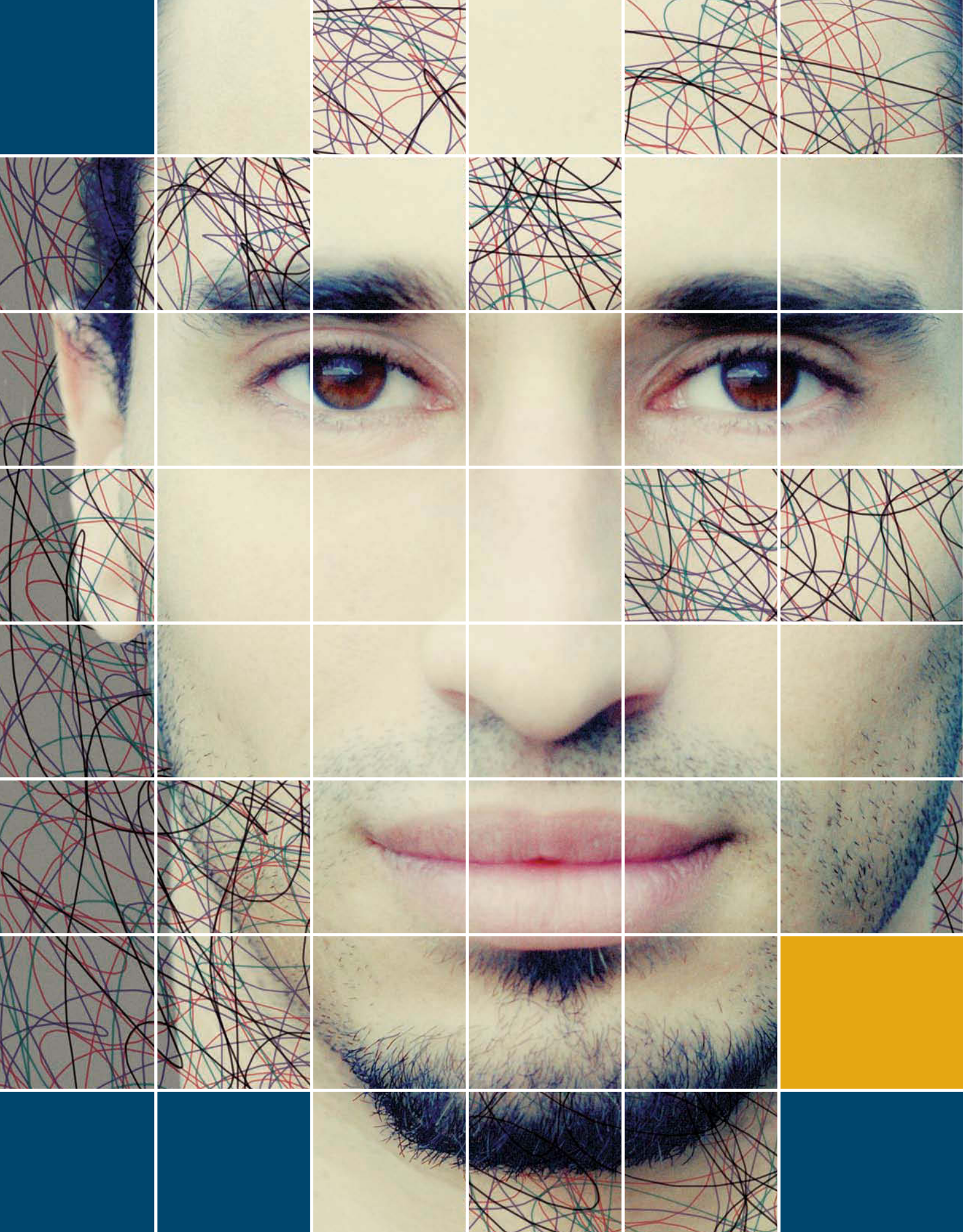


14 Psychological Disorders

Ask & Answer

MOST PEOPLE EXPERIENCE UPS AND DOWNS. For people with bipolar disorder, mood and energy swings are much more intense, quickly changing from episodes of extreme listlessness and depression to excited states of extraordinary joyfulness known as mania. This condition was previously called *manic-depressive disorder* because of the dramatic shifts between mania and depression. A number of celebrities have been diagnosed with bipolar disorder, including Britney Spears, Demi Lovato, Russell Brand, and Catherine Zeta-Jones.

One of the world's foremost authorities on bipolar disorder has unique insight among psychologists—she has suffered from the disorder since childhood. Kay Redfield Jamison acknowledged her struggles with bipolar disorder in her award-winning memoir, *An Unquiet Mind* (1995; **FIGURE 14.1**). Her work has helped shape the study of the disorder, and her 1990 textbook, coauthored with Frederick Goodwin, is considered the standard for the field (Goodwin & Jamison, 1990).

In *An Unquiet Mind,* Jamison details how as a child she was intensely emotional and occasionally obsessive. When she was 17, she had her first serious bout of what she describes as profoundly suicidal depression. Jamison experienced deepening swings from wild exuberance to paralyzing depression throughout her undergraduate years. In 1975, after obtaining her Ph.D. in clinical psychology, she joined the UCLA Department of Psychiatry, where she directed the Affective Disorders Clinic.

FIGURE 14.1
Kay Redfield Jamison
Jamison was able to overcome her crippling bipolar disorder to succeed as a teacher, researcher, and author.

Within months after she began this job, her condition deteriorated dramatically. She began hallucinating and feared that she was losing her mind. This state so terrified her that she sought out a psychiatrist, who quickly diagnosed her as having manic-depressive disorder (i.e., bipolar disorder) and prescribed a drug called lithium. (You will learn more about lithium and other treatments for bipolar disorder in Chapter 15, "Treatment of Psychological Disorders.")

People with bipolar disorder experience profoundly enjoyable highs during their manic phases. One of the unfortunate side effects of lithium is that it blunts positive feelings. Even though these patients know that lithium helps them, they often resent the drug and refuse to take it. Because people in manic episodes have impaired judgment, they often engage in dangerous behavior or make disastrous decisions. Lithium has helped Jamison, but she also credits the support of her psychiatrist, as well as of her family and friends.

Jamison has made the point that lithium can rob people of creative energy. In her book *Touched with Fire* (1993), she asks whether lithium would have dampened the genius of those major artists and writers who may have had mood disorders, such as Michelangelo, Vincent van Gogh, Georgia O'Keeffe, Emily Dickinson, and Ernest Hemingway. Jamison demonstrates the strong association between bipolar disorder and artistic genius, and she raises the disturbing question of whether eradicating the disorder would rob society of much great art. She embodies this irony: Her early career benefited from the energy and creativity of her manic phases even as her personal life was threatened by devastating depression.

Jamison provides a good example of both the ravages caused by psychological disorders and the effective methods available to help people live with them. In this chapter, you will learn about the various psychological disorders. In the next chapter, you will learn the most effective treatments for each disorder.

Learning Objectives

- Understand what is meant by the term *psychological disorder*.
- Explain how psychological disorders are classified.
- Identify assessment methods for psychological disorders.
- Describe the diathesis-stress model.
- Identify biological, environmental, and cognitive-behavioral causes of psychological disorders.
- Discuss sex differences and cultural differences in psychological disorders.

14.1 How Are Psychological Disorders Conceptualized and Classified?

Those who have psychological disorders display symptoms of **psychopathology.** This term means sickness or disorder of the mind. From the writings of Aristotle to those of Freud, accounts exist of people suffering from various forms of psychopathology. Although considerable progress has been made over the last century, we are still struggling to determine the causes of psychopathology. To understand any disorder, psychologists investigate its **etiology:** the factors that contribute to its development. For example, they investigate commonalities among people such as Kay Redfield Jamison and Demi Lovato to identify factors that might explain why they (and others) developed bipolar disorders.

The earliest views of psychopathology explained apparent "madness" as resulting from possession by demons or evil spirits (**FIGURE 14.2**). The ancient Babylonians believed a demon called Idta caused madness. Similar examples of demonology can be found among the ancient Chinese, Egyptians, and Greeks. This view of psychopathology continued into the Middle Ages. At that time, there was greater emphasis on possession as having resulted from the wrath of God for some sinful moral transgression. During any of these periods, someone like Kay Redfield Jamison might have been persecuted and subjected to an array of methods to cast out her demons. Such "treatments" included exorcism, bloodletting, and the forced ingestion of magical potions.

In the latter half of the Middle Ages and into the Renaissance, people with psychopathology were removed from society so they would not bother others. In the 1700s, Jamison likely would have been left in an understaffed, overcrowded mental institution called an asylum. Even there, the small staff would have made little attempt to understand Jamison's disorder and even less of an attempt to treat her. Indeed, people housed in asylums were often chained up and lived in incredibly filthy conditions, treated more like nonhuman animals than humans. "Treatments" included starvation, beatings, bloodletting, and isolation.

In 1793, Philippe Pinel, a French physician who believed that medical treatments should be based on empirical observations, became the head physician at Bicêtre Hospital, in Paris. At that time, among the hospital's 4,000 patients were about 200 with psychopathology being cared for by a former patient, Jean-Baptiste Pussin. Pussin treated his patients with kindness and care rather than violence. Impressed by the positive therapeutic results, Pinel removed patients from their chains and banished physical punishment. He instituted what came to be known as *moral treatment,* a therapy that involved close contact with and careful observation of patients. Pinel's benevolent treatment gained a foothold in Europe, and later, through the efforts of a Massachusetts schoolteacher, Dorothea Dix, in America.

As far back as ancient Greece, some people had a sense that there was a physical basis to psychopathology. Hippocrates (c. 460–377 BCE), often credited as the founder of modern medicine, classified psychopathologies into *mania, melancholia,* and *phrenitis,* the latter characterized by mental confusion. Hippocrates believed that such disorders resulted from the relative amount of "humors," or bodily fluids, a person possessed (Maher & Maher, 1994). For instance, having too much black bile led to melancholia, or extreme sadness and depression. From this term, we get the word *melancholy,* which we often use to describe people who are sad. The idea that bodily fluids cause mental illness was abandoned long ago, however. Increasingly throughout the nineteenth and twentieth centuries, psychopathology was viewed more as a medical condition than as a demonic curse caused by sin. The medical model viewed psychopathology as resulting from disease. During the last 200 years, recognition has grown that psychopathology reflects dysfunction of the body, particularly of the brain.

