the University of Wisconsin, collectively referred to as the Temple-Wisconsin Cognitive Vulnerability to Depression Project. Although the article reports on many facets of the project, we will focus on the study intended to test the hypothesis that a negative cognitive style is predictive of elevated vulnerability to depression.

Method

Participants. Over 5,000 first-year students at the two universities responded to two measures of negative thinking. Students who scored in the highest quartile on both mea-

asures were characterized as having a *high risk* for depression, while those who scored in the lowest quartile on both measures were characterized as having a *low risk* for depression. Randomly selected subsets of these two groups were invited for additional screening to eliminate anyone who was *currently* depressed or suffering from any other major psychological disorder. People who had *previously* suffered from depression or other disorders were not eliminated. The final sample consisted of 173 students in the high-risk group and 176 students in the low-risk group.

Follow-up assessments. Self-report measures and structured interviews were used to evaluate the mental health



SOURCE: Alloy, L. B., Abramson, L. Y., Whitehouse, W. G., Hogan, M. E., Tashman, N. A., Steinberg, D. L., Rose, D. T., & Donovan, P. (1999). Depressogenic cognitive styles: Predictive validity, information processing and personality characteristics, and developmental origins. *Behavioral Research and Therapy*, 37, 503–531.

of the participants every 6 weeks for the first two years and then every 16 weeks for an additional three years. The assessments were conducted by interviewers who were blind regarding the subjects' risk group status. The present report summarized the follow-up data for the first two and one-half years of the study. The results were given separately for those who did and did not have a prior history of depression.

Results

The data for students who had no prior history of depression showed dramatic differences between the high-risk and low-risk groups in vulnerability to depression. During the relatively brief 2.5-year period, a major depressive disorder emerged in 17% of the high-risk students in comparison to only 1% of the low-risk students. The high-risk subjects also displayed a much greater incidence of minor depressive episodes, as you can see in the left panel of **Figure 14.16**. The right panel of **Figure 14.16** shows the comparisons for participants who had a prior history of depression (but were not depressed or suffering from any other disorder at the beginning of the study). The data show that high-risk subjects were more vulnerable to a recurrence of both major and minor depression during the 2.5-year follow-up.

Discussion

The high-risk participants, who exhibited a negative cognitive style, were consistently found to have an elevated likelihood of developing depressive disorders. Hence, the authors conclude that their results provide strong support

for the cognitive vulnerability hypothesis, which asserts that negative thinking makes people more vulnerable to depression.

Comment

Previous studies of the correlation between negative thinking and depression used *retrospective designs*, which look backward in time from known outcomes. For example, investigators might compare depressed subjects versus non-depressed subjects on some measure of negative thinking. What makes the design retrospective is that the researchers already know which people experienced the outcome of depression. Retrospective designs can yield useful information, but they don't provide much insight about causation. Why? Because if you find an association between depression and negative thinking you can't determine whether the negative thinking preceded the depression or the depression preceded the negative thinking. The present study used a *prospective design* which moves forward in time, testing hypotheses about future outcomes. Prospective studies are much more difficult and time-consuming to conduct, but they can provide more insight about causation because they can show that one event (in this instance, the development of a negative cognitive style) preceded another (the occurrence of depression). The data are still correlational, so they cannot definitively establish a causal link, but they provide much stronger evidence in favor of causation than retrospective data. Thus, the research by Alloy and her colleagues provides the best evidence to date in support of the hypothesis that negative thinking contributes to the causation of depressive disorders.

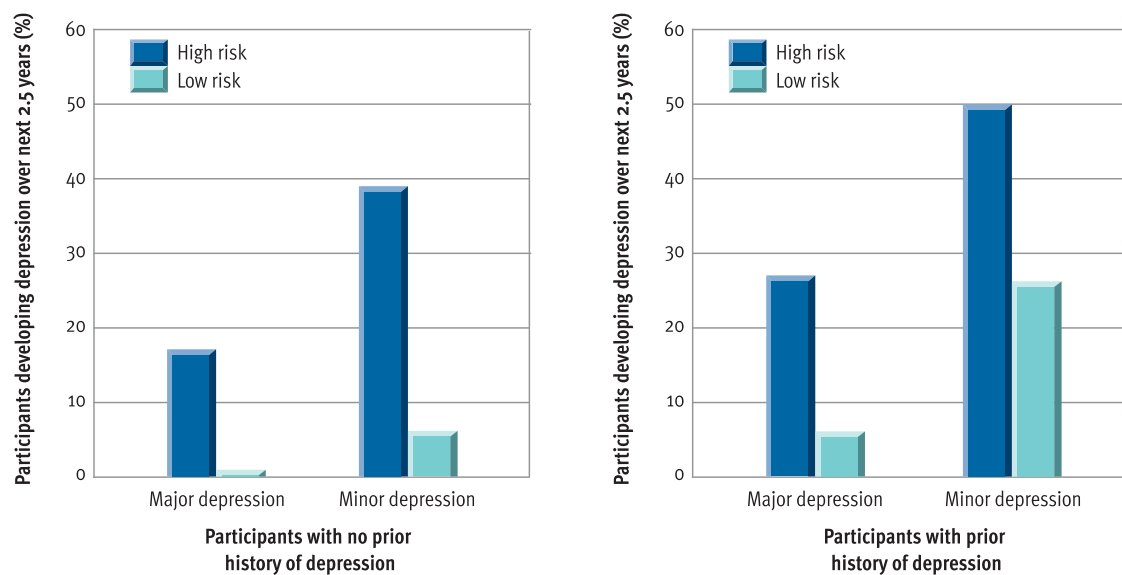


Figure 14.16

Negative thinking and prediction of depression. Alloy and colleagues (1999) measured the cognitive styles of first-year college students and characterized the students as high risk or low risk for depression. These graphs show the percentage of these students who experienced major or minor episodes of depression over the next 2.5 years. As you can see, the high-risk students who exhibited a negative thinking style proved to be much more vulnerable to depression.



Interpersonal Roots

11b

Behavioral approaches to understanding depression emphasize how inadequate social skills put people on the road to depressive disorders (see [Figure 14.17](#); Coyne, 1999). According to this notion, depression-prone people lack the social finesse needed to acquire many important kinds of reinforcers, such as good friends, top jobs, and desirable spouses. This paucity of reinforcers could understandably lead to negative emotions and depression. Consistent with this theory, researchers have found correlations between poor social skills and depression (Petty, Sachs-Ericsson, & Joiner, 2004).

Another interpersonal factor is that depressed people tend to be depressing (Joiner & Katz, 1999). Individuals suffering from depression often are irritable and pessimistic. They complain a lot and aren't particularly enjoyable companions. They also alienate people by constantly asking for reassurances about their relationships and their worth (Burns et al., 2006). As a consequence, depressed people tend to court rejection from those around them (Joiner & Metalsky, 1995). Depressed people thus have fewer sources of social support than nondepressed people, which may aggravate and deepen their depression (Potthoff, Holahan, & Joiner, 1995). Moreover, recent evidence suggests that lack of social support may make a larger contribution to depression in women than in men (Kendler, Myers, & Prescott, 2005). To compound these problems, evidence indicates that depressed people may gravitate to partners who view them unfavorably and hence reinforce their negative views of themselves (Joiner, 2002).

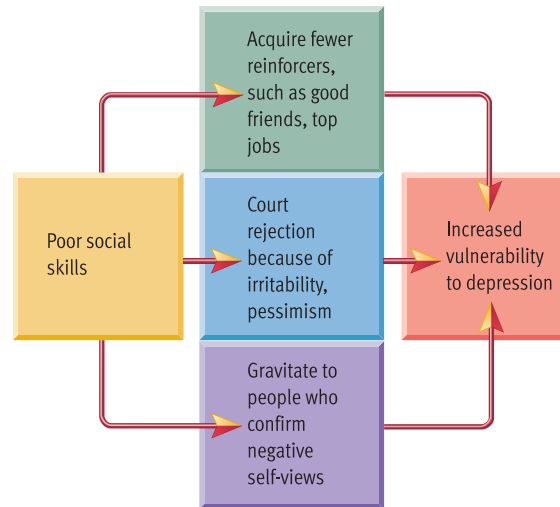


Figure 14.17

Interpersonal factors in depression. Behavioral theories about the etiology of depression emphasize how inadequate social skills may contribute to the development of the disorder through several mechanisms, as diagrammed here.

disorders are not influenced much by stress. However, advances in the measurement of personal stress have altered this picture. The evidence available today suggests a moderately strong link between stress and the onset of mood disorders (Hammen, 2005; Kendler, Kuhn, & Prescott, 2004). Stress also appears to affect how people with mood disorders respond to treatment and whether they experience a relapse of their disorder (Monroe & Hadjiyannakis, 2002).

Of course, many people endure great stress without getting depressed. The impact of stress varies, in part, because people vary in their degree of *vulnerability* to mood disorders (Lewinsohn, Joiner, & Rohde, 2001). Similar interactions between stress and vulnerability probably influence the development of many kinds of disorders, including those that are next on our agenda—the schizophrenic disorders.



Precipitating Stress

11b

Mood disorders sometimes appear mysteriously in people who are leading benign, nonstressful lives. For this reason, experts used to believe that mood

REVIEW of Key Points

14.12 Major depression is marked by profound sadness, slowed thought processes, and loss of interest in previous sources of pleasure. Bipolar disorder involves the experience of both manic episodes and periods of depression. Manic episodes are characterized by inflated self-esteem, high energy, grandiose plans, and racing thoughts. Depression is extremely common, whereas the lifetime prevalence of bipolar disorder is about 1%–2.5%. Both types of mood disorders are associated with greatly elevated rates of suicide.

14.13 Evidence indicates that people vary in their genetic vulnerability to mood disorders. These disorders are accompanied by changes in neurochemical activity in the brain. Abnormalities at norepinephrine and serotonin synapses appear par-

ticularly critical. Reduced hippocampal volume and suppressed neurogenesis are also associated with depression.

14.14 Cognitive models posit that negative thinking contributes to depression. A pessimistic explanatory style has been implicated, as has a tendency to ruminate about one's problems. The Featured Study reported impressive evidence in support of the idea that negative thinking can contribute to the causation of depression.

14.15 Interpersonal inadequacies may contribute to depressive disorders. Poor social skills may lead to a paucity of life's reinforcers and frequent rejection. Mood disorders may also be precipitated by high stress, especially in those who are particularly vulnerable to mood disorders.



Key Learning Goals

14.16 Review the general characteristics of schizophrenia.

14.17 Outline the classification of schizophrenic subtypes and the course of schizophrenia.

14.18 Explain how genetic vulnerability and neurochemical factors can contribute to schizophrenia.

14.19 Analyze the role of structural abnormalities in the brain and neurodevelopmental processes in the etiology of schizophrenia.

14.20 Summarize how family dynamics and stress may be related to the development of schizophrenia.

Schizophrenic Disorders SIM9



Literally, *schizophrenia* means “split mind.” However, when Eugen Bleuler coined the term in 1911 he was referring to the fragmentation of thought processes seen in the disorder—not to a “split personality.” Unfortunately, writers in the popular media often assume that the split-mind notion, and thus schizophrenia, refers to the rare syndrome in which a person manifests two or more personalities. As you have already learned, this syndrome is actually called *dissociative identity disorder* or *multiple-personality disorder*. Schizophrenia is a much more common, and altogether different, type of disorder.

Schizophrenic disorders are a class of disorders marked by delusions, hallucinations, disorganized speech, and deterioration of adaptive behavior. People with schizophrenic disorders often display some of the same symptoms seen in people with severe mood disorders; however, disturbed *thought* lies at the core of schizophrenic disorders, whereas disturbed *emotion* lies at the core of mood disorders.

How common is schizophrenia? Prevalence estimates suggest that about 1% of the population may suffer from schizophrenic disorders (Lauriello, Bustillo, & Keith, 2005). That may not sound like much, but it means that in the United States alone there may be several million people troubled by schizophrenic disturbances. Moreover, schizophrenia is an extremely costly illness for society, because it is a severe, debilitating disorder that tends to have an early onset and often requires lengthy hospital care (Buchanan & Carpenter, 2000). Because of these considerations, the financial impact of schizophrenia is estimated to exceed the costs of all types of cancers combined (Buchanan & Carpenter, 2005).

General Symptoms

11c



There are a number of distinct schizophrenic syndromes, but they share some general characteristics that we will examine before looking at the subtypes. Many of these characteristics are apparent in the following case history (adapted from Sheehan, 1982).

Sylvia was first given a diagnosis of schizophrenia at age 15. She has been in and out of many types of psychiatric facilities since then. She has never been able to hold a job for any length of time. During severe flare-ups of her disorder, her personal hygiene deteriorates. She rarely washes, she wears clothes that neither fit nor match, she smears makeup on heavily but randomly, and she slops food all over herself.

Sylvia occasionally hears voices talking to her. She tends to be argumentative, aggressive, and emotionally volatile. Over the years, she has been involved in innumerable fights with fellow patients, psychiatric staff members, and strangers. Her thoughts can be highly irrational, as is apparent from the following quote, which was recorded while she was a patient in a psychiatric facility called Creedmoor:

“Mick Jagger wants to marry me. If I have Mick Jagger, I don’t have to covet Geraldo Rivera. Mick Jagger is St. Nicholas and the Maharishi is Santa Claus. I want to form a gospel rock group called the Thorn Oil, but Geraldo wants me to be the music critic on Eyewitness News, so what can I do? Got to listen to my boyfriend. Teddy Kennedy cured me of my ugliness. I’m pregnant with the son of God. I’m going to marry David Berkowitz and get it over with. Creedmoor is the headquarters of the American Nazi Party. They’re eating the patients here. Archie Bunker wants me to play his niece on his TV show. I work for Epic Records. I’m Joan of Arc. I’m Florence Nightingale. The door between the ward and the porch is the dividing line between New York and California. Divorce isn’t a piece of paper, it’s a feeling. Forget about Zip Codes. I need shock treatments. The body is run by electricity. My wiring is all faulty.” (Sheehan, 1982, pp. 104–105)

Sylvia’s case clearly shows that schizophrenic thinking can be bizarre and that schizophrenia can be a severe and debilitating disorder. Although no single symptom is inevitably present, the following symptoms are commonly seen in schizophrenia (Ho, Black, & Andreasen, 2003; Lindenmayer & Khan, 2006).

Delusions and Irrational Thought

Cognitive deficits and disturbed thought processes are the central, defining feature of schizophrenic disorders (Barch, 2003; Heinrichs, 2005). Various kinds of delusions are common. **Delusions are false beliefs that are maintained even though they clearly are out of touch with reality.** For example, one patient’s delusion that he was a tiger (with a deformed body) persisted for more than 15 years (Kulick, Pope, & Keck, 1990). More typically, affected persons believe that their private thoughts are being broadcast to other people, that thoughts are being injected into their mind against their will, or that their thoughts are being controlled by some external force (Maher, 2001). In *delusions of grandeur*, people maintain that they are famous or important.

Sylvia expressed an endless array of grandiose delusions, such as thinking that Mick Jagger wanted to marry her, that she had dictated the hobbit stories to J. R. R. Tolkien, and that she was going to win the Nobel prize for medicine.

Another characteristic of schizophrenia is that the person's train of thought deteriorates. Thinking becomes chaotic rather than logical and linear. The person experiences a "loosening of associations," as he or she shifts topics in disjointed ways. The quotation from Sylvia illustrates this symptom dramatically. The entire quote involves a wild flight of ideas, but at one point (beginning with the sentence "Creedmoor is the headquarters . . .") she rattles off ten consecutive sentences that have no apparent connection to each other.

Deterioration of Adaptive Behavior

Schizophrenia usually involves a noticeable deterioration in the quality of the person's routine functioning in work, social relations, and personal care. Friends will often make remarks such as "Hal just isn't himself anymore." This deterioration is readily apparent in Sylvia's inability to get along with others or to function in the work world. It's also apparent in her neglect of personal hygiene.

Hallucinations

A variety of perceptual distortions may occur with schizophrenia, the most common being auditory hallucinations, which are reported by about 75% of patients (Combs & Mueser, 2007). **Hallucinations are sensory perceptions that occur in the absence of a real, external stimulus or are gross distortions of perceptual input.** People with schizophrenia frequently report that they hear voices of nonexistent or absent people talking to them. Sylvia, for instance, said she heard messages from Paul McCartney. These voices often provide an insulting, running commentary on the person's behavior ("You're an idiot for shaking his hand"). They may be argumentative ("You don't need a bath"), and they may issue commands ("Prepare your home for visitors from outer space").

Disturbed Emotion

Normal emotional tone can be disrupted in schizophrenia in a variety of ways. Although it may not be an accurate indicator of their underlying emotional experience (Kring, 1999), some victims show little emotional responsiveness, a symptom referred to as "blunted or flat affect." Others show inappropriate emotional responses that don't jibe with the situation or with what they are saying. For instance, a schizophrenic patient might cry over a silly cartoon

and then laugh about a news story describing a child's tragic death. People with schizophrenia may also become emotionally volatile. This pattern was displayed by Sylvia, who often overreacted emotionally in erratic, unpredictable ways.

Subtypes, Course, and Outcome



Four subtypes of schizophrenic disorders are recognized, including a category for people who don't fit neatly into any of the first three categories. The major symptoms of each subtype are as follows (Ho et al., 2003; Kirkpatrick & Tek, 2005).

Paranoid Type

As its name implies, **paranoid schizophrenia is dominated by delusions of persecution, along with delusions of grandeur.** In this common form of schizophrenia, people come to believe that they have many enemies who want to harass and oppress them. They may become suspicious of friends and relatives, or they may attribute the persecution to mysterious, unknown persons. They are convinced that they are being watched and manipulated in malicious ways. To make sense of this persecution, they often develop delusions of grandeur. They believe that they must be enormously important people, frequently seeing themselves as great inventors or as famous religious or political leaders. For example, in the case described at the beginning of the chapter, Ed's belief that he was president of the United States was a delusion of grandeur.

Catatonic Type

Catatonic schizophrenia is marked by striking motor disturbances, ranging from muscular rigidity to random motor activity. Some patients go into an extreme form of withdrawal known as a catatonic stupor. They may remain virtually motionless and seem oblivious to the environment around them for long periods of time. Others go into a state of catatonic excitement. They become hyperactive and incoherent. Some alternate between these dramatic extremes. The catatonic subtype is not particularly common, and its prevalence seems to be declining.

Disorganized Type

In disorganized schizophrenia, a particularly severe deterioration of adaptive behavior is seen. Prominent symptoms include emotional indifference, frequent incoherence, and virtually complete social withdrawal. Aimless babbling and giggling are common. Delusions often center on bodily functions ("My brain is melting out my ears").

web link 14.8



Doctor's Guide to the Internet: Schizophrenia

Produced by a communications and medical education consulting company, the free Doctor's Guide site is updated frequently to provide a current overview of the state of research on schizophrenic disorders. A more detailed set of resources for physicians parallels this site, which is intended primarily for patients and their families.

Undifferentiated Type

People who are clearly schizophrenic but who cannot be placed into any of the three previous categories are said to have *undifferentiated schizophrenia*, which is marked by idiosyncratic mixtures of schizophrenic symptoms. The undifferentiated subtype is fairly common.

Positive Versus Negative Symptoms

Many theorists have raised doubts about the value of dividing schizophrenic disorders into the four subtypes just described (Sanislow & Carson, 2001). Critics note that the catatonic subtype is disappearing and that undifferentiated cases aren't so much a subtype as a hodgepodge of "leftovers." Critics also point out that there aren't meaningful differences between the subtypes in etiology, prognosis, or response to treatment. The absence of such differences casts doubt on the value of the current classification scheme.

Because of such problems, Nancy Andreasen (1990) and others (Carpenter, 1992; McGlashan & Fenton, 1992) have proposed an alternative approach to subtyping. This new scheme divides schizophrenic disorders into just two categories based on the predominance of negative versus posi-

tive symptoms. *Negative symptoms* involve behavioral deficits, such as flattened emotions, social withdrawal, apathy, impaired attention, and poverty of speech. *Positive symptoms* involve behavioral excesses or peculiarities, such as hallucinations, delusions, bizarre behavior, and wild flights of ideas.

Theorists advocating this scheme hoped to find consistent differences between the two subtypes in etiology, prognosis, and response to treatment, and some progress along these lines *has* been made. For example, a predominance of positive symptoms is associated with better adjustment prior to the onset of schizophrenia and greater responsiveness to treatment (Combs & Mueser, 2007; Galderisi et al., 2002). However, the assumption that patients can be placed into discrete categories based on this scheme now seems untenable. Most patients exhibit both types of symptoms and vary only in the *degree* to which positive or negative symptoms dominate (Black & Andreasen, 1999). Although it seems fair to say that the distinction between positive and negative symptoms is enhancing our understanding of schizophrenia, it has not yielded a classification scheme that can replace the traditional subtypes of schizophrenia.



Courtesy of Nancy Andreasen, M.D.

Nancy Andreasen

"Schizophrenia disfigures the emotional and cognitive faculties of its victims, and sometimes nearly destroys them."

concept check 14.3



Distinguishing Schizophrenic and Mood Disorders

Check your understanding of the nature of schizophrenic and mood disorders by making preliminary diagnoses for the cases described below. Read each case summary and write your tentative diagnosis in the space provided. The answers are in Appendix A.

1. Max hasn't slept in four days. He's determined to write the "great American novel" before his class reunion, which is a few months away. He expounds eloquently on his novel to anyone who will listen, talking at such a rapid pace that no one can get a word in edgewise. He feels like he's wired with energy and is supremely confident about the novel, even though he's only written 10 to 20 pages. Last week, he charged \$5000 worth of new computer equipment and software, which is supposed to help him write his book.

Preliminary diagnosis: _____

2. Eduardo maintains that he invented the atomic bomb, even though he was born after its invention. He says he invented it to punish homosexuals, Nazis, and short people. It's short people that he's really afraid of. He's sure that all the short people on TV are talking about him. He thinks that short people are conspiring to make him look like a Republican. Eduardo frequently gets in arguments with people and is emotionally volatile. His grooming is poor, but he says it's okay because he's the secretary of state.

Preliminary diagnosis: _____

3. Margaret has hardly gotten out of bed for weeks, although she's troubled by insomnia. She doesn't feel like eating and has absolutely no energy. She feels dejected, discouraged, spiritless, and apathetic. Friends stop by to try to cheer her up, but she tells them not to waste their time on "pond scum."

Preliminary diagnosis: _____

Course and Outcome

Schizophrenic disorders usually emerge during adolescence or early adulthood, with 75% of cases manifesting by the age of 30 (Perkins, Miller-Anderson, & Lieberman, 2006). Those who develop schizophrenia usually have a long history of peculiar behavior and cognitive and social deficits, although most do not manifest a full-fledged psychological disorder during childhood (Walker et al., 2004). The emergence of schizophrenia may be sudden, but it is usually insidious and gradual. Once the disorder clearly emerges, its course is variable, but patients tend to fall into three broad groups. Some patients, presumably those with milder disorders, are treated successfully and enjoy a full recovery. Other patients experience a partial recovery and they can return to independent living for a time. However, they experience regular relapses over the remainder of their lives. Finally, a third group of patients endure chronic illness marked by relentless deterioration and extensive hospitalization. Estimates of the percentage of patients falling in each category vary. Overall, the preponderance of studies have suggested that only about 20 percent of schizophrenic patients enjoy a full recovery (Perkins et al., 2006; Robinson et al., 2004). However, to some extent, this low recovery rate may reflect the poor to mediocre quality of mental health care available for severe disorders in many countries (see Chapter 15). When

comprehensive, well-coordinated, quality care is initiated promptly, higher recovery rates in the vicinity of 50% have been found (Hopper et al., 2007; Liberman & Kopelowicz, 2005). Thus, the outlook for schizophrenia may not need to be as pervasively negative as it has been.

Etiology of Schizophrenia



You can probably identify, at least to some extent, with people who suffer from mood disorders, somatoform disorders, and anxiety disorders. You can probably imagine events that could unfold that might leave you struggling with depression, grappling with anxiety, or worrying about your physical health. But what could possibly have led Ed to believe that he had been fighting space wars and vampires? What could account for Sylvia's thinking that she was Joan of Arc or that she had dictated the hobbit novels to Tolkien? As mystifying as these delusions may seem, you'll see that the etiology of schizophrenic disorders is not all that different from the etiology of other psychological disorders. We'll begin our discussion by examining the matter of genetic vulnerability.

Genetic Vulnerability

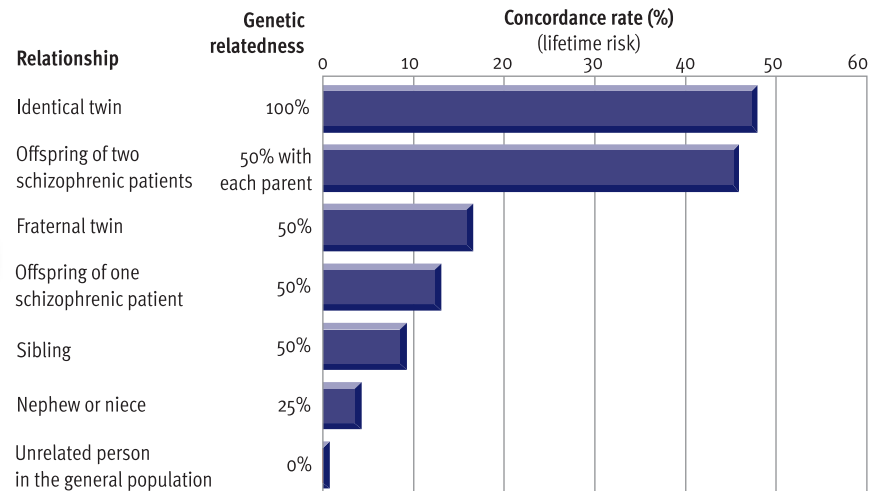


Evidence is plentiful that hereditary factors play a role in the development of schizophrenic disorders (Sullivan et al., 2006; Tsuang, Glatt, & Faraone, 2003). For instance, in twin studies, concordance rates average around 48% for identical twins, in comparison to about 17% for fraternal twins (Gottesman, 1991, 2001). Studies also indicate that a child born to two schizophrenic parents has about a 46% probability of developing a schizophrenic disorder (as compared to the probability in the general population of about 1%). These and other findings that demonstrate the genetic roots of schizophrenia are summarized in Figure 14.18. Overall, the picture is similar to that seen for mood disorders. Several converging lines of evidence indicate that some people inherit a polygenically transmitted *vulnerability* to schizophrenia (Riley & Kendler, 2005; Schneider & Deldin, 2001). Although some theorists suspect that genetic factors may account for as much as two-thirds of the variability in susceptibility to schizophrenia, genetic mapping studies have made little progress in identifying the specific genes at work (Crow, 2007; Walker & Tessner, 2008).

Neurochemical Factors



Like mood disorders, schizophrenic disorders appear to be accompanied by changes in the activity of one



or more neurotransmitters in the brain (Patel, Pinals, & Breier, 2003). The *dopamine hypothesis* asserts that excess dopamine activity is the neurochemical basis for schizophrenia, as presented in Figure 14.19 on the next page. This hypothesis makes sense because most of the drugs that are useful in the treatment of schizophrenia are known to dampen dopamine activity in the brain (Javitt & Laruelle, 2006; Tamminga & Carlsson, 2003). However, the evidence linking schizophrenia to high dopamine levels is riddled with inconsistencies, complexities, and interpretive problems (Abi-Dargham, 2004). Researchers are currently exploring how interactions between the dopamine and serotonin neurotransmitter systems may contribute to schizophrenia (Patel et al., 2003).