At various points in recent history, researchers and clinicians would have focused solely on environmental factors that contributed to Jamison's psychological disorder. For example, was she abused as a child? Although environmental factors are important, we now understand that biology plays a critical role in many psychological disorders, especially disorders such as bipolar disorder or schizophrenia. Indeed, an important lesson in this chapter is that environment and biology interact to produce psychological disorders. As noted throughout the book, it is meaningless to state that a condition is caused by just biology or just environment. Both factors affect all psychological disorders to some extent.

FIGURE 14.2
Historical View of Psychological Disorders
Throughout history, people believed that the gods, witches, or evil spirits caused psychological disorders.

psychopathology
Sickness or disorder of the mind.

etiology
Factors that contribute to the development of a disorder.

Psychopathology Is Different from Everyday Problems

Psychological disorders are common around the globe, in all countries and all societies. These disorders account for the greatest proportion of disability in developed countries, surpassing even cancer and heart disease (Centers for Disease Control and Prevention, 2011a). Indeed, about 1 in 4 Americans over age 18 has a diagnosable psychological disorder in a given year (Kessler, Chiu, Demler, & Walters, 2005a). About 1 in 5 American adults receives treatment over any two-year period (Kessler et al., 2005b). Nearly half of Americans will have some form of psychological disorder at some point in life, most commonly a depressive disorder, an attention-deficit/hyperactivity disorder, an anxiety disorder, or a substance-related and addictive disorder (Kessler & Wang, 2008). Of course, psychological disorders range in severity. Only about 7 percent of the U.S. population is severely affected, and this group also tend to suffer from multiple disorders (Kessler et al., 2005a).

As you read this chapter, you may realize that you have experienced some of the symptoms of many psychological disorders. Even if particular symptoms seem to describe you (or anyone you know) perfectly, resist the urge to make a diagnosis. Just like medical students who worry they have every disease they learn about, you need to guard against overanalyzing yourself and others. At the same time, what you learn in this chapter and the next one may help you understand the mental health problems you or others might experience.

PSYCHOLOGICAL DISORDERS AS MALADAPTIVE How do you know if someone has a psychological disorder? It can be challenging to decide if a given behavior is caused by psychopathology. Keep in mind that behavior, especially unusual behavior, must always be reviewed in the context of the situation. A woman running through the streets screaming, sobbing, and grabbing and hugging people might have some form of psychological disorder—or she might be celebrating because she just won the lottery. Many behaviors considered normal in one setting may be considered deviant in other settings. Some Native American and East Asian cultures consider it a great honor to hear the voices of spirits. In urban America, hearing spirits would be seen as evidence of auditory hallucinations.

In determining whether behavior represents psychopathology, it is important to consider certain criteria: (1) Does the person act in a way that deviates from cultural norms for acceptable behavior? (2) Is the behavior maladaptive? That is, does the behavior interfere with the person's ability to respond appropriately in different situations? For example, a person who is afraid to leave the house may avoid feeling anxious by staying inside, and that behavior might prevent the person from working, having a social life, or both. (3) Is the behavior self-destructive, does it cause the individual personal distress, or does it threaten other people in the community? (4) Does the behavior cause discomfort and concern to others, thus impairing a person's social relationships?

It may be hard to draw the line between normal and abnormal. As a result, psychopathology is increasingly defined in terms of *maladaptiveness*. That is, a person with psychopathology exhibits thoughts, feelings, and behaviors that are maladaptive rather than deviant. For example, people concerned about germs may wash their hands more than average and therefore be deviant, but that behavior may be beneficial in many ways and therefore adaptive—after all, it is the best way of avoiding contagious disease. The same behavior, however, can be maladaptive when people cannot stop until they have washed their hands raw. Indeed, the diagnostic criteria for all the major disorder categories stipulate that the symptoms of the disorder must interfere

with at least one aspect of the person's life, such as work, social relations, or self-care. This component is critical in determining whether given thoughts, emotions, or behaviors represent psychopathology or are simply unusual.

Psychological Disorders Are Classified into Categories

In the late 1800s, the psychiatrist Emil Kraepelin recognized that not all patients with psychological disorders suffer from the same disorder (**FIGURE 14.3**). Kraepelin separated disorders into categories based on what he could observe: groups of symptoms that occur together. For instance, he separated disorders of mood (emotions) from disorders of cognition. He called the latter disorder *dementia praecox*. It is now better known as *schizophrenia* and is discussed fully in this chapter and the next one.

The idea of categorizing psychological disorders systematically was not officially adopted until 1952, when the American Psychiatric Association published the first edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*. Since then, the *DSM* has undergone several revisions. It remains the standard in psychology and psychiatry. The guiding principle of the *DSM* is that if disorders can be grouped based on similar etiologies and symptoms, then figuring out how to treat those disorders should be easier.

In the current edition, *DSM-5* (released in 2013), disorders are described in terms of observable symptoms. A client must meet specific criteria to receive a particular diagnosis. The *DSM-5* consists of three sections: (1) an introduction with instructions for using the manual; (2) diagnostic criteria for all of the disorders, which are grouped so that similar categories of disorders are located near each other (**TABLE 14.1**); and

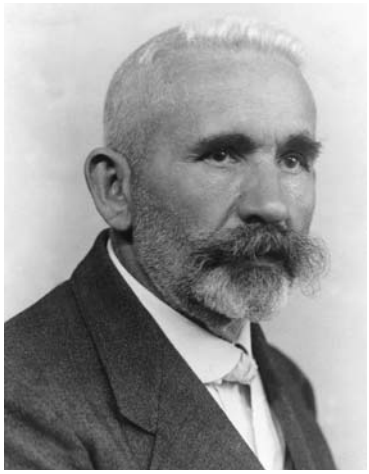


FIGURE 14.3
Emil Kraepelin
Kraepelin was one of the first researchers to propose a classification system for psychological disorders.

Table 14.1 *DSM-5* Disorders

CATEGORY	EXAMPLES
Neurodevelopmental disorders	Autism spectrum disorder
Schizophrenia spectrum and other psychotic disorders	Schizophrenia
Bipolar and related disorders	Bipolar I disorder
Depressive disorders	Major depressive disorder
Anxiety disorders	Panic disorder
Obsessive-compulsive and related disorders	Body dysmorphic disorder
Trauma- and stressor-related disorders	Posttraumatic stress disorder
Dissociative disorders	Dissociative amnesia
Somatic symptom and related disorders	Conversion disorder
Feeding and eating disorders	Anorexia nervosa
Elimination disorders	Enuresis (bed wetting)
Sleep-wake disorders	Narcolepsy
Sexual dysfunctions	Erectile disorder
Gender dysphoria	Gender dysphoria
Disruptive, impulse-control, and conduct disorders	Pyromania
Substance-related and addictive disorders	Alcohol use disorder
Neurocognitive disorders	Delirium
Personality disorders	Borderline personality disorder
Paraphilic disorders	Exhibitionist disorder

SOURCE: Based on American Psychiatric Association (2013).

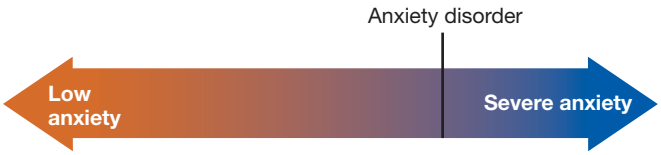


FIGURE 14.4
Dimensional Nature of Psychopathology
Symptoms of psychological disorders occur along continuums. They are not absolute states. A person who falls below the cut-off level may not meet the diagnostic criteria but may still experience symptoms that interfere with his or her life and will therefore benefit from treatment.

(3) a guide for future psychopathology research, which also includes conditions not yet officially recognized as disorders, such as excessive Internet gaming and misuse of caffeine.

DIMENSIONAL NATURE OF PSYCHOPATHOLOGY One problem with the *DSM* approach is that it implies that a person either has a psychological disorder or does not, which is known as a *categorical approach* (Bernstein, 2011). That is, the diagnosis is categorical, and a person is either in the category or not. This approach fails to capture differences in the severity of a disorder.

An alternative type of evaluation, called a *dimensional approach,* is to consider psychological disorders along a continuum in which people vary in degree rather than in kind (**FIGURE 14.4**). With categorization, the approach can be compared to a simple switch that turns a light on or off. By contrast, the dimensional approach is like a dimmer switch, which can provide light in varying amounts. A dimensional approach recognizes that many psychological disorders are extreme versions of normal feelings. We are all a little sad at times, and sometimes we feel more sad than usual. But no specific amount of sadness passes a threshold for depressive disorders. In the third section of *DSM-5,* researchers are encouraged to examine whether a dimensional approach might be helpful for understanding many psychological disorders, particularly personality disorders. Indeed, research indicates that personality disorders can be viewed as maladaptive extremes of the Big Five personality traits, which were described in Chapter 13.

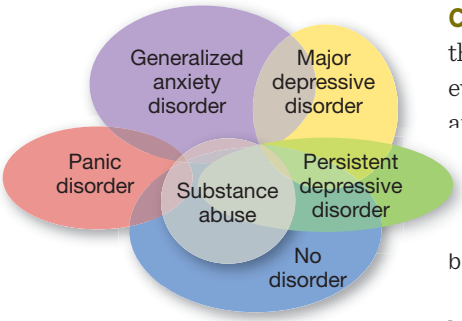


FIGURE 14.5
Comorbidity
Psychological disorders commonly overlap. For instance, substance abuse is common across psychological disorders, and people with depression (or a milder form known as persistent depressive disorder) often also have anxiety disorders (such as panic disorder or generalized anxiety disorder).