Recent research has suggested that marijuana use during adolescence may help precipitate schizophrenia in young people who have a genetic vulnerability to the disorder (Compton, Goulding, & Walker, 2007; Degenhardt & Hall, 2006). This unexpected finding has generated considerable debate about whether and how cannabis might contribute to the emergence of schizophrenia (Castle, 2008; DeLisi, 2008). The current thinking is that the key chemical ingredient in marijuana (THC) may amplify neurotransmitter activity in dopamine circuits (Degenhardt & Hall, 2006; Di Forti et al., 2007). The data on this issue are still preliminary, and more research will be needed to fully understand the association between marijuana use and schizophrenia.

Structural Abnormalities in the Brain



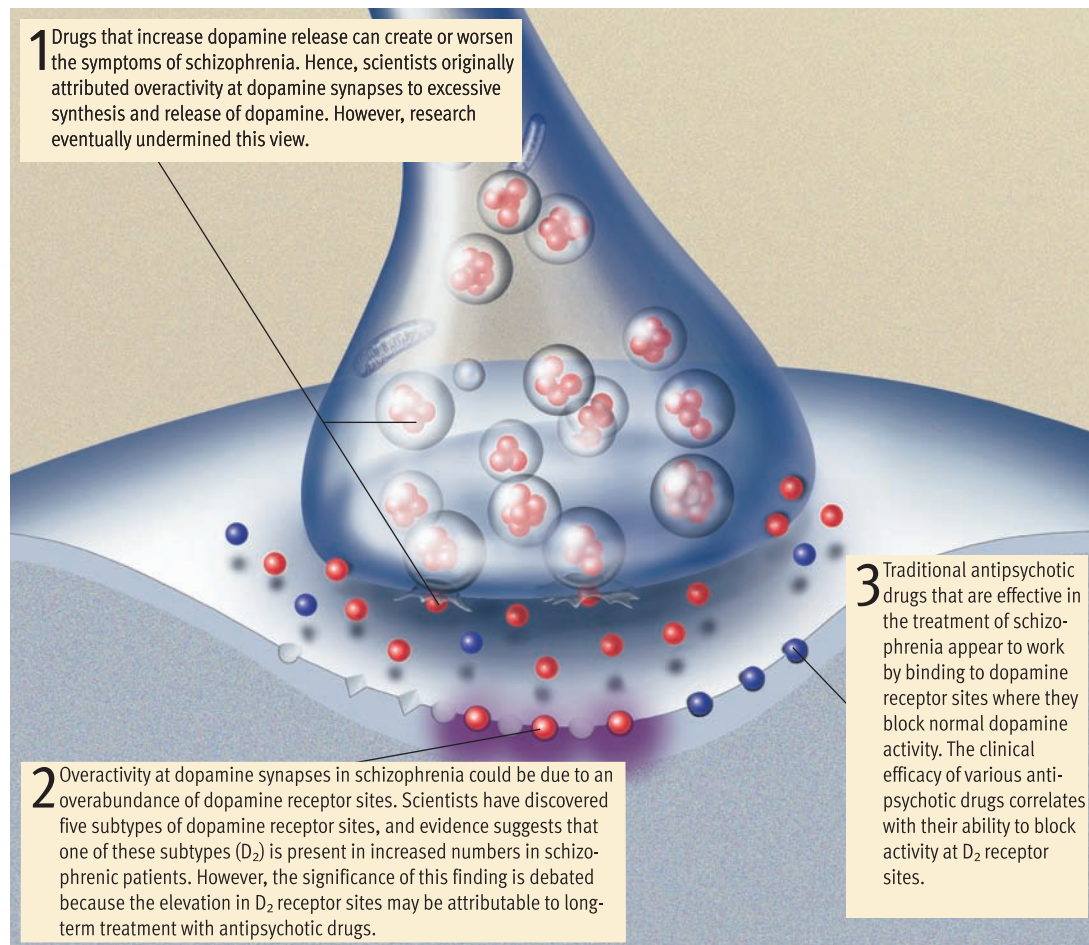
For decades, studies have suggested that individuals with schizophrenia exhibit a variety of deficits in attention, perception, and information processing (Gold & Green, 2005; Keefe & Eesley, 2006). Impairments in working (short-term) memory are

Figure 14.18
Genetic vulnerability to schizophrenic disorders.

Relatives of schizophrenic patients have an elevated risk for schizophrenia. This risk is greater among closer relatives. Although environment also plays a role in the etiology of schizophrenia, the concordance rates shown here suggest that there must be a genetic vulnerability to the disorder. These concordance estimates are based on pooled data from 40 studies conducted between 1920 and 1987. (Data from Gottesman, 1991)

Figure 14.19

The dopamine hypothesis as an explanation for schizophrenia. Decades of research have implicated overactivity at dopamine synapses as a key cause of schizophrenic disorders. However, the evidence on the exact mechanisms underlying this overactivity, which is summarized in this graphic, is complex and open to debate. Recent hypotheses about the neurochemical bases of schizophrenia go beyond the simple assumption that dopamine activity is increased. For example, one theory posits that schizophrenia may be accompanied by decreased dopamine activity in one area of the brain (the prefrontal cortex) and increased activity or dysregulation in other areas of the brain (Egan & Hyde, 2000). Moreover, abnormalities in other neurotransmitter systems may also contribute to schizophrenia.



especially prominent (Silver et al., 2003). These cognitive deficits suggest that schizophrenic disorders may be caused by neurological defects. Until recent decades this theory was based more on speculation than on actual research. Now, however, advances in brain-imaging technology have yielded mountains of intriguing data. The most reliable finding is that CT scans and MRI scans (see Chapter 3) suggest an association between enlarged brain ventricles (the hollow, fluid-filled cavities in the brain depicted in **Figure 14.20**) and schizophrenic disturbance (Belger & Dichter, 2006). Enlarged ventricles are assumed to reflect the degeneration of nearby brain tissue. The significance of enlarged ventricles is hotly debated, however. This structural deterioration (or failure to develop) could be a *consequence* of schizophrenia, or it could be a contributing *cause* of the illness.

Brain-imaging studies have also uncovered structural and metabolic abnormalities in the frontal lobes of individuals with schizophrenia. Although the research results are not entirely consistent, schizophrenia appears to be associated with smaller size and reduced metabolic activity in areas of the prefrontal

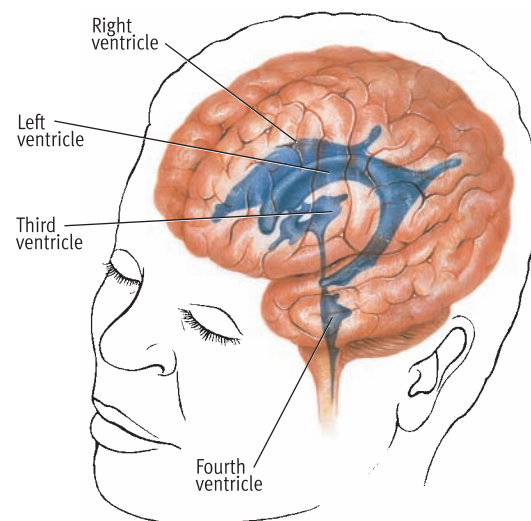


Figure 14.20
Schizophrenia and the ventricles of the brain. Cerebrospinal fluid (CSF) circulates around the brain and spinal cord. The hollow cavities in the brain filled with CSF are called ventricles. The four ventricles in the human brain are depicted here. Recent studies with CT scans and MRI scans suggest that an association exists between enlarged ventricles in the brain and the occurrence of schizophrenic disturbance.

cortex (Fowles, 2003). Scientists are also intrigued by the fact that a major dopamine pathway runs through the area in the prefrontal cortex where metabolic abnormalities have been found. A connection may exist between the abnormal dopamine activity implicated in schizophrenia and the dysfunctional metabolic activity seen in this area of the prefrontal cortex (Conklin & Iacono, 2002). Although the research on the prefrontal cortex is intriguing, Ho, Black, and Andreasen (2003) caution that the neural correlates of schizophrenia are complex and that the disease is not likely to be caused by “a single abnormality in a single region of the brain” (p. 408).

The Neurodevelopmental Hypothesis



Several relatively new lines of evidence have led to the emergence of the *neurodevelopmental hypothesis* of schizophrenia, which asserts that schizophrenia is caused in part by various disruptions in the normal maturational processes of the brain before or at birth (Brown, 1999). According to this hypothesis, insults to the brain during sensitive phases of prenatal development or during birth can cause subtle neurological damage that elevates individuals' vulnerability to schizophrenia years later in adolescence and early adulthood (see Figure 14.21). What are the sources of these early insults to the brain? Thus far, research has mostly focused on viral infections or malnutrition during prenatal development and obstetrical complications during the birth process.

The evidence on viral infections has been building since Sarnoff Mednick and his colleagues (1988) discovered an elevated incidence of schizophrenia among individuals who were in their second trimester of prenatal development during a 1957 influenza epidemic in Finland. Several subsequent studies in other locations have also found a link between exposure to influenza during the second trimester and increased prevalence of schizophrenia (Brown et al., 2004). Another study, which investigated the possible impact of prenatal malnutrition, found an elevated incidence of schizophrenia in a cohort of people who were prenatally exposed to a severe famine in 1944–45 resulting from a Nazi blockade of food deliveries in the Netherlands during World War II (Susser et al., 1996). A recent study looked at a new source of disruption during prenatal development: severe maternal stress. The study found an elevated prevalence of schizophrenia among the offspring of women who suffered severe stress during their pregnancy (Khashan et al., 2008). Other research has shown that schizophrenic patients are

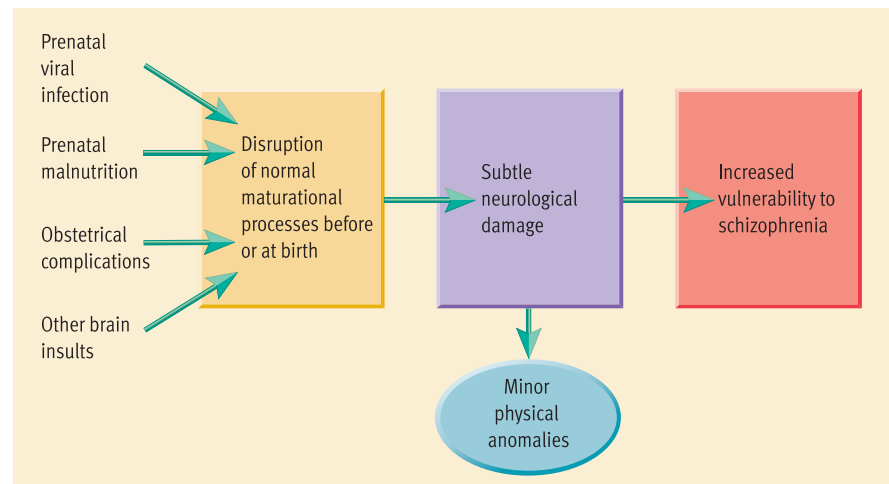


Figure 14.21
The neurodevelopmental hypothesis of schizophrenia. Recent findings have suggested that insults to the brain sustained during prenatal development or at birth may disrupt crucial maturational processes in the brain, resulting in subtle neurological damage that gradually becomes apparent as youngsters develop. This neurological damage is believed to increase both vulnerability to schizophrenia and the incidence of minor physical anomalies (slight anatomical defects of the head, face, hands, and feet).

more likely than control subjects to have a history of obstetrical complications (Kelly et al., 2004; Murray & Bramon, 2005). Finally, research suggests that minor physical anomalies (slight anatomical defects of the head, hands, feet, and face) that would be consistent with prenatal neurological damage are more common among people with schizophrenia than among others (McNeil, Canton-Graae, & Ismail, 2000; Schiffman et al., 2002). Collectively, these diverse studies argue for a relationship between early neurological trauma and a predisposition to schizophrenia (Mednick et al., 1998).

Expressed Emotion

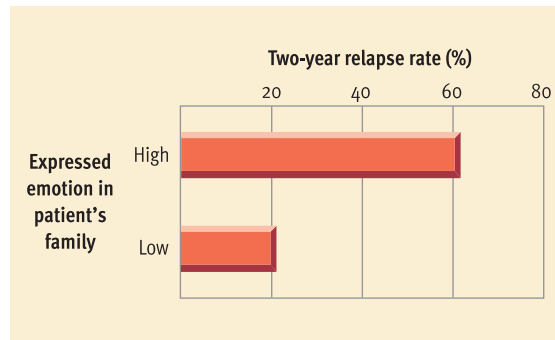


Studies of expressed emotion have primarily focused on how this element of family dynamics influences the *course* of schizophrenic illness, after the onset of the disorder (Leff & Vaughn, 1985). **Expressed emotion (EE) is the degree to which a relative of a patient displays highly critical or emotionally over-involved attitudes toward the patient.** Audiotaped interviews of relatives' communication are carefully evaluated for critical comments, hostility toward the patient, and excessive emotional involvement (over-protective, overconcerned attitudes) (Hooley, 2004).

Studies show that a family's expressed emotion is a good predictor of the course of a schizophrenic patient's illness (Hooley, 2007). After release from a hospital, people with schizophrenia who return to a family high in expressed emotion show relapse rates about three times that of patients who return to a family low in expressed emotion (see Figure 14.22 on the next page; Hooley & Hiller, 1998). Part of the problem for patients returning to homes high in expressed emotion is that their families are probably sources of more *stress* than of *social support*

Figure 14.22

Expressed emotion and relapse rates in schizophrenia. Schizophrenic patients who return to a home that is high in expressed emotion have higher relapse rates than those who return to a home low in expressed emotion. Thus, unhealthy family dynamics can influence the course of schizophrenia. (Data adapted from Leff & Vaughn, 1981)



(Cutting & Docherty, 2000). Although the effects of expressed emotion have been explored primarily with schizophrenic patients, accumulating evidence suggests that high levels of expressed emotion also foster higher relapse rates for patients suffering from mood and anxiety disorders (Hooley, 2004, 2007).

Precipitating Stress

11c



Most theories of schizophrenia assume that stress plays a key role in triggering schizophrenic disorders (Walker & Tessner, 2008). According to this notion, various biological and psychological factors influence individuals' *vulnerability* to schizophrenia. High stress may then serve to precipitate a schizophrenic disorder in someone who is vulnerable. Research indicates that high stress can also trigger relapses in patients who have made progress toward recovery (Walker, Mittal, & Tessner, 2008).

Schizophrenia is the last of the major, Axis I diagnostic categories that we will consider. We'll com-

plete our overview of various types of abnormal behavior with a brief look at the personality disorders. These disorders are recorded on Axis II in the DSM classification system.

REVIEW of Key Points

14.16 Disturbed, irrational thought processes, including delusions, are the defining feature of schizophrenic disorders. Schizophrenia is also characterized by deterioration of everyday adaptive behavior, auditory hallucinations, and disturbed emotion.

14.17 Schizophrenic disorders are classified as paranoid, catatonic, disorganized, or undifferentiated. A classification scheme based on the predominance of positive versus negative symptoms has been proposed, but has not supplanted the traditional classification system. Schizophrenic disorders usually emerge during adolescence or young adulthood. The course of the disorder tends to involve chronic deterioration for many patients, but with prompt, effective care recovery is possible.

14.18 Twin studies and other research show that some people inherit a genetic vulnerability to schizophrenia. The dopamine hypothesis asserts that excess dopamine activity is the neurochemical basis for schizophrenia. The dopamine hypothesis may explain why recent research has uncovered a link between marijuana use and vulnerability to schizophrenia.

14.19 Structural abnormalities in the brain, such as enlarged ventricles, are associated with schizophrenia, but their causal significance is unclear. The neurodevelopmental hypothesis of schizophrenia asserts that schizophrenia is attributable to disruptions in the normal maturational processes of the brain before or at birth that are caused by prenatal viral infections, obstetrical complications, and other insults to the brain.

14.20 Patients who come from homes high in expressed emotion have elevated relapse rates, suggesting that unhealthy family dynamics play a role in schizophrenia. High stress may also contribute to the onset of schizophrenia.



Key Learning Goals

14.21 Discuss the nature of personality disorders and problems with the diagnosis of such disorders.

14.22 Describe the anti-social personality disorder, and discuss its etiology.

Personality Disorders

We have seen repeatedly that it is often difficult to draw that imaginary line between healthy and disordered behavior. This is especially true in the case of personality disorders, most of which are milder disturbances in comparison to most of the Axis I disorders. **Personality disorders are a class of disorders marked by extreme, inflexible personality traits that cause subjective distress or impaired social and occupational functioning.** Essentially, people with these disorders display certain personality traits to an excessive degree and in rigid ways that undermine their adjustment. Personality disorders usually emerge during late childhood or adoles-

cence and often continue throughout adulthood. It is difficult to estimate the prevalence of these subtle disorders, but it is clear that they are common (Mattia & Zimmerman, 2001).

DSM-IV lists ten personality disorders, which are grouped into three related clusters: anxious-fearful, odd-eccentric, and dramatic-impulsive. These disorders are described briefly in **Table 14.2**. If you examine this table, you will find a diverse collection of maladaptive personality syndromes. You may also notice that some personality disorders essentially are milder versions of more severe Axis I disorders. For example, obsessive compulsive personality dis-

Table 14.2 Personality Disorders

Cluster	Disorder	Description	% Male/% Female
Anxious/fearful	Avoidant personality disorder	Excessively sensitive to potential rejection, humiliation, or shame; socially withdrawn in spite of desire for acceptance from others	50/50
	Dependent personality disorder	Excessively lacking in self-reliance and self-esteem; passively allowing others to make all decisions; constantly subordinating own needs to others' needs	31/69
	Obsessive-compulsive personality disorder	Preoccupied with organization, rules, schedules, lists, trivial details; extremely conventional, serious, and formal; unable to express warm emotions	50/50
Odd/eccentric	Schizoid personality disorder	Defective in capacity for forming social relationships; showing absence of warm, tender feelings for others	78/22
	Schizotypal personality disorder	Showing social deficits and oddities of thinking, perception, and communication that resemble schizophrenia	55/45
	Paranoid personality disorder	Showing pervasive and unwarranted suspiciousness and mistrust of people; overly sensitive; prone to jealousy	67/33
Dramatic/impulsive	Histrionic personality disorder	Overly dramatic; tending to exaggerated expressions of emotion; egocentric, seeking attention	15/85
	Narcissistic personality disorder	Grandiosely self-important; preoccupied with success fantasies; expecting special treatment; lacking interpersonal empathy	70/30
	Borderline personality disorder	Unstable in self-image, mood, and interpersonal relationships; impulsive and unpredictable	38/62
	Antisocial personality disorder	Chronically violating the rights of others; failing to accept social norms, to form attachments to others, or to sustain consistent work behavior; exploitive and reckless	82/18

Source: Estimated gender ratios from Millon (1981).

order is a milder version of obsessive-compulsive disorder, and the schizoid and schizotypal personality disorders are milder cousins of schizophrenic disorders. Some personality disorders are more common in men and some in women, as the figures in the far right column of the table indicate.

Diagnostic Problems

Many critics have argued that the personality disorders overlap too much with Axis I disorders and with each other (Clark, 2007). The extent of this problem was documented in a study by Leslie Morey (1988). Morey reviewed the cases of 291 patients who had received a specific personality disorder diagnosis to see how many could have met the criteria for any of the other personality disorders. Morey found massive overlap among the diagnoses. For example, among patients with a diagnosis of histrionic personality disorder, 56% also qualified for a borderline disorder, 54% for a narcissistic disorder, 32% for an avoidant disorder, and 30% for a dependent disorder. Clearly, there are fundamental problems with Axis II as a classification system (Tyrrer et al., 2007; Widiger, 2007). The overlap among the personality disorders makes it extremely difficult to achieve reliable diagnoses. Doubts have also been raised about the decision to place personality disorders on a sepa-

rate axis, as there does not appear to be any fundamental distinction between personality disorders and Axis I disorders (Krueger, 2005).

In light of these problems, a variety of theorists have questioned the wisdom of the current *categorical approach* to describing personality disorders, which assumes (incorrectly, they argue) that people can reliably be placed in discontinuous (nonoverlapping) diagnostic categories (Verheul, 2005; Widiger & Trull, 2007). These theorists argue instead for a *dimensional approach*, which would describe personality disorders in terms of how people score on a limited number of continuous personality dimensions. The practical logistics of using a dimensional approach to describe personality disorders are formidable, and experts note that the categorical approach better reflects how clinicians think about pathology (Phillips, Yen, & Gunderson, 2003). In any event, vigorous debate about the classification of personality disorders is likely to continue as researchers grapple with how to move from DSM-IV to DSM-V.

The difficulties involved in the diagnosis of personality disorders have clearly hindered research on their etiology and prognosis. The only personality disorder that has a long history of extensive research is the antisocial personality disorder, which we examine next.

Antisocial Personality Disorder

Antisocial personality disorder has a misleading name. The antisocial designation does *not* mean that people with this disorder shun social interaction. In fact, rather than shrinking from social interaction, many such individuals are sociable, friendly, and superficially charming. People with this disorder are *antisocial* in that they choose to *reject widely accepted social norms* regarding moral principles and behavior.

Description

People with antisocial personalities chronically violate the rights of others. They often use their social charm to cultivate others' liking or loyalty for purposes of exploitation. **The antisocial personality disorder is marked by impulsive, callous, manipulative, aggressive, and irresponsible behavior that reflects a failure to accept social norms.** Since they haven't accepted the social norms they violate, people with antisocial personalities rarely feel guilty about their transgressions. Essentially, they lack an adequate conscience. The antisocial personality disorder occurs much more frequently among males than females. Studies suggest that it is a moderately common disorder, seen in roughly 3%–6% of males and about 1% of females (Widiger & Mullins, 2003).

Many people with antisocial personalities get involved in illegal activities. Moreover, antisocial personalities tend to begin their criminal careers at an early age, to commit offenses at a relatively high rate, and to be versatile offenders who get involved in many types of criminal activity (Douglas, Vincent, & Edens, 2006; Hare, 2006; Porter & Porter, 2007). However, many people with antisocial personalities keep their exploitive, amoral behavior channeled within the boundaries of the law. Such people may even enjoy high status in our society (Babiak & Hare, 2006; Hall & Benning, 2006). In other words, the concept of the antisocial personality disorder can apply to cut-throat business executives, scheming politicians, unprincipled lawyers, and money-hungry evangelists, as well as to con artists, drug dealers, thugs, burglars, and petty thieves.

People with antisocial personalities exhibit quite a variety of maladaptive traits (Hare, 2006; Hare & Neumann, 2008). Among other things, they rarely experience genuine affection for others. However, they may be skilled at faking affection so they can exploit people. Sexually, they are predatory and promiscuous. They also tend to be irresponsible and impulsive. They can tolerate little frustration, and they pursue immediate gratification. These charac-

teristics make them unreliable employees, unfaithful spouses, inattentive parents, and undependable friends. Many people with antisocial personalities have a checkered history of divorce, child abuse, and job instability. The picture does tend to improve as those with antisocial personalities become middle-aged. One study that followed antisocial men into their 50s found substantial improvement in 58% of the subjects (Black, 2001).

Etiology

Many theorists believe that biological factors contribute to the development of antisocial personality disorders. Various lines of evidence suggest a genetic predisposition toward these disorders (Moffitt, 2005; Waldman & Rhee, 2006). A review of twin studies found an average concordance rate of 67% for identical twins in comparison to 31% for fraternal twins (Black, 2001). These findings are consistent with a fairly strong genetic vulnerability to the disorder. Many observers have noted that people with antisocial personalities lack the inhibitions that most of us have about violating moral standards. Their lack of inhibitions prompted Hans Eysenck (1982) to theorize that such people might inherit relatively sluggish autonomic nervous systems, leading to slow acquisition of inhibitions through classical conditioning. The notion that antisocial personalities exhibit underarousal has received some support (Raine, 1997), but the findings have been inconsistent (Blackburn, 2006), and some studies have suggested the opposite—that *overarousal* may promote antisocial behavior (Hart, Eisenberg, & Valiente, 2007). Part of the problem in this area of research may be that arousal can be quantified in a great many different ways.

Efforts to relate psychological factors to antisocial behavior have emphasized inadequate socialization in dysfunctional family systems (Farrington, 2006; Sutker & Allain, 2001). It's easy to envision how antisocial traits could be fostered in homes where parents make haphazard or halfhearted efforts to socialize their children to be respectful, truthful, responsible, unselfish, and so forth. Consistent with this idea, studies find that individuals with antisocial personalities tend to come from homes where discipline is erratic or ineffective or where they experience physical abuse and neglect (Luntz & Widom, 1994; Widom, 1997). Such people are also more likely to emerge from families where one or both parents exhibit antisocial traits (Black, 2001). These parents presumably model exploitive, amoral behaviors, which their children acquire through observational learning.

REVIEW of Key Points

14.21 Personality disorders are marked by extreme personality traits that cause distress and impaired functioning. There are ten personality disorders allocated to Axis II in DSM-IV. Personality disorders can be grouped into three clusters: anxious-fearful, odd-eccentric, and dramatic-impulsive. Specific personality disorders are poorly defined and there is excessive overlap among them, creating diagnostic problems. Some theorists

believe that these problems could be reduced by replacing the current categorical approach with a dimensional approach.

14.22 Antisocial personality disorder is characterized by manipulative, impulsive, exploitive, aggressive behavior. It is associated with criminal activity, although many keep their amoral behavior within the boundaries of the law. Research on the etiology of this disorder has implicated genetic vulnerability, autonomic reactivity, inadequate socialization, and observational learning.

Psychological Disorders and the Law

Societies use laws to enforce their norms regarding appropriate behavior. Given this function, the law in our society has something to say about many issues related to abnormal behavior. In this section we examine the concepts of insanity and involuntary commitment.

Insanity

Insanity is *not* a diagnosis; it's a legal concept. **Insanity is a legal status indicating that a person cannot be held responsible for his or her actions because of mental illness.** Why is this an issue in the courtroom? Because criminal acts must be intentional. The law reasons that people who are "out of their mind" may not be able to appreciate the significance of what they're doing. The insanity defense is used in criminal trials by defendants who admit that they committed the crime but claim that they lacked intent.

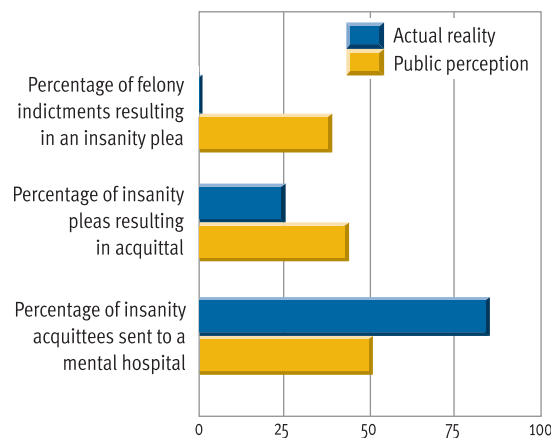
No simple relationship exists between specific diagnoses of mental disorders and court findings of insanity. The vast majority of people with diagnosed psychological disorders would *not* qualify as insane. The people most likely to qualify are those troubled by severe disturbances that display delusional behavior. The courts apply various rules in making judgments about a defendant's sanity, depending on the jurisdiction (Simon, 2003). According to one widely used rule, called the *M'naghten rule*, *insanity exists when a mental disorder makes a person unable to distinguish right from wrong.* As you can imagine, evaluating insanity as defined in the *M'naghten rule* can be difficult for judges and jurors, not to mention the psychologists and psychiatrists who are called into court as expert witnesses.