COMORBIDITY Another problem with the *DSM-5* is that people seldom fit neatly into the precise categories provided. Indeed, many psychological disorders occur together even though the *DSM-5* treats them as separate disorders—for example, depression and anxiety, or depression and substance abuse. This state is known as *comorbidity* (**FIGURE 14.5**). Accordingly, people who are found to be depressed should also be examined for comorbid conditions. Though people may be diagnosed with two or more disorders, a dual diagnosis offers no advantages in terms of treatment because both conditions will usually respond to the same treatment.

It is possible that psychological disorders are comorbid because of common underlying factors. Although the *DSM-5* separates disorders involving anxiety from those involving depression, both types involve the trait *neuroticism,* the tendency to experience frequent and intense negative emotions (Barlow, Sauer-Zavala, Carl, Bullis, & Ellard, 2014). In fact, it has recently been proposed that psychopathology reflects a common general factor, analogous to general intelligence (or g, discussed in Chapter 8). Avshalom Caspi and colleagues (2014) examined symptoms of psychopathology in a large sample of individuals who were studied for more than 30 years, from childhood to middle adulthood. They found that one underlying factor, which they called the *p factor,* was involved in all types of psychological disorders. Higher scores on the p factor were associated with more life impairment, such as suicide attempts, psychiatric hospitalizations, and criminal behaviors. High p scores also predicted a worsening of impairments over time. Just as the g dimension of intelligence reflects low to high cognitive abilities, the p dimension reflects low to high psychopathology severity.

RESEARCH DOMAIN CRITERIA (RDOC) The U.S. National Institute of Mental Health (NIMH) has proposed an entirely new way of classifying and understanding psychological disorders (Insel et al., 2010). Whereas the *DSM* approach classifies disorders by observable symptoms, the **Research Domain Criteria (RDoC)** method defines basic *domains* of functioning (such as attention, social communication, anxiety) and considers them across multiple levels of analysis, from genes to brain

Research Domain Criteria (RDoC)
A method that defines basic aspects of functioning and considers them across multiple levels of analysis, from genes to brain systems to behavior.

systems to behavior. For example, researchers might study attention problems for people with anxiety disorders, depression, schizophrenia, and posttraumatic stress disorder.

The RDoC initiative is initially meant to guide research rather than classify disorders for treatment. The goal of the initiative is to understand the processes that give rise to disordered thoughts, emotions, and behaviors. Identifying the cause of these symptoms ultimately may provide insight into treating them.

The RDoC approach capitalizes on recent advances in genetics, neuroscience, and psychology in understanding adaptive behavior, as well as how functioning can be disrupted by various disorders (National Institute of Mental Health, 2011). For example, as you will learn later in this chapter, the same genetic mutation may be involved in a number of apparently different psychological disorders. This mutation may affect how neurotransmitters function and cause similar impairments in thought processes across those disorders. In other instances, people diagnosed with the same *DSM* disorder can show radically different behaviors or responses, which might indicate that two different disorders share the same *DSM* diagnosis. Because of such problems, RDoC examines psychopathology without regard to *DSM* diagnoses. The ultimate aim of the RDoC initiative is for the classification and treatment of psychological disorders to be based on the underlying biological and psychosocial causes (Insel, 2014).

Some critics of RDoC argue that it is moving too quickly and that an abrupt shift in diagnostic criteria is no guarantee of better treatment results (Marder, 2014). Others worry that this initiative is focused on neuroscience at the expense of understanding personal experience (Parnas, 2014). At least within the United States, however, because the NIMH funds the majority of research, RDoC will be a driving force for research on psychopathology.

assessment
In psychology, examination of a person's cognitive, behavioral, or emotional functioning to diagnose possible psychological disorders.

Psychological Disorders Must Be Assessed

Physical disorders can generally be detected by medical tests, such as blood tests or biopsies. Determining whether a person has a mental disorder is not as straightforward. Examining a person's mental functions and psychological condition to diagnose a psychological disorder is known as **assessment.** This process often includes self-reports, psychological testing, observations, and interviews. It may also involve neuropsychological testing.

In the neuropsychological method, the client performs actions such as copying a picture; drawing a design from memory; sorting cards that show various stimuli into categories based on size, shape, or color; placing blocks into slots on a board while blindfolded; and tapping fingers rapidly (**FIGURE 14.6**). Each task requires an ability such as planning, coordinating, or remembering. By highlighting actions that the client performs poorly, the assessment might indicate problems with a particular brain region. For instance, people who have difficulty switching from one rule to another for categorizing objects, as in sorting by shape rather than by color, may have impairments in the frontal lobes. Subsequent assessment with MRI or PET (brain imaging techniques discussed in Chapter 3, "Biology and Behavior") might indicate brain damage caused by a tumor or by an injury. Often a medical evaluation is indicated. For instance, the symptoms of depression or anxiety disorder can be similar to those of hypothyroidism, an endocrine disorder that should be ruled out before the psychological disorder is treated (Giynas Ayhan, Uguz, Askin, & Gonen, 2014).

FIGURE 14.6
Neuropsychological Testing
The assessment depicted here uses a neuropsychological test to examine mental function. In this timed test, a researcher watches a client fit wooden blocks into a corresponding template to test for signs of Alzheimer's disease.

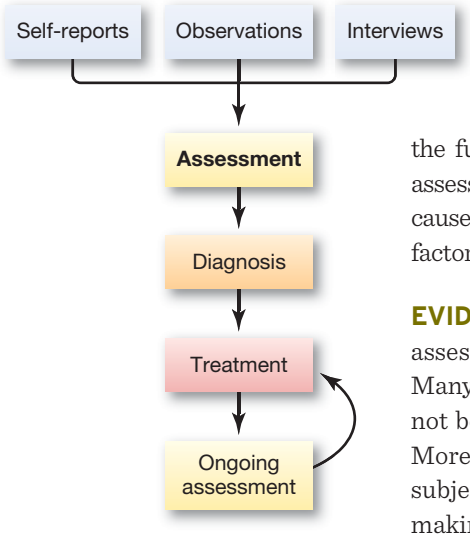


FIGURE 14.7
Assessing a Client
Clinical psychologists examine a person's mental functions and psychological health to diagnose a psychological disorder and determine an appropriate treatment. This flowchart shows the factors that lead to treatment.

diathesis-stress model
A diagnostic model that proposes that a disorder may develop when an underlying vulnerability is coupled with a precipitating event.

The primary goal of assessment is to make a diagnosis so that appropriate treatment can be provided. The course and probable outcome, or *prognosis,* will depend on the particular psychological disorder that is diagnosed. Therefore, a correct diagnosis will help the client—and perhaps the client's family—understand what the future might bring. Assessment does not stop with diagnosis, however. Ongoing assessment helps mental health workers understand whether specific situations might cause a worsening of the disorder, whether progress is being made in treatment, and other factors that might help in understanding unique aspects of a given case (**FIGURE 14.7**).

EVIDENCE-BASED ASSESSMENT A key question is whether psychological assessments provide information that is useful for treating psychological disorders. Many popular methods of assessment, such as projective tests (see Chapter 13), have not been shown to be helpful in predicting the kinds of treatments that are useful. Moreover, individual clinicians often choose assessment procedures based on their subjective beliefs and training rather than on scientific studies. For instance, when making diagnoses, some clinicians use their clinical judgment rather than a formal method—such as a structured interview that consists of standardized questions, derived from *DSM* criteria, in the same order each time.

Evidence-based assessment is an approach to clinical evaluation in which research guides the evaluation of psychopathology, the selection of appropriate psychological tests and neuropsychological methods, and the use of critical thinking in making a diagnosis (Hunsley & Mash, 2007; Joiner, Walker, Pettit, Perez, & Cukrowicz, 2005). For instance, as noted earlier, scientific research indicates that many disorders are comorbid. Research also indicates that people who are depressed often have substance abuse disorders. Therefore, an evidence-based assessment approach would indicate that people found to be depressed should also be assessed for comorbid conditions, such as substance abuse.

Psychological Disorders Have Many Causes

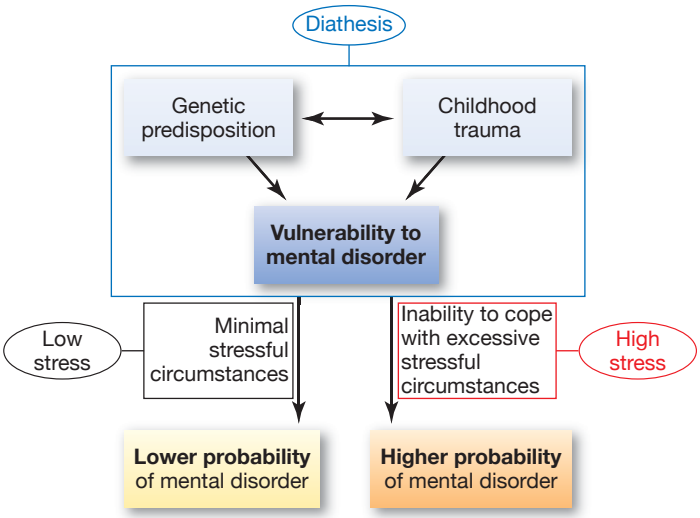


FIGURE 14.8
Diathesis-Stress Model
The onset of psychological disorders can be seen as resulting from the interactions of a diathesis and stress. The diathesis may be biological (e.g., genetic predisposition), environmental (e.g., childhood trauma), or both.

Psychologists do not completely agree about the causes of most psychopathology. Still, some factors are thought to play important developmental roles. As discussed throughout this book, both nature and nurture matter, and it is futile to try to identify biology or environment as solely responsible for a given disorder. The **diathesis-stress model** (presented as a flowchart in **FIGURE 14.8**) provides one way of thinking about the onset of psychopathology (Monroe & Simons, 1991).