Although highly publicized and controversial, the insanity defense is actually used less frequently and less successfully than widely believed (see [Figure 14.23](#)). One study found that the general public

estimates that the insanity defense is used in 37% of felony cases, when in fact it is used in less than 1% (Silver, Cirincione, & Steadman, 1994). Another study of over 60,000 indictments in Baltimore found that only 190 defendants (0.31%) pleaded insanity, and of these, only 8 were successful (Janofsky et al., 1996).

Involuntary Commitment

The issue of insanity surfaces only in *criminal* proceedings. Far more people are affected by *civil* proceedings relating to involuntary commitment. **In involuntary commitment people are hospitalized in psychiatric facilities against their will.** What are the grounds for such a dramatic action? They vary some from state to state. Generally, people are subject to involuntary commitment when mental health professionals and legal authorities believe that a mental disorder makes them (1) dangerous to themselves (usually suicidal), (2) dangerous to others (potentially violent), or (3) in need of treatment (applied in cases of severe disorientation). In emergency situations psychologists and psychiatrists can authorize *temporary* commitment, usually for 24 to 72 hours. Orders for long-term involuntary commitment are



Key Learning Goals

14.23 Articulate the legal concept of insanity, and clarify the grounds for involuntary commitment.

web link 14.9



David Willshire's Forensic Psychology and Psychiatry Links

This site's webmaster, a senior psychologist at Australia's Victorian Institute of Forensic Mental Health, has brought together a large set of annotated links on all aspects of forensic matters—that is, how the law and criminal justice system interact with psychology and psychiatry.

Figure 14.23

The insanity defense: Public perceptions and actual realities. Silver, Cirincione, and Steadman (1994) collected data on the general public's beliefs about the insanity defense and the realities of how often it is used and how often it is successful (based on a large-scale survey of insanity pleas in eight states). Because of highly selective media coverage, dramatic disparities are seen between public perceptions and actual realities, as the insanity defense is used less frequently and less successfully than widely assumed.

ILLUSTRATED OVERVIEW OF THREE CATEGORIES OF PSYCHOLOGICAL DISORDERS

AXIS I CATEGORY

ANXIETY DISORDERS

Edvard Munch's *The Scream* expresses overwhelming feelings of anxiety.



National Gallery, Oslo, Norway; SCALA/Art Resource/NY; © 2009 The Munch Museum/The Munch-Ellingsen Group/Artists Rights Society (ARS), NY.

MOOD DISORDERS



Musee d'Orsay, Paris. © Erich Lessing/Art Resource, NY.

Vincent Van Gogh's *Portrait of Dr. Gachet* captures the profound dejection experienced in depressive disorders.

SCHIZOPHRENIC DISORDERS

The perceptual distortions seen in schizophrenia probably contributed to the bizarre imagery apparent in this portrait of a cat painted by Louis Wain.



© Derek Bayes/Aspect Picture Library

SUBTYPES

Generalized anxiety disorder: Chronic, high level of anxiety not tied to any specific threat

Phobic disorder: Persistent, irrational fear of object or situation that presents no real danger

Panic disorder: Recurrent attacks of overwhelming anxiety that occur suddenly and unexpectedly

Obsessive-compulsive disorder: Persistent, uncontrollable intrusions of unwanted thoughts and urges to engage in senseless rituals

Posttraumatic stress disorder: Enduring psychological disturbance attributable to the experience of a major traumatic event

Major depressive disorder: Two or more major depressive episodes marked by feelings of sadness, worthlessness, despair

Bipolar disorder: One or more manic episodes marked by inflated self-esteem, grandiosity, and elevated mood and energy, usually accompanied by major depressive episodes

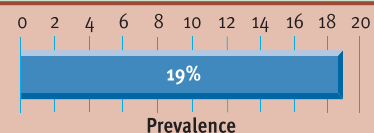
Paranoid schizophrenia: Delusions of persecution and delusions of grandeur; frequent auditory hallucinations

Catatonic schizophrenia: Motor disturbances ranging from immobility to excessive, purposeless activity

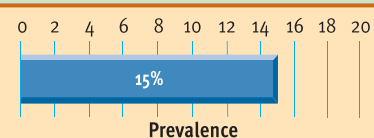
Disorganized schizophrenia: Flat or inappropriate emotions; disorganized speech and adaptive behavior

Undifferentiated schizophrenia: Idiosyncratic mixtures of schizophrenic symptoms that cannot be placed into above three categories

PREVALENCE/ WELL-KNOWN VICTIM



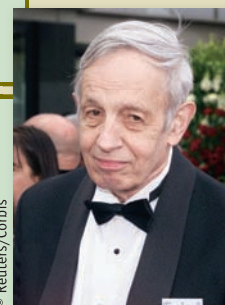
The famous industrialist Howard Hughes suffered from obsessive-compulsive disorder.



Actor Harrison Ford has suffered from depression.



© Elizabetha Villa/Getty Images



© Reuters/Corbis

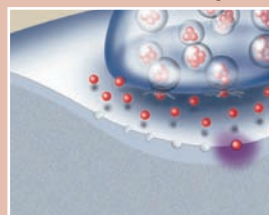
John Nash, the Nobel Prize-winning mathematician whose story was told in the film *A Beautiful Mind*, has struggled with schizophrenia.

ETIOLOGY: BIOLOGICAL FACTORS

Genetic vulnerability: Twin studies and other evidence suggest a mild genetic predisposition to anxiety disorders.



Anxiety sensitivity: Oversensitivity to physical symptoms of anxiety may lead to overreactions to feelings of anxiety, so anxiety breeds anxiety.

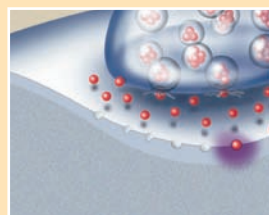


Neurochemical bases: Disturbances in neural circuits releasing GABA may contribute to some disorders; abnormalities at serotonin synapses have been implicated in panic and obsessive-compulsive disorders.

Genetic vulnerability: Twin studies and other evidence suggest a genetic predisposition to mood disorders.



Suppressed neurogenesis: Disruption of neurogenesis may lead to reduced volume in the hippocampus and to depression.



Neurochemical bases: Disturbances in neural circuits releasing norepinephrine may contribute to some mood disorders; abnormalities at serotonin synapses have also been implicated as a factor in depression.

Genetic vulnerability: Twin studies and other evidence suggest a genetic predisposition to schizophrenic disorders.

Neurochemical bases: Overactivity in neural circuits releasing dopamine is associated with schizophrenia; but abnormalities in other neurotransmitter systems may also contribute.



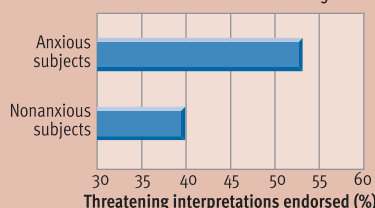
Structural abnormalities in brain: Enlarged brain ventricles are associated with schizophrenia, but they may be an effect rather than a cause of the disorder.

ETIOLOGY: PSYCHOLOGICAL FACTORS

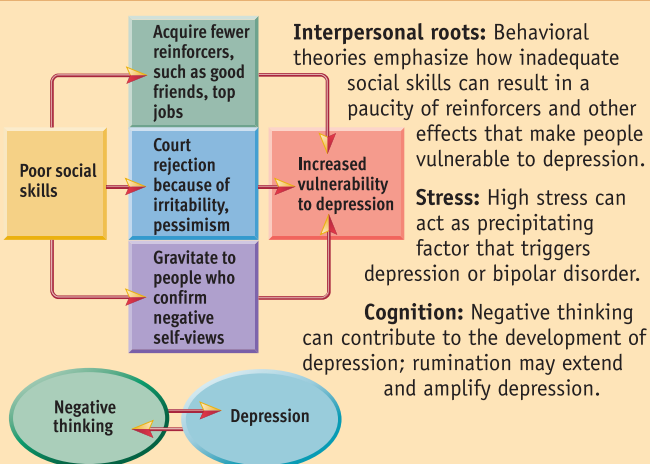
Learning: Many anxiety responses may be acquired through classical conditioning or observational learning; phobic responses may be maintained by operant reinforcement.



Stress: High stress may help to precipitate the onset of anxiety disorders.

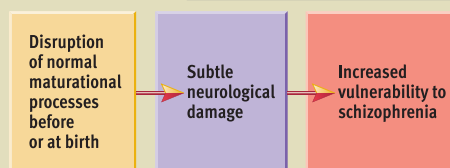


Cognition: People who misinterpret harmless situations as threatening and who focus excessive attention on perceived threats are more vulnerable to anxiety disorders.

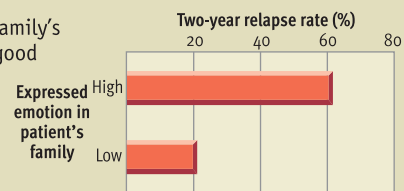


Expressed emotion: A family's expressed emotion is a good predictor of the course of a schizophrenic patient's illness.

Stress: High stress can precipitate schizophrenic disorder in people who are vulnerable to schizophrenia.



The neurodevelopmental hypothesis: Insults to the brain sustained during prenatal development or at birth may disrupt maturational processes in the brain resulting in elevated vulnerability to schizophrenia.





© AP Images/Richard Drew

Seung-Hui Cho, who gunned down 32 people at Virginia Tech in April of 2007, had a history of mental illness and showed many signs of psychological deterioration in the months leading up to the massacre. Given his struggles with psychological disturbance, many people were baffled about why he had not been subjected to involuntary commitment. But commitment proceedings based on his overt, known behavior prior to the murders (a couple of stalking incidents and some angry, violent class essays) probably would have failed. What most people do not understand is that laws in the United States generally set the bar very high for involuntary commitment. Why? Because predictions of dangerousness are not very accurate and because our legal system is reluctant to incarcerate people for what they might do. Unfortunately, our conservative approach to involuntary commitment sometimes has tragic consequences.

usually set up for renewable six-month periods and can be issued by a court only after a formal hearing. Mental health professionals provide extensive input in these hearings, but the courts make the final decisions (Simon, 2005).

Most involuntary commitments occur because people appear to be *dangerous* to themselves or others. The difficulty, however, is in predicting dangerousness. Studies suggest that clinicians' short-term predictions about which patients are likely to become violent are only moderately accurate and that their long-term predictions of violent behavior are largely inaccurate (Simon, 2003; Stone, 1999). This inaccuracy in predicting dangerousness is unfortunate, because involuntary commitment involves the *detention* of people for what they *might* do in the future. Such detention goes against the grain of the American legal principle that people are *innocent until proven guilty*. The inherent difficulty in predicting dangerousness makes involuntary commitment a complex and controversial issue.

REVIEW of Key Points

14.23 Insanity is a legal concept applied to people who cannot be held responsible for their actions because of mental illness. The insanity defense is used less frequently and less successfully than widely believed. When people appear to be dangerous to themselves or others, courts may rule that they are subject to involuntary commitment in a hospital.



Key Learning Goals

14.24 Compare the relativistic versus pancultural view of psychological disorders.

14.25 Assess the extent of cultural variability in the existence and presentation of mental disorders.

Culture and Pathology

The legal rules governing insanity and involuntary commitment obviously are culture-specific. And we noted earlier that judgments of normality and abnormality are influenced by cultural norms and values. In light of these realities, would it be reasonable to infer that psychological disorders are culturally variable phenomena? Social scientists are sharply divided on the answer to this question. Some embrace a *relativistic view* of psychological disorders, whereas others subscribe to a *universalistic or pancultural view* (Tanaka-Matsumi, 2001). Theorists who embrace the *relativistic view* argue that the criteria of mental illness vary greatly across cultures and that there are no universal standards of normality and abnormality. According to the relativists, the DSM diagnostic system reflects an ethnocentric, Western, white, urban, middle- and upper-class cultural orientation

that has limited relevance in other cultural contexts. In contrast, those who subscribe to the *pancultural view* argue that the criteria of mental illness are much the same around the world and that basic standards of normality and abnormality are universal across cultures. Theorists who accept the pancultural view of psychopathology typically maintain that Western diagnostic concepts have validity and utility in other cultural contexts.

The debate about culture and pathology basically boils down to two specific issues: (1) Are the psychological disorders seen in Western societies found throughout the world? (2) Are the symptom patterns of mental disorders invariant across cultures? Let's briefly examine the evidence on these questions and then reconsider the relativistic and pancultural views of psychological disorders.

Are Equivalent Disorders Found Around the World?

Most investigators agree that the principal categories of serious psychological disturbance—schizophrenia, depression, and bipolar illness—are identifiable in all cultures (Tsai et al., 2001). Most behaviors that are regarded as clearly abnormal in Western culture are also viewed as abnormal in other cultures. People who are delusional, hallucinatory, disoriented, or incoherent are thought to be disturbed in all societies, although there are cultural disparities in exactly what is considered delusional or hallucinatory.

Cultural variations are more apparent in the recognition of less severe forms of psychological disturbance (Mezzich, Lewis-Fernandez, & Ruiperez, 2003). Additional research is needed, but relatively mild types of pathology that do not disrupt behavior in obvious ways appear to go unrecognized in many societies. Thus, syndromes such as generalized anxiety disorder, hypochondria, and narcissistic personality disorder, which are firmly established as diagnostic entities in the DSM, are viewed in some cultures as “run of the mill” difficulties and peculiarities rather than as full-fledged disorders.

Finally, researchers have discovered a small number of *culture-bound disorders* that further illustrate the diversity of abnormal behavior around the world (Griffith, Gonzalez, & Blue, 2003; Trujillo, 2005). **Culture-bound disorders are abnormal syndromes found only in a few cultural groups.** For example, *koro*, an obsessive fear that one’s penis will withdraw into one’s abdomen, is seen only among Chinese males in Malaya and several other regions of southern Asia. *Windigo*, which involves an intense craving for human flesh and fear that one will turn into a cannibal, is seen only among Algonquin Indian cultures. And until fairly recently, the eating disorder *anorexia nervosa*, discussed in this chapter’s Personal Application, was largely seen only in affluent Western cultures.