In this model, an individual can have an underlying vulnerability (known as *diathesis*) to a psychological disorder. This diathesis can be biological, such as a genetic predisposition to a specific disorder, or it can be environmental, such as childhood trauma. The vulnerability may not be sufficient to trigger a disorder, but the addition of stressful circumstances can tip the scales. If the stress level exceeds an individual's ability to cope, the symptoms of psychological disorder will occur. In this view, a family history of psychopathology suggests vulnerability rather than destiny.

BIOLOGICAL FACTORS The biological perspective focuses on how physiological factors, such as genetics, contribute to psychological disorders (Kandel, 1998).

Chapter 3 describes how comparing the rates of psychological disorders between identical and fraternal twins and studying individuals who have been adopted have revealed the importance of genetic factors (Kendler, Prescott, Myers, & Neale, 2003; Krueger, 1999). Genetic factors can affect the production and levels of neurotransmitters and their receptor sites. Research has provided insights on the role of neurotransmitters in psychopathology. In some cases, based on what is known about the neurochemistry of psychological disorders, medications have been developed. In other cases, the unexpected effects of medications have led to discoveries about the neurotransmitters involved in psychological disorders.

Genetic factors can also affect the size of brain structures and their level of connectivity. Structural imaging and postmortem studies have revealed differences in brain anatomy, perhaps due to genetics, between those with psychological disorders and those without. Functional neuroimaging is currently at the forefront of research into the neurological components of mental disorders: PET and fMRI have revealed brain regions that may function differently in individuals with mental disorders (**FIGURE 14.9**).

Environmental effects on the body also influence the development and course of psychological disorders. The fetus is particularly vulnerable to other biological factors—such as malnutrition, exposure to toxins (such as drugs and alcohol), and maternal illness—that because of their effects on the central nervous system may contribute to psychological disorders (Salum, Polanczyk, Miguel, & Rohde, 2010). Similarly, during childhood and adolescence, environmental toxins and malnutrition can put an individual at risk for psychological disorders. Again, biological factors often reflect the vulnerabilities that occur in individuals. As the diathesis-stress model reminds us, single explanations (nature *or* nurture, rather than nature *and* nurture) are seldom sufficient for understanding psychological disorders.

FIGURE 14.9
Biological Factors in Psychopathology
Although these men are twins, the one on the right has schizophrenia and the one on the left does not. In the MRI of the twin with schizophrenia, note the larger ventricles (these fluid-filled cavities appear dark in the image). This same pattern has emerged in the study of other twin pairs in which one has schizophrenia and the other does not. Thus, the brain may be deteriorating over time for those with schizophrenia, and this finding tells us that biological factors may be important for understanding schizophrenia.

ENVIRONMENTAL FACTORS The first edition of the *DSM* was influenced heavily by Freudian psychoanalytic theory. Freud believed that psychopathology was mostly due to unconscious conflicts, often sexual in nature, dating back to childhood. Consistently with this perspective, the first edition of the *DSM* described many disorders as reactions to environmental conditions or as involving various defense mechanisms. Although Freud made important historical contributions in shaping psychology, most of his theories—particularly his theories on the causes of psychopathology—have not stood the test of time. Environmental factors clearly play an important role, however, in the expression and treatment of psychological disorders.

Thoughts and emotions shaped by an environment can profoundly influence behavior, including disordered behavior. Not only traumatic events but also less extreme circumstances, such as constantly being belittled by a parent, can have long-lasting effects. The **family systems model** proposes that an individual's behavior must be considered within a social context, particularly within the family (Kazak, Simms, & Rourke, 2002). According to this model, problems that arise within an individual are manifestations of problems within the family (Goodman & Gotlib, 1999). Thus, developing a profile of an individual's family interactions can be important for understanding the factors that may be contributing to the disorder. A profile can also be important for determining whether the family is likely to be helpful or detrimental to the client's progress in therapy.

Similarly, the **sociocultural model** views psychopathology as the result of the interaction between individuals and their cultures. For example, disorders such as schizophrenia appear to be more common among those in lower socioeconomic classes (**FIGURE 14.10**). From the sociocultural perspective, these differences in occurrence are due to differences in lifestyles, in expectations, and in opportunities among classes. There may be biases in people's willingness to ascribe disorders to different social classes, however.

family systems model
A diagnostic model that considers problems within an individual as indicating problems within the family.

sociocultural model
A diagnostic model that views psychopathology as the result of the interaction between individuals and their cultures.

FIGURE 14.10 Sociocultural Model of Psychopathology
According to the sociocultural model, psychopathology results from the interaction between individuals and their cultures. This homeless man with schizophrenia lives on the streets in Notting Hill, a fashionable area of London.

cognitive-behavioral approach
A diagnostic model that views psychopathology as the result of learned, maladaptive thoughts and beliefs.

Eccentric behavior among the wealthy elite might be tolerated or viewed as amusing. The same behaviors observed among those living in poverty might be taken as evidence of psychopathology. Moreover, people who develop schizophrenia may have trouble finding work, and so their lower socioeconomic status may be a result of their disorder.

COGNITIVE-BEHAVIORAL FACTORS The central principle of the **cognitive-behavioral approach** is that abnormal behavior is learned (Butler, Chapman, Forman, & Beck, 2006). As discussed in Chapter 6, through classical conditioning an unconditioned stimulus produces an unconditioned response. For example, a loud noise produces a startled response. A neutral stimulus paired with this unconditioned stimulus can eventually by itself produce a similar response. As was the case with Little Albert, if a child is playing with a fluffy white rat and is frightened by a loud noise, the white rat alone can later cause fear in the child. In fact, this process is how John B. Watson, the founder of behaviorism, demonstrated that many fears are learned rather than innate.

According to the cognitive-behavioral perspective, thoughts and beliefs are learned and therefore can be unlearned through treatment. The premise of this approach is that thoughts can become distorted and produce maladaptive behaviors and maladaptive emotions. In contrast to the psychologists who subscribe to the psychoanalytic perspective, cognitive-behavioral psychologists believe that thought processes are available to the conscious mind. Individuals are aware of, or easily can be made aware of, the thought processes that give rise to maladaptive emotions and behaviors.

SEX DIFFERENCES IN PSYCHOLOGICAL DISORDERS Some disorders, such as schizophrenia and bipolar disorder, are equally likely in both sexes (**FIGURE 14.11**). Rates of other disorders vary between the sexes. For example, dependence on alcohol is much more likely in males, whereas anorexia nervosa is much more likely in females. The reasons for these differences are both biological and environmental.

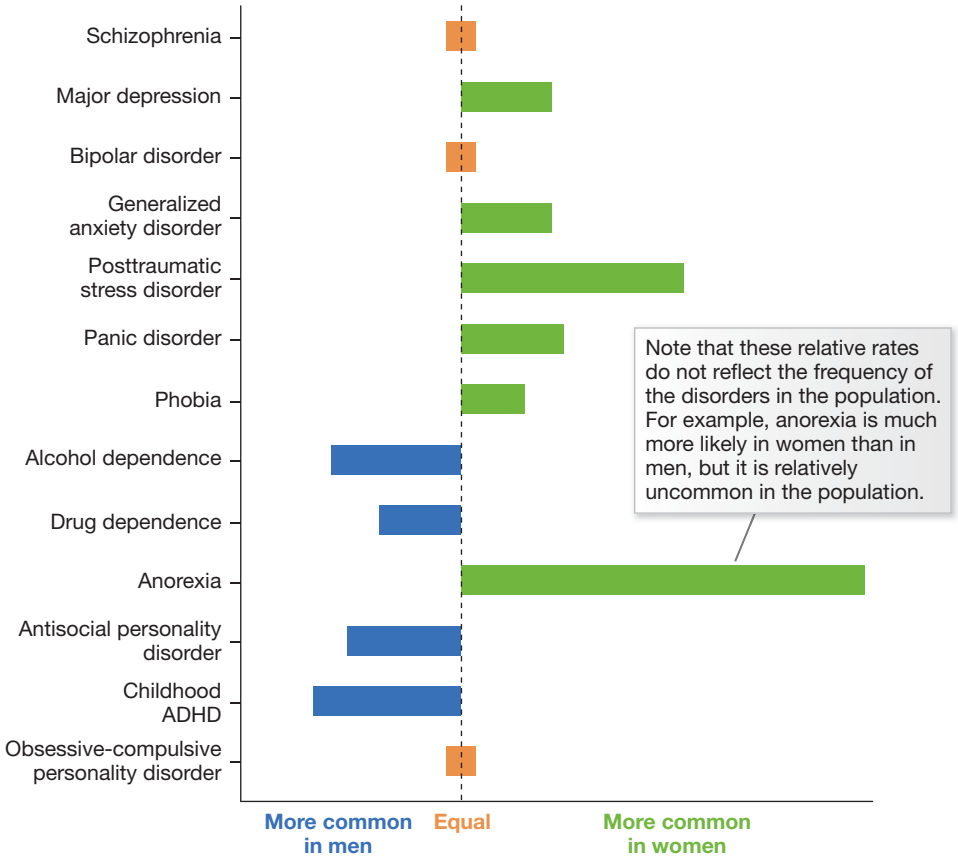
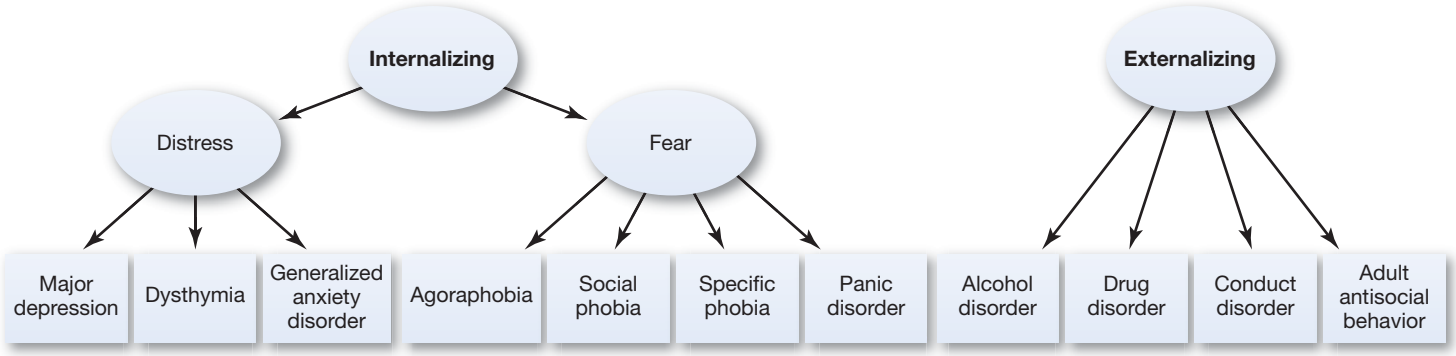


FIGURE 14.11
Sex Differences in Psychological Disorders
The bars in this graph represent how common particular psychological disorders are for men and for women.



SOURCE: Krueger & Markon, 2006.

FIGURE 14.12
Internalizing and Externalizing Model of Psychological Disorders
This diagram divides disorders into two basic categories, internalizing and externalizing. It also divides internalizing disorders into those related to fear and those related to distress.

One way of categorizing psychological disorders is to divide them into two major groups: *Internalizing disorders* are characterized by negative emotions, and they can be grouped into categories that reflect the emotions of distress and fear. These disorders include major depressive disorder, generalized anxiety disorder, and panic disorder. *Externalizing disorders* are characterized by disinhibition. These disorders include alcoholism, conduct disorders, and antisocial personality disorder (**FIGURE 14.12**). In general, the disorders associated with internalizing are more prevalent in females, and those associated with externalizing are more prevalent in males (Krueger & Markon, 2006).

CULTURE AND PSYCHOLOGICAL DISORDERS Increasingly, psychologists and other mental health professionals are recognizing the importance of culture in many aspects of our lives. Most psychological disorders show both universal and culture-specific symptoms. That is, the disorders may be very similar around the world, but they still reflect cultural differences. A disorder with a strong biological component will tend to be more similar across cultures. A disorder heavily influenced by learning, context, or both is more likely to differ across cultures. For example, depression is a major mental health problem around the world, but the manifestations of depression differ by culture.

Since the 1994 edition, the *DSM* has included a number of disorders that tend to occur within specific cultural settings. The *DSM-5* incorporates a greater consideration of cultural factors for each psychological disorder and updates criteria to reflect cross-cultural variations in how people exhibit symptoms. For example, the fear of "offending others" has been added as a possible symptom of social anxiety disorder to reflect the collectivist cultural concept that not harming others is as important as not harming the self. *DSM-5* also provides more details about cultural concepts of distress, such as encouraging clinicians to consider the specific words and phrases used by different cultural groups to describe their distress, as well as the cultural explanations for the cause of psychopathology. Finally, *DSM-5* provides examples of *cultural syndromes,* disorders that include a cluster of symptoms that are found in specific cultural groups or regions (**TABLE 14.2** presents examples of common cultural syndromes, and **FIGURE 14.13** illustrates one of them).

Clinicians and researchers need to be sensitive to cultural issues to avoid making mistakes in their diagnoses and treatments (Marsella & Yamada, 2007). Cultural factors can be critical in determining how a disorder is expressed and how an individual will respond to different types of therapies.

FIGURE 14.13
Taijin Kyofusho
This Japanese woman may be exhibiting symptoms of a psychological syndrome unique to her culture.

Table 14.2 Cultural Syndromes

NAME	DEFINITION AND LOCATION
Ataque de nervios	Uncontrollable shouting and/or crying; verbal and physical aggression; heat in chest rising to head; feeling of losing control; occasional amnesia for experience (Caribbean and South American Latinos).
Dhat syndrome	Anxiety, fatigue, weakness, weight loss, and other bodily complaints; typically observed in young males who believe their symptoms are due to loss of semen (South Asia).
Khyâl cap	Belief that a "windlike" substance may rise in the body and cause serious effects; acute panic, autonomic arousal, anxiety; catastrophic cognitions (Cambodians in the United States and Cambodia).
Kufungisisa	Belief that thinking too much can damage the mind and body; an explanation for anxiety, depression, and somatic problems indicating distress (Zimbabwe).
Maladi moun	A cultural explanation that sickness has been sent by people to harm their enemies; visible success makes one vulnerable to attack; causes various illnesses, including psychosis, depression, and social failure (Haiti).
Nervios	A phrase used to refer to a general state of vulnerability to stressful life experience; common symptoms include headaches and "brain aches" as well as irritability and nervousness (Latinos in the United States and Latin America).
Shenjing shuairuo	A weakness in the nervous system; mental fatigue, negative emotions, excitement, nervous pain, and sleep disturbances; caused by stress, embarrassment, or acute sense of failure (China).
Susto	An illness attributed to a frightening event that causes the soul to leave the body; sadness, somatic complaints, lack of motivation, and difficulty functioning in daily living (Latinos in the United States and Latin America).
Taijin kyofusho	Intense fear of interpersonal relations; belief that parts of the body give off offensive odors or displease others (Japan).

SOURCE: Based on American Psychiatric Association (2013).

Summing Up

How Are Psychological Disorders Conceptualized and Classified?

- Because psychopathology takes many forms, psychological disorders are difficult to define and categorize. The behavioral manifestations vary widely, but people diagnosed with these disorders have two things in common: Their behavior deviates from cultural norms and is maladaptive.
- The *DSM-5* is used by clinicians to classify and diagnose psychological disorders.
- Psychological disorders are often comorbid—that is, they occur together.
- Due to comorbidity, it has been proposed that all psychological disorders involve a common underlying factor, p. High scores on the p factor have been found to be associated with more-severe psychopathology.
- Rather than classifying disorders, the Research Domain Criteria (RDoC) method strives to understand the processes that give rise to psychopathology. The RDoC defines basic domains of functioning such as attention and social communication and considers them across multiple levels of analysis, from genes to brain systems to behavior.

- Clinical assessments help with the diagnosis and treatment of psychological disorders. Assessments may include interviews, behavioral assessments, psychological tests, and neuropsychological tests. The diathesis-stress model suggests that psychological disorders result from an underlying vulnerability coupled with a stressful, precipitating event.
- The causes of most psychopathology are unknown and may result from complex interactions between biological, environmental, and cognitive-behavioral factors.
- In general, females are more likely to suffer from internalizing disorders, such as major depressive disorder and generalized anxiety disorder. Males are more likely to suffer from externalizing disorders, such as alcohol use disorder and conduct disorder.
- Most psychological disorders show both universal and culture-specific symptoms. Disorders that are largely biologically determined tend to be more similar across cultures than disorders that are strongly influenced by learning and context. The *DSM* includes a number of cultural syndromes—that is, disorders that occur in specific cultures or regions.

Measuring Up

1. **Which of the following statements are true?**
   - **a.** ____ Neuropsychological assessments are useful for determining brain regions that may be impaired.
   - **b.** _____ The primary goal of psychological assessment is diagnosis.
   - **c.** _____ Psychological disorders are assessed only through client self-report of maladaptive thoughts, maladaptive behaviors, or both.
   - **d.** _____ Neuropsychological testing might involve asking patients to sort cards or draw pictures from memory.

2. **Mitch has struggled with psychological problems for most of his adult life. In high school and college, he experimented with alcohol and drugs and suffered through periodic bouts of depression and anxiety. As he has gotten older, Mitch's symptoms and subsequent problems have escalated, including his substance abuse. Mitch would most likely score high on which of the following factors?**
   - **a.** g factor
   - **b.** p factor
   - **c.** unconscious conflicts
   - **d.** the neuropsychological inventory

3. **While at a conference on psychological disorders, you attend a symposium titled "Understanding the Origins of Mental Health." Excerpts from three of the presentations appear below. Match each excerpt with one of the etiological models discussed in this chapter: diathesis-stress model, biological model, family systems model, sociocultural model, and cognitive-behavioral approach. (Not all the models will have matches.)**
   - **a.** "By understanding the mechanisms by which neurotransmitters affect behavior and cognition and emotion, we gain insight into the underlying causes of psychological disorders."
   - **b.** "Children are not raised in vacuums; they are raised in families. Therefore, to understand the origins of psychological disorders, we must understand the dynamics of the client's family."
   - **c.** "Some individuals are predisposed—whether as a function of their biology or of their past experiences—to develop psychological disorders. Stressful circumstances amplify these predispositions, making the individual more likely to evidence symptoms of psychopathology."

ANSWERS: **(1)** Choices a, b, and d are true. **(2) b.** p factor. **(3) a.** biological; **b.** family systems model; **c.** diathesis-stress model.

Learning Objectives

- Differentiate the various anxiety disorders.
- Understand the various causes of obsessive-compulsive disorder.
- Understand the role of trauma in posttraumatic stress disorders.
- Discuss cultural and sex differences in depressive disorders.
- Distinguish between bipolar I and bipolar II disorder.

14.2 Which Disorders Emphasize Emotions or Moods?

People often feel emotional—down, anxious, and so on. Such feelings can be useful. They can prepare people for dealing with future events, motivating them to learn new ways of coping with challenges. For example, being anxious about tests reminds people to keep up with their homework and study. Being slightly anxious when meeting strangers helps people avoid doing bizarre things and making bad impressions. For some people, however, feelings such as anxiety can become debilitating and interfere with every aspect of life.

Likewise, moods color every aspect of people's lives. When people are happy, the world seems like a wonderful place, and they feel boundless energy. When people are sad, they view the world in a decidedly less rosy light, feeling hopeless and isolated. Few people, however, experience the same strong moods day after day.

When emotions or moods go from being a normal part of daily living to being extreme enough to disrupt people's ability to work, learn, and play, these states are considered symptoms of psychological disorders. Most forms of psychopathology influence how people feel as well as how they think, but emotional experiences or moods are more central to some disorders and thought disturbances are more central to others. In this section, we consider the most common disorders involving emotions or moods.