Are Symptom Patterns Culturally Invariant?

Do the major types of psychological disorders manifest themselves in the same way around the world?

REVIEW of Key Points

14.24 Theorists who embrace a relativistic view of psychological disorders argue that there are no universal standards of normality and abnormality. Those who subscribe to the pan-cultural view argue that the criteria of mental illness are much the same around the world.

It depends to some extent on the disorder. The more a disorder has a strong biological component, the more it tends to be expressed in similar ways across varied cultures (Marsella & Yamada, 2007). Thus, the constellations of symptoms associated with schizophrenia and bipolar illness are largely the same across widely disparate societies (Draguns, 1980, 1990). However, even in severe, heavily biological disorders, cultural variations in symptom patterns are also seen (Mezzich et al., 2003). For example, delusions are a common symptom of schizophrenia in all cultures, but the specific delusions that people report are tied to their cultural heritage (Brislin, 1993). In technologically advanced societies, schizophrenic patients report that thoughts are being inserted into their minds through transmissions from electric lines, satellites, or microwave ovens. Victims of schizophrenia in less technological societies experience the same phenomenon but blame sorcerers or demons. Of the major disorders, symptom patterns are probably most variable for depression. For example, profound feelings of guilt and self-deprecation lie at the core of depression in Western cultures but are far less central to depression in many other societies. In non-Western cultures, depression tends to be expressed in terms of somatic symptoms, such as complaints of fatigue, headaches, and backaches, more than psychological symptoms, such as dejection and low self-esteem (Tsai et al., 2001; Young, 1997). These differences presumably occur because people learn to express symptoms of psychological distress in ways that are acceptable in their culture.

So, what can we conclude about the validity of the relativistic versus pancultural views of psychological disorders? Both views appear to have some merit. As we have seen in other areas of research, psychopathology is characterized by both cultural variance and invariance. Investigators have identified some universal standards of normality and abnormality and found considerable similarity across cultures in the syndromes that are regarded as pathological and in their patterns of symptoms. However, researchers have also discovered many cultural variations in the recognition, definition, and symptoms of various psychological disorders. Given this extensive variability, the relativists’ concerns about the ethnocentric nature of the DSM diagnostic system seem well founded.

14.25 The principal categories of psychological disturbance are identifiable in all cultures. However, milder disorders may go unrecognized in some societies, and culture-bound disorders further illustrate the diversity of abnormal behavior around the world. The symptoms associated with specific disorders are largely the same across different cultures, but cultural variations are seen in the details of how these symptoms are expressed.



Key Learning Goals

14.26 Identify the four unifying themes highlighted in this chapter.



Multifactorial Causation



Heredity and Environment



Sociohistorical Context



Cultural Heritage

Reflecting on the Chapter's Themes

Our examination of abnormal behavior and its roots has highlighted four of our organizing themes: multifactorial causation, the interplay of heredity and environment, the sociohistorical context in which psychology evolves, and the influence of culture on psychological phenomena.

We can safely assert that every disorder described in this chapter has multiple causes. The development of mental disorders involves an interplay among a variety of psychological, biological, and social factors. We also saw that most psychological disorders depend on an interaction of genetics and experience. This interaction shows up most clearly in the *stress-vulnerability models* for mood disorders and schizophrenic disorders (see [Figure 14.24](#)). *Vulnerability* to these disorders seems to depend primarily on heredity, whereas stress is largely a function of environment. According to stress-vulnerability theories, disorders emerge when high vulnerability intersects with high stress. A high biological vulner-

ability may not be converted into a disorder if a person's stress is low. Similarly, high stress may not lead to a disorder if vulnerability is low. Thus, the impact of heredity depends on the environment, and the effect of environment depends on heredity.

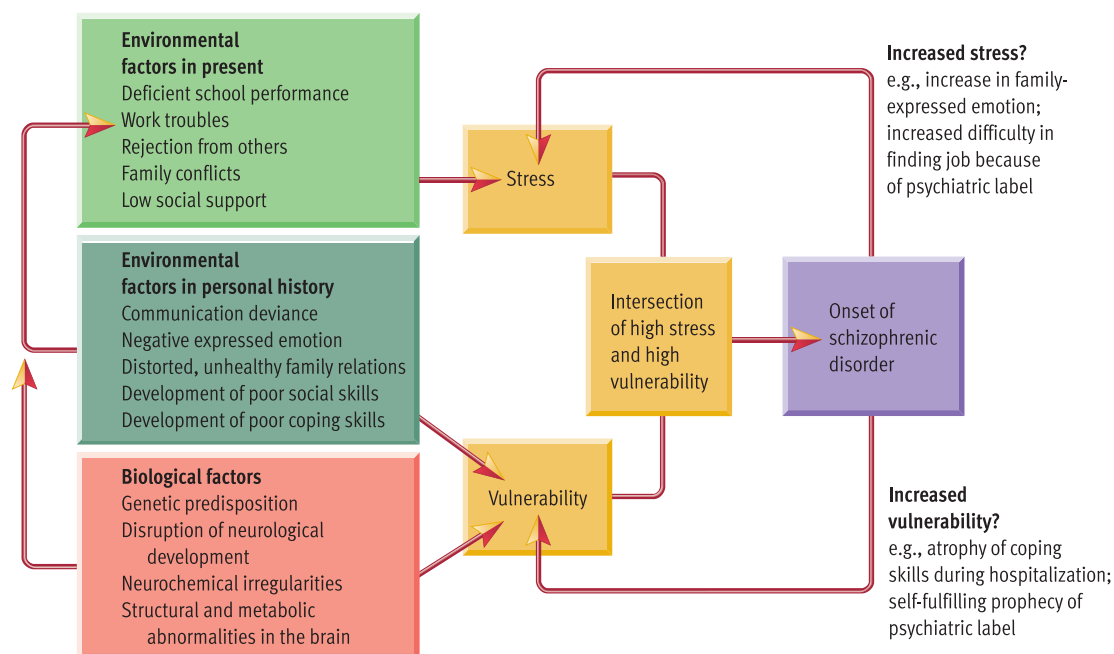
This chapter also demonstrated that psychology evolves in a sociohistorical context. We saw that modern conceptions of normality and abnormality are largely shaped by empirical research, but social trends, economic necessities, and political realities also play a role. Finally, our discussion of psychological disorders showed once again that psychological phenomena are shaped to some degree by cultural parameters. Although some standards of normality and abnormality transcend cultural boundaries, cultural norms influence many aspects of psychopathology. Indeed, the influence of culture will be apparent in our upcoming Personal Application on eating disorders. These disorders are largely a creation of modern, affluent, Western culture.

REVIEW of Key Points

14.26 This chapter highlighted four of our unifying themes, showing that behavior is governed by multiple causes, that he-

redity and environment jointly influence mental disorders, that psychology evolves in a sociohistorical context, and that pathology is characterized by both cultural variance and invariance.

Figure 14.24
The stress-vulnerability model of schizophrenia. Multifactorial causation is readily apparent in current theories about the etiology of schizophrenic disorders. A variety of biological factors and personal history factors influence one's vulnerability to the disorder, which interacts with the amount of stress one experiences. Schizophrenic disorders appear to result from an intersection of high stress and high vulnerability.



Understanding Eating Disorders

Answer the following “true” or “false.”

- ___ 1 Although they have only attracted attention in recent years, eating disorders have a long history and have always been fairly common.
- ___ 2 People with anorexia nervosa are much more likely to recognize that their eating behavior is pathological than people suffering from bulimia nervosa are.
- ___ 3 The prevalence of eating disorders is twice as high in women as it is in men.
- ___ 4 The binge-and-purge syndrome seen in bulimia nervosa is not common in anorexia nervosa.

All of the above statements are false, as you will see in this Personal Application. The psychological disorders that we discussed in the main body of the chapter have largely been recognized for centuries, and most of them are found in one form or another in all cultures and societies. Eating disorders present a sharp contrast to this picture; they have only been recognized relatively recently and have largely been confined to affluent, Westernized cultures (G. F. M. Russell, 1995; Szmukler & Patton, 1995). In spite of these fascinating differences, eating disorders have much in common with traditional forms of pathology.

Description

Although most people don’t seem to take eating disorders as seriously as other types of psychological disorders, you will see that they are dangerous and debilitating (Thompson, Roehrig, & Kinder, 2007). No psychological disorder is associated with a greater elevation in mortality (Striegel-Moore & Bulik, 2007). **Eating disorders are severe disturbances in eating behavior characterized by preoccupation with weight and unhealthy efforts to control weight.** In DSM-IV, two sometimes overlapping syndromes are recognized: *an-*

orexia nervosa and *bulimia nervosa*. A third syndrome, called *binge-eating disorder*, is described in the appendix of DSM-IV as a potential new disorder, pending further study. We will devote our attention in this Application to the two established eating disorders, but we will briefly outline the symptoms of this new disorder as well.

Anorexia Nervosa

Anorexia nervosa involves intense fear of gaining weight, disturbed body image, refusal to maintain normal weight, and use of dangerous measures to lose weight.

Two subtypes have been observed (Herzog & Delinski, 2001). In *restricting type anorexia nervosa*, people drastically reduce their intake of food, sometimes literally starving themselves. In *binge-eating/purging type anorexia nervosa*, individuals attempt to lose weight by forcing themselves to vomit after meals, by misusing laxatives and diuretics, and by engaging in excessive exercise.



Eating disorders have become distressingly common among young women in Western cultures. No matter how frail they become, people suffering from anorexia insist that they are too fat.

Key Learning Goals

14.27 Describe the subtypes, history, and prevalence of eating disorders.

14.28 Outline how genetic factors, personality, culture, family dynamics, and disturbed thinking contribute to eating disorders.

People with both types suffer from disturbed body image. No matter how frail and emaciated they become, they insist that they are too fat. Their morbid fear of obesity means that they are never satisfied with their weight. If they gain a pound or two, they panic. The only thing that makes them happy is to lose more weight. The common result is a relentless decline in body weight; people entering treatment for anorexia nervosa are typically 25%–30% below their normal weight (Hsu, 1990). Because of their disturbed body image, people suffering from anorexia generally do *not* appreciate the maladaptive quality of their behavior and rarely seek treatment on their own. They are typically coaxed or coerced into treatment by friends or family members who are alarmed by their appearance.

Anorexia nervosa eventually leads to a cascade of medical problems, including *amenorrhea* (a loss of menstrual cycles in women), gastrointestinal problems, low blood pressure, *osteoporosis* (a loss of bone density), and metabolic disturbances that can lead to cardiac arrest or circulatory collapse (Pomeroy & Mitchell, 2002; Walsh, 2003). Anorexia is a serious illness that leads to death in 5%–10% of patients (Steinhausen, 2002).

Bulimia Nervosa

Bulimia nervosa involves habitually engaging in out-of-control overeating followed by unhealthy compensatory efforts, such as self-induced vomiting, fasting, abuse of laxatives and diuretics, and excessive exercise. The eating binges are usually carried out in secret and are followed by intense guilt and concern about gaining weight. These feelings motivate ill-advised strategies to undo the effects of the

overeating. However, vomiting prevents the absorption of only about half of recently consumed food, and laxatives and diuretics have negligible impact on caloric intake, so people suffering from bulimia nervosa typically maintain a reasonably normal weight (Beumont, 2002; Kaye et al., 1993). Medical problems associated with bulimia nervosa include cardiac arrhythmias, dental problems, metabolic deficiencies, and gastrointestinal problems (Halmi, 2002, 2003). Bulimia often coexists with other psychological disturbances, including depression, anxiety disorders, and substance abuse (Hudson et al., 2007).

Obviously, bulimia nervosa shares many features with anorexia nervosa, such as a morbid fear of becoming obese, preoccupation with food, and rigid, maladaptive approaches to controlling weight that are grounded in naive all-or-none thinking. The close relationship between the disorders is demonstrated by the fact that many patients who initially develop one syndrome cross over to display the other syndrome (Tozzi et al., 2005). However, the two syndromes also differ in crucial ways. First and foremost, bulimia is a much less life-threatening condition. Second, although their appearance is usually more “normal” than that seen in anorexia, people with bulimia are much more likely to recognize that their eating behavior is pathological and are more likely to cooperate with treatment (Striegel-Moore, Silberstein, & Rodin, 1993; Guarda et al., 2007).

Binge-Eating Disorder

A surprising number of people who exhibit disordered eating do not fit neatly into the anorexia or bulimia categories, which is why a third category has been proposed. **Binge-eating disorder involves distress-inducing eating binges that are not accompanied by the purging, fasting, and excessive exercise seen in bulimia.** Obviously, this syndrome resembles bulimia, but it is a less severe disorder. Still, this disorder creates great distress, as people tend to be disgusted by their bodies and distraught about their overeating. People with binge-eating disorder are frequently overweight. Their excessive eating is often triggered by stress

(Gluck, 2006). Research suggests that this comparatively mild syndrome may be more common than anorexia or bulimia (Hudson et al., 2007). Given the research that has been compiled since DSM-IV was released in 1994, it appears likely that binge-eating disorder will be recognized as an independent disorder in the forthcoming DSM-V (Striegel-Moore & Franko, 2008).

History and Prevalence

Historians have been able to track down descriptions of anorexia nervosa that date back centuries, so the disorder is *not* entirely new, but anorexia nervosa did not become a common affliction until the middle part of the 20th century (Vandereycken, 2002). Although bingeing and purging have a long history in some cultures, they were not part of pathological efforts to control weight, and bulimia nervosa appears to be a new syndrome that emerged gradually in the middle of the 20th century and was first recognized in the 1970s (G. F. M. Russell, 1997; Vandereycken, 2002).