Anxiety Disorders Make People Apprehensive and Tense

Imagine that you are about to make your first parachute jump out of an airplane. If you are like most people, your heart will be racing, and you will be sweating. You might feel queasy. While under these circumstances you may find such sensations thrilling, people who have an anxiety disorder experience these feelings all the time and are unhappy about them.

Anxiety disorders are characterized by excessive fear and anxiety in the absence of true danger. Those with anxiety disorders feel tense and apprehensive. They are often irritable because they cannot see any solution to their anxiety. Constant worry can make falling asleep and staying asleep difficult, and attention span and concentration can be impaired. By continually arousing the autonomic nervous system, chronic anxiety also causes bodily symptoms such as sweating, dry mouth, rapid pulse, shallow breathing, increased blood pressure, and increased muscular tension. Chronic arousal can also result in hypertension, headaches, and other health problems. More than 1 in 4 Americans will have some type of anxiety disorder during their lifetimes (Kessler & Wang, 2008).

Because of their high levels of autonomic arousal, people who have anxiety disorders also exhibit restless and pointless motor behaviors. Exaggerated startle response is typical, and behaviors such as toe tapping and excessive fidgeting are common. Problem solving and judgment may suffer as well. Research has shown that chronic stress can produce atrophy in the hippocampus, a brain structure involved in learning and memory (McEwen, 2008). Because chronic stress can damage the body, including the brain, it is very important to identify and effectively treat disorders that involve chronic anxiety. The various anxiety disorders share some emotional, cognitive, somatic, and motor symptoms, even though the behavioral manifestations of these disorders are quite different (Barlow, 2002). These disorders include specific phobia, social anxiety disorder, generalized anxiety disorder, and panic disorder.

anxiety disorder
A psychological disorder characterized by excessive fear and anxiety in the absence of true danger.

Table 14.3 Some Unusual Specific Phobias

- **Arachibutyrophobia:** fear of peanut butter sticking to the roof of one's mouth
- **Automatonophobia:** fear of ventriloquists' dummies
- **Barophobia:** fear of gravity
- **Dextrophobia:** fear of objects at the right side of the body
- **Geliophobia:** fear of laughter
- **Gnomophobia:** fear of garden gnomes
- **Hippopotomonstrosesquipedaliophobia:** fear of long words
- **Ochophobia:** fear of being in a moving automobile
- **Panophobia:** fear of everything
- **Pentheraphobia:** fear of mothers-in-law
- **Triskaidekaphobia:** fear of the number 13

SPECIFIC PHOBIA As discussed in Chapter 6, a phobia is a fear of a specific object or situation. Of course, some fear can be a good thing. As an adaptive force, fear can help people avoid potential dangers, such as poisonous snakes and rickety bridges. In phobias, however, the fear is exaggerated and out of proportion to the actual danger.

In *DSM-5,* people are diagnosed with *specific phobia* based on the object of the fear. Specific phobias, which affect about 1 in 8 people, involve particular objects and situations. Common specific phobias include fear of snakes (ophidiophobia), fear of enclosed spaces (claustrophobia), and fear of heights (acrophobia). (**TABLE 14.3** lists some unusual specific phobias.) Another common specific phobia is fear of flying. Even though the odds of dying in a plane crash, compared with a car crash, are extraordinarily small, some people find flying terrifying. For those who need to travel frequently for their jobs, a fear of flying can cause significant impairment in daily living.

SOCIAL ANXIETY DISORDER *Social anxiety disorder,* formerly sometimes called *social phobia,* is a fear of being negatively evaluated by others. It includes fears of public speaking, speaking up in class, meeting new people, and eating in front of others. About 1 in 8 people will experience social anxiety disorder at some point in their lifetime, and around 7 percent are experiencing social anxiety disorder at any given time (Ruscio et al., 2008). It is one of the earliest forms of anxiety disorder to develop, often beginning at around age 13. The more social fears a person has, the more likely he or she is to develop other disorders, particularly depression and substance abuse problems. Indeed, assessment must consider the overlap between social anxiety disorder and related disorders to make an informed diagnosis (Stein & Stein, 2008; **FIGURE 14.14**).

GENERALIZED ANXIETY DISORDER The anxiety in specific phobia has a focus. By contrast, the anxiety in **generalized anxiety disorder (GAD)** is diffuse and always present. People with this disorder are constantly anxious and worry incessantly about even minor matters (Sanderson & Barlow, 1990). They even worry about being worried! Because the anxiety is not focused, it can occur in response to almost anything, so the sufferer is constantly on the alert for problems. This hypervigilance results in distractibility, fatigue, irritability, and sleep problems, as

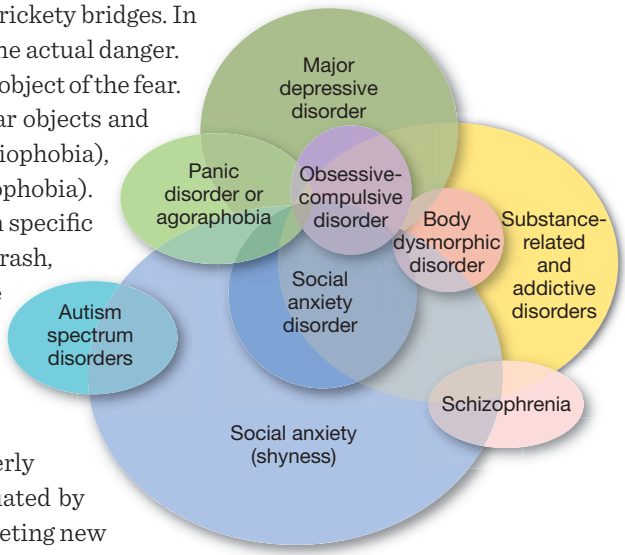


FIGURE 14.14
Comorbidity of Social Anxiety Disorder
As this diagram illustrates, social anxiety disorder is comorbid with many other psychological disorders. If a client has social anxiety disorder, all of these disorders need to be considered to make an accurate and complete diagnosis.

generalized anxiety disorder (GAD)
A diffuse state of constant anxiety not associated with any specific object or event.

panic disorder
An anxiety disorder that consists of sudden, overwhelming attacks of terror.

agoraphobia
An anxiety disorder marked by fear of being in situations in which escape may be difficult or impossible.

well as headaches, restlessness, light-headedness, and muscle pain. Just under 6 percent of the United States population is affected by this disorder at some point in their lives, though women are diagnosed more often than men (Kessler et al., 1994; Kessler & Wang, 2008).

PANIC DISORDER **Panic disorder** consists of sudden, overwhelming attacks of terror and worry about having additional panic attacks. The attacks seemingly come out of nowhere, or they are cued by external stimuli or internal thought processes. Panic attacks typically last for several minutes, during which the person may begin to sweat and tremble; feels his or her heart racing; feels short of breath; feels chest pain; and may feel dizzy and light-headed, with numbness and tingling in the hands and feet. People experiencing panic attacks often believe that they are going crazy or that they are dying, and those who suffer from persistent panic attacks attempt suicide much more often than those in the general population (Fawcett, 1992; Korn et al., 1992; Noyes, 1991). People who experience panic attacks during adolescence are especially likely to develop other anxiety disorders—such as generalized anxiety disorder—in adulthood (Goodwin et al., 2004). Panic disorder affects an estimated 3 percent of the population in a given year, and women are twice as likely to be diagnosed as men (Kessler & Wang, 2008).

A related disorder is **agoraphobia.** People with this disorder are afraid of being in situations in which escape is difficult or impossible. For example, they may fear being in a crowded shopping mall or using public transportation. Their fear is so strong that being in such situations causes panic attacks. As a result, people who suffer from agoraphobia avoid going into open spaces or to places where there might be crowds. In extreme cases, sufferers may feel unable to leave their homes. In addition to fearing the particular situations, they fear having a panic attack in public:

> Ms. Watson began to dread going out of the house alone. She feared that while out she would have an attack and would be stranded and helpless. She stopped riding the subway to work out of fear she might be trapped in a car between stops when an attack struck, preferring instead to walk the 20 blocks between her home and work. She also severely curtailed her social and recreational activities—previously frequent and enjoyed—because an attack might occur, necessitating an abrupt and embarrassing flight from the scene. (Spitzer, Skodol, Gibbon, & Williams, 1983)

This description demonstrates the clear links between panic attacks and agoraphobia. Indeed, agoraphobia without panic is quite rare (Kessler & Wang, 2008).

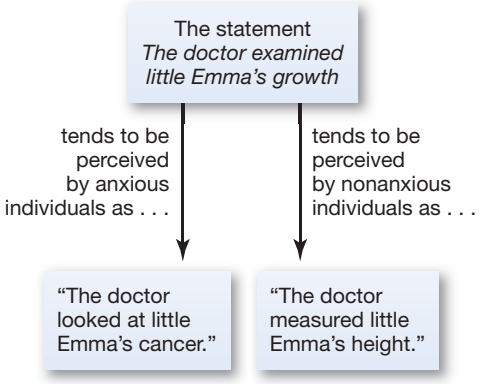


FIGURE 14.15
Anxiety Disorders
As this example illustrates, anxious individuals tend to perceive ambiguous situations as threatening.

DEVELOPMENT OF ANXIETY DISORDERS The behavioral manifestations of anxiety disorders can be quite different, but all share some causal factors (Barlow, 2002). The first factor is biased thinking. When presented with ambiguous or neutral situations, anxious individuals tend to perceive them as threatening, whereas nonanxious individuals assume they are nonthreatening (Eysenck, Mogg, May, Richards, & Matthews, 1991; **FIGURE 14.15**). Anxious individuals also focus excessive attention on perceived threats (Rinck, Reinecke, Ellwart, Heuer, & Becker, 2005). They thus recall threatening events more easily than nonthreatening ones, exaggerating the events' perceived magnitude and frequency.

A second factor is learning. As discussed in Chapter 6, monkeys develop a fear of snakes if they observe other monkeys responding to snakes fearfully. Similarly, a person could develop a fear of flying by observing another person's fearful reaction to the closing of cabin doors. Such a fear might then generalize to other enclosed spaces, resulting in claustrophobia.

Scientific Thinking

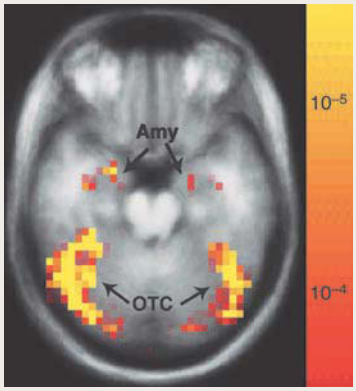
Inhibition and Social Anxiety

HYPOTHESIS: People who had an inhibited temperamental style as children are more likely to show signs of social anxiety later in life.

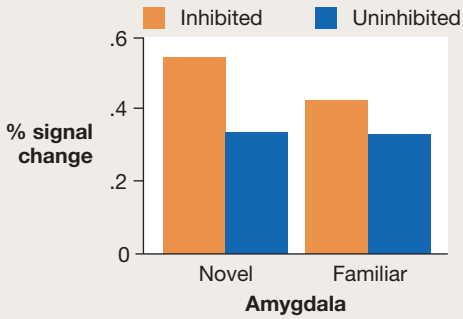
RESEARCH METHOD:

1 Adults received brain scans while viewing pictures of familiar faces and of novel faces. One group of these adults had been categorized as inhibited before age 2. The other group had been categorized as uninhibited before age 2.

2 Two regions of the brain were more activated by novel faces. These areas were the amygdala (marked "Amy" in the brain scan below) and the occipito-temporal cortex (marked "OTC"). The amygdala is normally active when people are threatened. The occipitotemporal cortex is normally active when people see faces, whether the faces are novel or familiar.



RESULTS: Compared with the uninhibited group, the inhibited group showed greater activation of the amygdala while viewing novel faces. That activation indicated that, when seeing novel faces, the inhibited group showed greater brain activity associated with threat.



CONCLUSION: The results suggest that some aspects of childhood temperament are preserved in the adult brain. In particular, biological factors seem to play an important role in social anxiety.

SOURCE: Schwartz, C. E., Wright, C. I., Shin, L. M., Kagan, J., & Rauch, S. L. (2003, June 20). Inhibited and uninhibited infants "grown up": Adult amygdalar response to novelty. *Science, 300,* 1952–1953.

There is also a biological factor. As noted in Chapter 13, children who have an inhibited temperamental style are usually shy and tend to avoid unfamiliar people and novel objects. These inhibited children are more likely to develop anxiety disorders later in life (Fox, Henderson, Marshall, Nichols, & Ghera, 2005). They are especially at risk for developing social anxiety disorder (Biederman et al., 2001). In one study, adults received brain scans while viewing pictures of familiar faces and of novel faces (Schwartz, Wright, Shin, Kagan, & Rauch, 2003). One group of these adults had been categorized as inhibited before age 2. The other group had been categorized as uninhibited before age 2. Compared with the uninhibited group, the inhibited group showed greater activation of the amygdala—a brain region involved when people are threatened—while viewing the novel faces. That is, after the passage of so many years, the inhibited group still seemed to show a threat response to novel faces. Although this study did not involve those with diagnosed anxiety disorders, it does show that childhood temperaments are preserved in the adult brain (see "Scientific Thinking: Inhibition and Social Anxiety").

Unwanted Thoughts Create Anxiety in Obsessive-Compulsive Disorders

We have seen that many psychological disorders involve both emotional and cognitive impairments. In some cases, having unwanted thoughts leads to emotional distress and anxiety. *DSM-5* categorizes a number of disorders together that involve

obsessive-compulsive disorder (OCD)
A disorder characterized by frequent intrusive thoughts and compulsive actions.

experiencing unwanted thoughts or the desire to engage in maladaptive behaviors (see Table 14.1). The commonality is an obsession with an idea or thought or the compulsion to repeatedly act in a certain way. These compulsive actions temporarily reduce anxiety. Related disorders in this category include people chronically pulling at their hair or picking at their skin, people being obsessed with deficiencies in their physical appearance, and *hoarding disorder,* in which people have persistent difficulty parting with their possessions and end up accumulating clutter and garbage that can make their living conditions seem like disaster zones.

"Is the Itsy Bitsy Spider obsessive-compulsive?"

OBSESSIVE-COMPULSIVE DISORDER The most common disorder in this *DSM-5* category is **obsessive-compulsive disorder (OCD)**, which involves frequent intrusive thoughts and compulsive actions (Kessler & Wang, 2008). Affecting 1–2 percent of the population, OCD is more common in women than men, and it generally begins in early adulthood (Robins & Regier, 1991; Weissman et al., 1994). *Obsessions* are recurrent, intrusive, and unwanted thoughts or ideas or mental images. They often include fear of contamination, of accidents, or of one's own aggression. The individual typically attempts to ignore or suppress such thoughts but sometimes engages in particular behaviors to neutralize his or her obsessions (**FIGURE 14.16**).

Compulsions are particular acts that the OCD patient feels driven to perform over and over. The most common compulsive behaviors are cleaning, checking, and counting. For instance, a person might continually check to make sure a door is locked, because of an obsession that his or her home might be invaded, or a person might engage in superstitious counting to protect against accidents, such as counting the number of telephone poles while driving. The compulsive behavior or mental act, such as counting, is aimed at preventing or reducing anxiety or preventing something dreadful from happening.

Those with OCD anticipate catastrophe and loss of control. However, as opposed to those who suffer from anxiety disorders—who fear what might happen to them—those with OCD fear what they might do or might have done. Checking is one way to calm the anxiety:

> While in reality no one is on the road, I'm intruded with the heinous thought that I *might* have hit someone . . . a human being! God knows where such a fantasy comes from. . . . I try to make reality chase away this fantasy. I reason, "Well, if I hit someone while driving, I would have *felt* it." This brief trip into reality helps the pain dissipate . . . but only for a second. . . . I start ruminating, "Maybe I did hit someone and didn't realize it. . . . Oh my God! I might have killed somebody! I have to go back and check." (Rapoport, 1990, pp. 22–27)

FIGURE 14.16 Howie Mandel
The comedian Howie Mandel has been diagnosed with obsessive-compulsive disorder. Like many people with OCD, Mandel suffers from mysophobia, or the fear of germs. His trademark shaved head helps him with this problem, as it makes him feel cleaner. Mandel even built a second, sterile house, to which he can retreat if he feels he might be contaminated by anyone around him. Here, Mandel promotes his autobiography, *Here's the Deal: Don't Touch Me* (2009), in which he "comes clean" about suffering from OCD and other disorders.

CAUSES OF OBSESSIVE-COMPULSIVE DISORDER A paradoxical aspect of OCD is that people are aware that their obsessions and compulsions are irrational, yet they are unable to stop them. One explanation is that the disorder results from conditioning. In the person with OCD, anxiety is somehow paired to a specific event, probably through classical conditioning. As a result, the person engages in behavior that reduces anxiety and therefore is reinforced through operant conditioning. This reduction of anxiety is reinforcing and increases the person's chance of engaging in that behavior again.

Suppose you are forced to shake hands with a man who has a bad cold. You have just seen him wiping his nose with his right hand. Shaking that hand might cause you to be anxious or uncomfortable because you do not want to get sick. As soon as the pleasantries are over, you run to the bathroom and wash your hands. You feel relieved. You have now paired handwashing with a reduction in anxiety, thus increasing the

chances of handwashing in the future (**FIGURE 14.17**). If you develop OCD, however, the compulsive behavior will reduce your anxiety only temporarily, so you will need to perform the behavior over and over.

There is also good evidence that the etiology of OCD is in part genetic (Crowe, 2000). Indeed, various behavioral genetics methods, such as twin studies, have shown that OCD runs in families. The specific mechanism has not been identified, but the OCD-related genes appear to control the neurotransmitter glutamate (Pauls, 2008). As noted in Chapter 3, glutamate is the major excitatory transmitter in the brain, causing increased neural firing.

Brain imaging has provided some evidence regarding which brain systems are involved in OCD. The caudate, a brain structure involved in suppressing impulses, is smaller and has structural abnormalities in people with OCD (Baxter, 2000). Moreover, brain imaging studies show abnormal activity in the caudates of people with OCD compared with the caudates of controls (Maia, Cooney, & Peterson, 2008). Because the caudate is involved in impulse suppression, dysfunction in this region may result in the leak of impulses into consciousness. The prefrontal cortex, which is involved in conscious control of behavior, then becomes overactive in an effort to compensate (Whiteside, Port, & Abramowitz, 2004; Yucel et al., 2007). As discussed in Chapter 15, deep brain electrical stimulation of the caudate has been successful in alleviating the symptoms of OCD, providing additional evidence that this brain structure is involved in OCD (Aouizerate et al., 2004).

There is also growing evidence that OCD can be triggered by environmental factors. In particular, a streptococcal infection apparently can cause a severe form of OCD in some young children. Originally identified in 1998 by Susan Swedo and her colleagues at the National Institute of Mental Health, this syndrome strikes virtually overnight. The affected children suddenly display odd symptoms of OCD, such as engaging in repetitive behaviors, developing irrational fears and obsessions, and having facial tics. Researchers have speculated that an autoimmune response damages the caudate, thereby producing the symptoms of OCD (Snider & Swedo, 2004). Treatments that enhance the immune system have been found to diminish the symptoms of OCD in children with this syndrome. Why some children are susceptible to this autoimmune response is unknown.

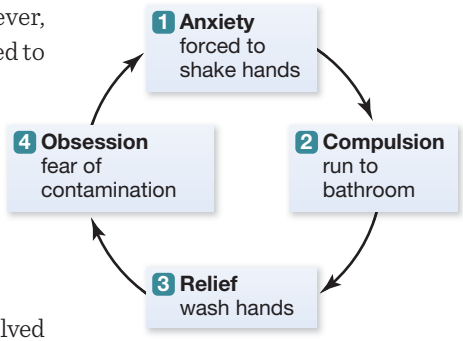


FIGURE 14.17
OCD Cycle
This flowchart illustrates the operations of conditioning for the example given in the text. Classical conditioning (step 1) and operant conditioning (steps 2 and 3) reinforce behavior. Continued reinforcement may contribute to a person's developing OCD (step 4).