Both disorders are a product of modern, affluent, Western culture, where food is generally plentiful and the desirability of being thin is widely endorsed. Until recently, these disorders were not seen outside of Western cultures (Hoek, 2002). However, advances in communication have exported Western culture to far-flung corners of the globe, and eating disorders have started showing up in many non-Western societies, especially affluent Asian countries (Becker & Fay, 2006; Lee & Katzman, 2002).

A huge gender gap is seen in the likelihood of developing eating disorders. About 90%–95% of individuals with eating disorders are female (Thompson & Kinder, 2003). This staggering discrepancy appears to be a result of cultural pressures rather than biological factors (Smolak & Murnen, 2001). Western standards of attractiveness emphasize slenderness more for females than for males, and women generally experience greater pressure to be physically attractive than men do (Strahan et al., 2008). Eating disorders mostly afflict *young* women. The typical age of onset is 14 to 18 for anorexia and 15 to 21 for bulimia (see [Figure 14.25](#)).

How common are eating disorders in Western societies? Studies of young women suggest that about 1% develop anorexia nervosa and about 2%–3% develop bulimia nervosa (Anderson & Yager, 2005). However, prevalence rates appear to be trending higher in more recent studies (Thompson et al., 2007). In some respects, these figures may only scratch the surface of the problem. Evidence suggests that as many as 20% of female college students may struggle with transient bulimic symptoms (Anderson & Yager, 2005). And recent community surveys suggest that there may be more undiagnosed eating disorders among men than generally appreciated (Hudson et al., 2007).

Etiology of Eating Disorders

Like other types of psychological disorders, eating disorders are caused by multiple determinants that work interactively. Let's take a brief look at some of the factors that contribute to the development of anorexia nervosa and bulimia nervosa.

Genetic Vulnerability

The evidence is not nearly as strong or complete as for many other types of psychopathology (such as anxiety, mood, and schizophrenic disorders), but some people may inherit a genetic vulnerability to eating disorders (Slof-Op't Landt et al., 2005). Studies show that relatives of patients with eating disorders have elevated rates of anorexia nervosa and bulimia nervosa (Bulik, 2004). Twin studies suggest that a genetic predisposition may be at work (Steiger, Bruce, & Israel, 2003).

Personality Factors

Certain personality traits may increase vulnerability to eating disorders. There are innumerable exceptions, but victims of anorexia nervosa tend to be obsessive, rigid, and emotionally restrained, whereas victims of bulimia nervosa tend to be impulsive, overly sensitive, and low in self-esteem (Anderluh et al., 2003; Wonderlich, 2002). Recent research also suggests that perfectionism is a risk factor for anorexia (Bulik et al., 2003; Halmi et al., 2000).

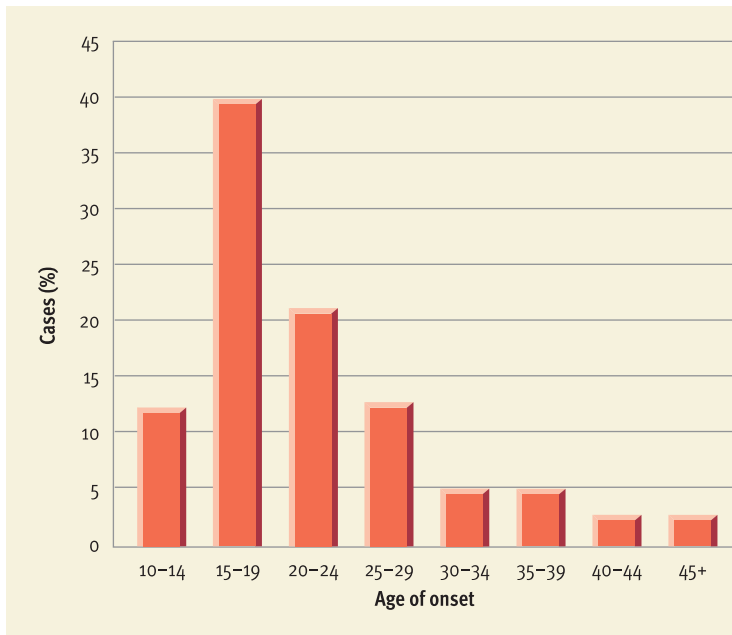


Figure 14.25

Age of onset for anorexia nervosa. Eating disorders tend to emerge during adolescence, as these data for anorexia nervosa show. This graph shows how age of onset was distributed in a sample of 166 female patients from Minnesota. As you can see, over half the patients experienced the onset of their illness before the age of 20, with vulnerability clearly peaking between the ages of 15 and 19. (Adapted from Lucas, et al., 1991)

Cultural Values

The contribution of cultural values to the increased prevalence of eating disorders can hardly be overestimated (Anderson-Fye & Becker, 2004; Striegel-Moore & Bulik, 2007). In Western society, young women are socialized to believe that they must be attractive, and to be attractive they must be as thin as the actresses and fashion models that dominate the media (Levine & Harrison, 2004). Thanks to this cultural milieu, many young women are dissatisfied with their weight, as the societal ideals promoted by the media are unattainable for most of them (Thompson & Stice, 2001). Unfortunately, in a portion of these women, the pressure to be thin, in combination with genetic vulnerability, family pathology, and other factors, leads to unhealthy efforts to control weight.

The Role of the Family

Quite a number of theorists emphasize how family dynamics can contribute to the

development of anorexia and bulimia in young women (Haworth-Hoepfner, 2000). The principal issue appears to be that some mothers contribute to eating disorders simply by endorsing society's message that "you can never be too thin" and by modeling unhealthy dieting behaviors of their own (Francis & Birch, 2005). In conjunction with media pressures, this role modeling leads many daughters to internalize the idea that the thinner you are, the more attractive you are.

Cognitive Factors

Many theorists emphasize the role of disturbed thinking in the etiology of eating disorders (Williamson et al., 2001). For example, anorexic patients' typical belief that they are fat when they are really wasting away is a dramatic illustration of how thinking goes awry. Patients with eating disorders display rigid, all-or-none thinking and many maladaptive beliefs, such as "I must be thin to be accepted"; "If I am not

in complete control, I will lose all control"; and "If I gain one pound, I'll go on to gain enormous weight." Additional research is needed to determine whether distorted thinking is a *cause* or merely a *symptom* of eating disorders.

REVIEW of Key Points

14.27 The principal eating disorders are anorexia nervosa and bulimia nervosa, with binge-eating disorder a proposed third syndrome. Anorexia and bulimia both lead to a cascade of medical problems, but anorexia is more dangerous. Both disorders are largely a product of affluent, Westernized culture that weren't recognized until the 20th century. Females account for 90%–95% of eating disorders. Among young women, about 1% develop anorexia nervosa and about 2%–3% develop bulimia nervosa, typically between the age of 15 to 20.

14.28 There appears to be a genetic vulnerability to eating disorders. Certain personality traits increase the vulnerability to eating disorders. Cultural pressures on young women to be thin clearly help to foster eating disorders. Families that endorse the idea that you can never be too thin can help to promote eating disorders. Rigid, disturbed thinking can also contribute to the development of these disorders.

Key Learning Goals

14.29 Understand how mental heuristics can distort estimates of cumulative and conjunctive probabilities.

As you read about the various types of psychological disorders, did you think to yourself that you or someone you know was being described? On the one hand, there is no reason to be alarmed. The tendency to see yourself and your friends in descriptions of pathology is a common one, sometimes called the *medical students' disease* because beginning medical students often erroneously believe that they or their friends have whatever diseases they are currently learning about. On the other hand, realistically speaking, it is quite likely that you know *many* people with psychological disorders because—as you learned in the main body of the chapter—the likelihood of anyone having at least one DSM disorder is estimated to be about 44% (consult [Figure 14.5](#) on p. 581).

This estimate strikes most people as surprisingly high. Why is this so? One reason is that when people think about psychological disorders they tend to think of severe disorders, such as bipolar disorder or schizophrenia, which are relatively infrequent, rather than “run of the mill” disturbances, such as anxiety and depressive disorders, which are much more common. When it comes to mental illness, people tend to think of patients in straightjackets or of obviously disturbed homeless people who do not reflect the broad and diverse population of people who suffer from psychological disorders. In other words, their *prototypes* or “best examples” of mental illness consist of severe disorders that are infrequent, so they underestimate the prevalence of mental disorders. This distortion illustrates the influence of the **representativeness heuristic, which is basing the estimated probability of an event on how similar it is to the typical prototype of that event** (see Chapter 8).

Do you still find it hard to believe that the overall prevalence of psychological disorders is about 44%? Another reason this number seems surprisingly high is that

Working with Probabilities in Thinking About Mental Illness

many people do not understand that the probability of having *at least one* disorder is much higher than the probability of having the most prevalent disorder by itself. For example, the probability of having a substance use disorder, the single most common type of disorder, is approximately 24%, but the probability of having a substance use disorder *or* an anxiety disorder *or* a mood disorder *or* a schizophrenic disorder jumps to 44%. These “or” relationships represent *cumulative probabilities*. Yet another consideration that makes the prevalence figures seem high is that many people confuse different types of *prevalence rates*. The 44% estimate is for *lifetime prevalence*, which means it is the probability of having *any* disorder *at least once* at any time in one’s lifetime. The lifetime prevalence rate is another example of “or” relationships. It is a value that takes into account the probability of having a psychological disorder in childhood *or* adolescence *or* adulthood *or* old age. *Point prevalence rates*, which estimate the percentage of people manifesting various disorders *at a particular point in time*, are much lower



Highly publicized insanity trials, such as that of John Hinckley, Jr., who tried to assassinate President Reagan, lead the public to greatly overestimate how often the insanity defense is used, illustrating the impact of the availability heuristic.

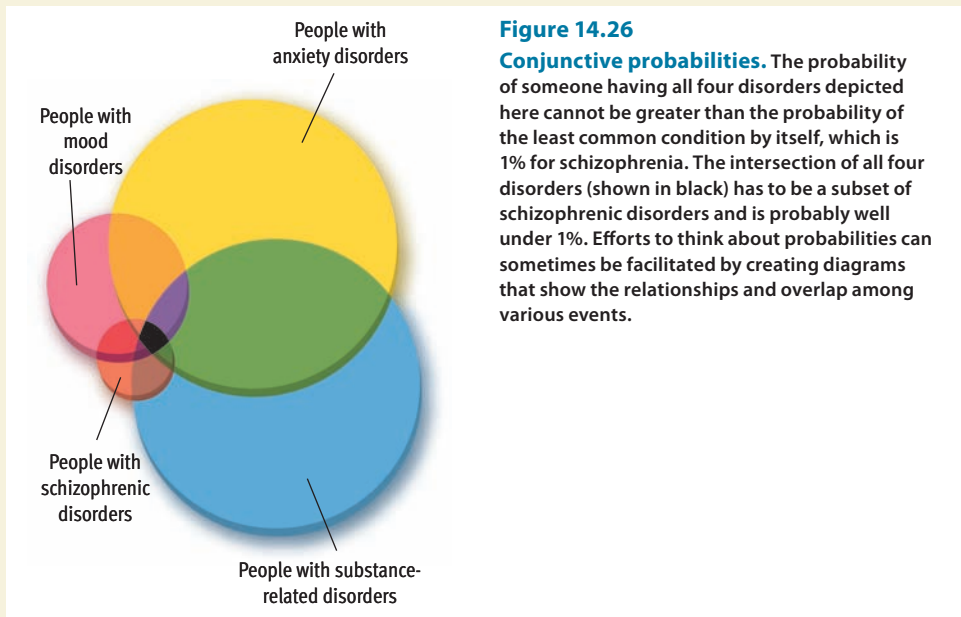
because many psychological disorders last only a few months to a few years.

What about “and” relationships—that is, relationships in which we want to know the probability of someone having condition A *and* condition B? For example, given the lifetime prevalence estimates (from [Figure 14.5](#)) for each category of disorder, which are shown in the parentheses, what is the probability of someone having a substance use disorder (24% prevalence) *and* an anxiety disorder (19%) *and* a mood disorder (15%) *and* a schizophrenic disorder (1%) during his or her lifetime? Such “and” relationships represent *conjunctive probabilities*. Stop and think: what must be true about the probability of having all four types of disorders? Will this probability be less than 24%, between 24% and 44%, or over 44%? You may be surprised to learn that this figure is probably well under 1%. You can’t have all four disorders unless you have the least frequent disorder (schizophrenia), which has a prevalence of 1%, so the answer *must* be 1% or less. Moreover, of all of the people with schizophrenia, only a tiny subset of them are likely to have all three of the other disorders, so the answer is probably well under 1% (see [Figure 14.26](#)). If this type of question strikes you as contrived, think again. Epidemiologists have devoted an enormous amount of research to the estimation of **comorbidity—the coexistence of two or more disorders**—because it greatly complicates treatment issues.

These are two examples of using statistical probabilities as a critical thinking tool. Let’s apply this type of thinking to another problem dealing with physical health. Here is a problem used in a study by Tversky and Kahneman (1983, p. 308) that many physicians got wrong:

A health survey was conducted in a sample of adult males in British Columbia, of all ages and occupations. Please give your best estimate of the following values:

What percentage of the men surveyed have had one or more heart attacks? _____



What percentage of the men surveyed both are over 55 years old and have had one or more heart attacks? _____

Fill in the blanks above with your best guesses. Of course, you probably have only a very general idea about the prevalence of heart attacks, but go ahead and fill in the blanks anyway.

The actual values are not as important in this example as the relative values are. Over 65% of the physicians who participated in the experiment by Tversky and Kahneman gave a higher percentage value for the second question than for the first. What is wrong with their answers? The second question is asking about the conjunctive probability of two events. Hope-

fully, you see why this figure *must* be less than the probability of either one of these events occurring alone. Of all of the men in the survey who had had a heart attack, only some of them are also over 55, so the second number must be smaller than the first. As we saw in Chapter 8, this common error in thinking is called the *conjunction fallacy*. **The conjunction fallacy occurs when people estimate that the odds of two uncertain events happening together are greater than the odds of either event happening alone.**

Why did so many physicians get this problem wrong? They were vulnerable to the conjunction fallacy because they were influenced by the *representativeness heuristic*, or the power of prototypes. When phy-

sicians think “heart attack,” they tend to envision a man over the age of 55. Hence, the second scenario fit so well with their prototype of a heart attack victim, they carelessly overestimated its probability.

Let’s consider some additional examples of erroneous reasoning about probabilities involving how people think about psychological disorders. Toward the beginning of the chapter, we discussed the fact that many people tend to stereotypically assume that mentally ill people are likely to be violent. Near the end of the chapter, we noted that people tend to wildly overestimate (37-fold in one study) how often the insanity defense is used in criminal trials. These examples reflect the influence of the *availability heuristic*, which is basing the estimated probability of an event on the ease with which relevant instances come to mind.

Because of the availability heuristic, people tend to overestimate the probability of dramatic events that receive heavy media coverage, even when these events are rare, because examples of the events are easy to retrieve from memory. Violent acts by former psychiatric patients tend to get lots of attention in the press. And because of the *hindsight bias*, journalists tend to question why authorities couldn’t foresee and prevent the violence (see the Critical Thinking Application for Chapter 12), so the mental illness angle tends to be emphasized. In a similar vein, press coverage is usually intense when a defendant in a murder trial mounts an insanity defense.

In sum, the various types of statistics that come up in thinking about psychological disorders demonstrate that we are constantly working with probabilities, even though we may not realize it. Critical thinking requires a good understanding of the laws of probability because there are very few certainties in life.

REVIEW of Key Points

14.29 Probability estimates can be distorted by the representativeness heuristic and the availability heuristic. Cumulative probabilities are additive, whereas conjunctive probabilities are always less than the likelihood of any one of the events happening alone.

Table 14.3 Critical Thinking Skills Discussed in This Application

Skill	Description
Understanding the limitations of the representativeness heuristic	The critical thinker understands that focusing on prototypes can lead to inaccurate probability estimates.
Understanding cumulative probabilities	The critical thinker understands that the probability of at least one of several events occurring is additive, and increases with time and the number of events.
Understanding conjunctive probabilities	The critical thinker appreciates that the probability of two uncertain events happening together is less than the probability of either event happening alone.
Understanding the limitations of the availability heuristic	The critical thinker understands that the ease with which examples come to mind may not be an accurate guide to the probability of an event.

CHAPTER 14 RECAP

Key Ideas

Abnormal Behavior: Myths, Realities, and Controversies

- The medical model assumes that it is useful to view abnormal behavior as a disease. This view has been criticized on the grounds that it turns ethical questions about deviance into medical questions.
- Three criteria are used in deciding whether people suffer from psychological disorders: deviance, personal distress, and maladaptive behavior. People with psychological disorders are not particularly bizarre or dangerous, and even the most severe disorders are potentially curable.
- DSM-IV is the official psychodiagnostic classification system in the United States. This system asks for information about patients on five axes, or dimensions. Psychological disorders are more common than widely believed and the socioeconomic costs of mental illness are enormous.

Anxiety Disorders

- The anxiety disorders include generalized anxiety disorder, phobic disorder, panic disorder, obsessive-compulsive disorder, and posttraumatic stress disorder. Heredity, oversensitivity to the physiological symptoms of anxiety, and abnormalities in GABA or serotonin activity may contribute to these disorders.
- Many anxiety responses, especially phobias, may be caused by classical conditioning and then maintained by operant conditioning. Cognitive theorists hold that a tendency to overinterpret harmless situations as threatening may make some people vulnerable to anxiety disorders. Stress may also trigger anxiety disorders.

Somatoform Disorders

- Somatoform disorders include somatization disorder, conversion disorder, and hypochondriasis. These disorders often emerge in people with histrionic personalities and in people who focus excess attention on their internal physiological processes.

Dissociative Disorders

- Dissociative disorders include dissociative amnesia and fugue and dissociative identity disorder (DID). These disorders are uncommon and their causes are not well understood. Dissociative identity disorder is a controversial diagnosis.

Mood Disorders

- The principal mood disorders are major depressive disorder and bipolar disorder. Mood disorders are episodic. Depression is more common in females than males. Mood disorders are associated with dramatic elevations in suicide rates.
- Evidence indicates that people vary in their genetic vulnerability to mood disorders. These disorders are accompanied by changes in neurochemical activity in the brain. Depression is associated with reduced hippocampal volume and suppressed neurogenesis. Cognitive models posit that negative thinking contributes to depression. Depression is often rooted in interpersonal inadequacies and stress.

Schizophrenic Disorders

- Schizophrenic disorders are characterized by deterioration of adaptive behavior, delusions, hallucinations, and disturbed mood. Recognized subtypes are paranoid, catatonic, disorganized, and undifferentiated schizophrenia. Research has linked schizophrenia to genetic vulnerability, changes in neurotransmitter activity, and structural abnormalities in the brain.
- The neurodevelopmental hypothesis asserts that schizophrenia is attributable to disruptions in the normal maturational processes of the brain before or at birth that are caused by prenatal or obstetrical insults to the brain. Precipitating stress and high expressed emotion in families may also modulate the course of schizophrenia.

Personality Disorders

- Ten personality disorders, grouped into three clusters, are allocated to Axis II in the DSM. The antisocial personality disorder involves manipulative, impulsive, exploitive, aggressive behavior. Research on the etiology of this disorder has implicated genetic vulnerability, autonomic reactivity, inadequate socialization, and observational learning.

Psychological Disorders and the Law

- Insanity is a legal concept applied to people who cannot be held responsible for their actions because of mental illness. When people appear to be dangerous to

themselves or others, courts may rule that they are subject to involuntary commitment in a hospital.

Culture and Pathology

- The principal categories of psychological disturbance are identifiable in all cultures, but milder disorders may go unrecognized in some societies. The symptoms associated with specific disorders are largely the same across different cultures, but some variability is seen.

Reflecting on the Chapter's Themes

- This chapter highlighted four of our unifying themes, showing that behavior is governed by multiple causes, that heredity and environment jointly influence mental disorders, that psychology evolves in a sociohistorical context, and that pathology is characterized by both cultural variance and invariance.

PERSONAL APPLICATION Understanding Eating Disorders

- The principal eating disorders are anorexia nervosa and bulimia nervosa. Binge-eating disorder has been proposed as a third diagnosis. Eating disorders appear to be largely a product of modern, affluent, Westernized culture. Females account for 90%–95% of eating disorders.
- There appears to be a genetic vulnerability to eating disorders. Cultural pressures on young women to be thin clearly help foster eating disorders. Unhealthy family dynamics and disturbed thinking can also contribute.

CRITICAL THINKING APPLICATION Working with Probabilities in Thinking About Mental Illness

- Probability estimates can be distorted by the representativeness heuristic and the availability heuristic. Cumulative probabilities are additive, whereas conjunctive probabilities are always less than the likelihood of any one of the events happening alone.

Key Terms

- Agoraphobia (p. 582)
- Anorexia nervosa (p. 613)
- Antisocial personality disorder (p. 606)
- Anxiety disorders (p. 582)
- Availability heuristic (p. 617)
- Binge-eating disorder (p. 614)
- Bipolar disorder (p. 592)
- Bulimia nervosa (p. 613)
- Catatonic schizophrenia (p. 599)
- Comorbidity (p. 616)
- Concordance rate (p. 584)
- Conjunction fallacy (p. 617)
- Conversion disorder (p. 587)
- Culture-bound disorders (p. 611)
- Cyclothymic disorder (p. 592)
- Delusions (p. 598)
- Diagnosis (p. 577)
- Disorganized schizophrenia (p. 599)
- Dissociative amnesia (p. 589)
- Dissociative disorders (p. 589)
- Dissociative fugue (p. 589)
- Dissociative identity disorder (DID) (p. 589)
- Dysthymic disorder (p. 592)
- Eating disorders (p. 613)
- Epidemiology (p. 579)
- Etiology (p. 577)
- Expressed emotion (EE) (p. 603)
- Generalized anxiety disorder (p. 582)
- Hallucinations (p. 599)
- Hypochondriasis (p. 587)
- Insanity (p. 607)
- Involuntary commitment (p. 607)
- Major depressive disorder (p. 591)
- Manic-depressive disorder (p. 592)
- Medical model (p. 576)
- Mood disorders (p. 590)
- Multiple-personality disorder (p. 589)
- Negative symptoms (p. 600)
- Obsessive-compulsive disorder (OCD) (p. 583)
- Panic disorder (p. 582)
- Paranoid schizophrenia (p. 599)
- Personality disorders (p. 604)
- Phobic disorder (p. 582)
- Positive symptoms (p. 600)
- Posttraumatic stress disorder (PTSD) (p. 584)
- Prevalence (p. 579)
- Prognosis (p. 577)
- Representativeness heuristic (p. 616)
- Schizophrenic disorders (p. 598)
- Somatization disorder (p. 587)
- Somatoform disorders (p. 586)
- Undifferentiated schizophrenia (p. 600)

Key People

- Nancy Andreasen (p. 600)
- Susan Nolen-Hoeksema (pp. 592, 595)
- David Rosenhan (pp. 578–579)
- Martin Seligman (pp. 585, 595)
- Thomas Szasz (pp. 576–577)

CHAPTER 14 PRACTICE TEST


- According to Thomas Szasz, abnormal behavior usually involves:
 - behavior that is statistically unusual.
 - behavior that deviates from social norms.
 - a disease of the mind.
 - biological imbalance.
- Although Sue is plagued by a high level of dread, worry, and anxiety, she still manages to meet her daily responsibilities. Sue's behavior:
 - should not be considered abnormal, since her adaptive functioning is not impaired.
 - should not be considered abnormal, since everyone sometimes experiences worry and anxiety.
 - can still be considered abnormal, since she feels great personal distress.
 - involves both a and b.
- The fact that people acquire phobias of ancient sources of threat (such as snakes) much more readily than modern sources of threat (such as electrical outlets) can best be explained by:
 - classical conditioning.
 - operant conditioning.
 - observational learning.
 - preparedness or an evolved module for fear learning.
- Which of the following statements about dissociative identity disorder is true?
 - The original personality is always aware of the alternate personalities.
 - The alternate personalities are usually unaware of the original personality.
 - The personalities are typically all quite similar to one another.
 - Starting in the 1970s, a dramatic increase occurred in the diagnosis of dissociative identity disorder.
- People with unipolar disorders experience _____; people with bipolar disorders are vulnerable to _____.
 - alternating periods of depression and mania; mania only
 - depression only; alternating periods of depression and mania
 - mania only; alternating periods of depression and mania
 - alternating periods of depression and mania; depression and mania simultaneously
- A concordance rate indicates:
 - the percentage of relatives who exhibit the same disorder.
 - the percentage of people with a given disorder who are currently receiving treatment.
 - the prevalence of a given disorder in the general population.
 - the rate of cure for a given disorder.
- People who consistently exhibit _____ thinking are more vulnerable to depression than others.
 - overly optimistic
 - negative, pessimistic
 - delusional
 - dysthymic
- Mary believes that while she sleeps at night, space creatures are attacking her and invading her uterus, where they will multiply until they are ready to take over the world. Mary would most likely be diagnosed as _____ schizophrenic.
 - paranoid
 - catatonic
 - disorganized
 - undifferentiated
- As an alternative to the current classification scheme, it has been proposed that schizophrenic disorders be divided into just two categories based on:
 - whether the prognosis is favorable or unfavorable.
 - whether the disorder is mild or severe.
 - the predominance of thought disturbances.
 - the predominance of negative versus positive symptoms.
- Most of the drugs that are useful in the treatment of schizophrenia are known to dampen _____ activity in the brain, suggesting that increases in the activity of this neurotransmitter may contribute to the development of the disorder.
 - norepinephrine
 - serotonin
 - acetylcholine
 - dopamine
- The main problem with the current classification scheme for personality disorders is that:
 - it falsely implies that nearly everyone has at least one personality disorder.
 - the criteria for diagnosis are so detailed and specific that even extremely disturbed people fail to meet them.
 - the categories often overlap, making diagnosis unreliable.
 - it contains too few categories to be useful.
- The diagnosis of antisocial personality disorder would apply to an individual who:
 - withdraws from social interaction due to an intense fear of rejection.
 - withdraws from social interaction due to a lack of interest.
 - is emotionally cold and suspicious of everyone.
 - is callous, impulsive, and manipulative.
- Involuntary commitment to a psychiatric facility:
 - can occur only after a mentally ill individual has been convicted of a violent crime.
 - usually occurs because people appear to be a danger to themselves or others.
 - no longer occurs under modern civil law.
 - will be a lifelong commitment, even if the individual is no longer mentally ill.
- Those who embrace a relativistic view of psychological disorders would agree that:
 - the criteria of mental illness vary considerably across cultures.
 - there are universal standards of normality and abnormality.
 - Western diagnostic concepts have validity and utility in other cultural contexts.
 - both b and c are true.
- About _____ of patients with eating disorders are female.

A. 40%	C. 75%
B. 50%–60%	D. 90%–95%


15 D p. 614	10 D pp. 601–602	5 B pp. 590–592
14 A p. 610	9 D p. 600	4 D p. 588
13 B pp. 607, 610	8 A pp. 599–600	3 D p. 585
12 D p. 606	7 B p. 595	2 C p. 577
11 C p. 605	6 A p. 584	1 B p. 576

Answers

PsykTrek
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 To order: www.cengage.com/psychology/weiten
 Go to the PsykTrek website or CD-ROM for further study of the concepts in this chapter. Both online and on the CD-ROM, PsykTrek includes dozens of learning modules with videos, animations, and quizzes, as well as simulations of psychological phenomena and a multimedia glossary that includes word pronunciations.



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