Posttraumatic Stress Disorder Results from Trauma

DSM-5 categorizes a number of disorders together that result from trauma or excessive stress. This category describes *trauma- and stressor-related disorders* (see Table 14.1). For example, a person who cries continually, has difficulty studying, and avoids social settings six months after a romantic breakup may have an *adjustment disorder.* This person is having difficulty adjusting to the stressor. When people experience severe stress or emotional trauma—such as having a serious accident, being raped, fighting in active combat, or surviving a natural disaster—they often have negative reactions long after the danger has passed. In severe cases, people develop **posttraumatic stress disorder (PTSD),** a psychological disorder that involves frequent and recurring unwanted thoughts related to the trauma, including nightmares, intrusive thoughts, and flashbacks. People with PTSD often try to avoid situations or stimuli that remind them of their trauma. The lifetime prevalence of PTSD is around 7 percent, with women being more likely to develop the disorder (Kessler et al., 2005b).

An opportunity to study susceptibility to PTSD came about because of a tragedy at Northern Illinois University in 2008. On the campus, in front of many observers, a lone gunman killed 5 people and wounded 21. Among a sample of female students, those with certain genetic markers related to serotonin functioning were much more likely to show PTSD symptoms in the weeks after the shooting (Mercer et al., 2011).

posttraumatic stress disorder (PTSD)
A disorder that involves frequent nightmares, intrusive thoughts, and flashbacks related to an earlier trauma.

major depressive disorder
A disorder characterized by severe negative moods or a lack of interest in normally pleasurable activities.

This finding suggests that some individuals may be more at risk than others for developing PTSD after exposure to a stressful event.

Those with PTSD often have chronic tension, anxiety, and health problems, and they may experience memory and attention problems in their daily lives. PTSD involves an unusual problem in memory: the inability to forget. PTSD is associated with an attentional bias, such that people with PTSD are hypervigilant to stimuli associated with their traumatic events. For instance, soldiers with combat-induced PTSD show increased physiological responsiveness to pictures of troops, sounds of gunfire, and even words associated with combat. Exposure to stimuli associated with past trauma leads to activation of the amygdala (Rauch, van der Kolk, Fisler, & Alpert, 1996). It is as if the severe emotional event is "overconsolidated," burned into memory (see Chapter 7 for a discussion of consolidation of memory).

Depressive Disorders Consist of Sad, Empty, or Irritable Mood

When we feel down or sad about something happening in our life, we often say we are depressed. Although this experience is relatively common, it often does not last very long. For some people, however, the negative feelings persist and turn into a psychological disorder. The *DSM-5* categorizes a number of disorders as *depressive disorders.* The common feature of all depressive disorders is the presence of sad, empty, or irritable mood along with bodily symptoms and cognitive problems that interfere with daily life.

MAJOR DEPRESSIVE DISORDER The classic disorder in this category is major depressive disorder. According to *DSM-5* criteria, to be diagnosed with **major depressive disorder,** a person must experience a *major depressive episode,* during which he or she experiences a depressed mood or a loss of interest in pleasurable activities every day for at least two weeks. In addition, the person must have other symptoms, such as appetite and weight changes, sleep disturbances, loss of energy, difficulty concentrating, feelings of self-reproach or guilt, and frequent thoughts of death, perhaps by suicide. The following excerpt is from a case study of a 56-year-old woman diagnosed with depression:

> She described herself as overwhelmed with feelings of guilt, worthlessness, and hopelessness. She twisted her hands almost continuously and played nervously with her hair. She stated that her family would be better off without her and that she had considered taking her life by hanging herself. She felt that after death she would go to hell, where she would experience eternal torment, but that this would be a just punishment. (Andreasen, 1984, p. 39)

FIGURE 14.18
Robin Williams
In 2014, the actor and comedian Robin Williams hanged himself. Although he built his career on making people laugh, Williams appears to have struggled for years with depression, along with drug and alcohol problems.

Feelings of depression are relatively common, but only long-lasting episodes that impair a person's life are diagnosed as depressive disorders. Major depression affects about 6–7 percent of Americans in a given 12-month period, whereas approximately 16 percent of Americans will experience major depression at some point in their lives (Kessler & Wang, 2008). Although major depressive disorder varies in severity, those who receive a diagnosis are highly impaired by the condition, and it tends to persist over several months, often lasting for years (Kessler, Merikangas, & Wang, 2007).

Depression is the leading risk factor for suicide, which claims approximately a million lives annually around the world and is among the top three causes of death for people between ages 15 and 35 (Insel & Charney, 2003). The suicide of the comedian and actor Robin Williams shocked many, but Williams reportedly had long battled depression and substance abouse (**FIGURE 14.18**). You will learn more about suicide in this chapter's "Using Psychology in Your Life" feature (p. 622).

PERSISTENT DEPRESSIVE DISORDER Unlike major depressive disorder, **persistent depressive disorder,** sometimes called *dysthymia,* is of mild to moderate severity. Most individuals with this disorder describe their mood as "down in the dumps." People with persistent depressive disorder have many of the same symptoms as people with major depressive disorder, but those symptoms are less intense. People diagnosed with this disorder—approximately 2–3 percent of the population—must have a depressed mood most of the day, more days than not, for at least 2 years. Periods of depressed mood last from 2 to 20 or more years, although the typical duration is about 5 to 10 years. Because the depressed mood is so long-lasting, some psychologists consider it a personality disorder rather than a mood disorder.

persistent depressive disorder
A form of depression that is not severe enough to be diagnosed as major depressive disorder.

The distinctions between a depressive personality, persistent depressive disorder, and major depressive disorder are unclear. In keeping with a dimensional view of psychological disorders, these states may be points along a continuum rather than distinct disorders (Lewinsohn, Allen, Seeley, & Gotlib, 1999; Lewinsohn, Rodhe, Seeley, & Hops, 1991).

THE ROLES OF CULTURE AND GENDER IN DEPRESSIVE DISORDERS

Depression is so prevalent that it is sometimes called the common cold of psychological disorders. In its most severe form, depression is the leading cause of disability in the United States and worldwide (Worley, 2006). The stigma associated with this disorder has especially dire consequences in developing countries, where people do not take advantage of the treatment options because they do not want to admit to being depressed. One way to combat the stigma of psychological disorders is to focus attention on their high incidence and to educate more people about effective treatments (discussed in Chapter 15, "Treatment of Psychological Disorders"; **FIGURE 14.19**).

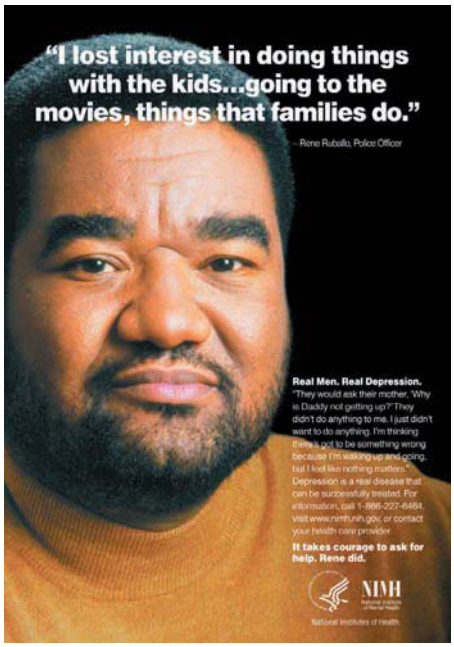


FIGURE 14.19
Informing the Public
Public-service ads may help "normalize" the treatment of psychological disorders. The more people hear about talking to doctors about problems, the more inclined they may be to visit doctors when problems arise.

Gender also plays a role in the incidence of depression. Across multiple countries and contexts, twice as many women as men suffer from depressive disorders (Kessler et al., 2003; Ustün, Ayuso-Mateos, Chatterji, Mathers, & Murray, 2004). In fact, suicide is the leading cause of death among young women in India and China (Khan, 2005), and the highest rates of depression are found in women in developing countries, with especially high rates reported for women in rural Pakistan (Mumford, Saeed, Ahmad, Latif, & Mubbashar, 1997).

Why are the rates of depressive disorders so much higher for women than for men? Some researchers have theorized that women's multiple roles in most societies—as wage earners and family caregivers—cause stress that results in increased incidence of depression, but other researchers have pointed out the health benefits of having multiple roles, such as wife, mother, and employee (Barnett & Hyde, 2001). Thus, it is not multiple roles per se but more likely overwork and lack of support that contribute to the high rate of depression in women. Research in India, Brazil, and Chile shows that low income, lack of education, and difficult family relationships contribute to psychological disorders in women (Blue & Harpham, 1996).

Depressive Disorders Have Biological, Situational, and Cognitive Components

Depression can be devastating. The sadness, hopelessness, and inability to concentrate that characterize major depressive disorder can result in the loss of jobs, of friends, and of family relationships. Because of this disorder's profound effects, particularly the danger of suicide, much research has focused on understanding the causes of depression and treating it.

BIOLOGICAL COMPONENTS Studies of twins, families, and adoptions support the notion that depression has a genetic component. Although there is some variability among studies, concordance rates (i.e., the percentage who share the same disorder) for identical twins are generally around two to three times higher than rates for fraternal twins (Levinson, 2006). The genetic contribution to depression is somewhat weaker than the genetic contribution to schizophrenia or to bipolar disorder (Belmaker & Agam, 2008).

The existence of a genetic component implies that biological factors are involved in depression. In fact, there is evidence that major depressive disorder may involve one or more monoamines. (As discussed in Chapter 3, monoamines are neurotransmitters that regulate emotion and arousal and motivate behavior.) For instance, medications that increase the availability of norepinephrine, a monoamine, may help alleviate depression. Medications that decrease levels of this neurotransmitter can cause symptoms of depression. Medications such as Prozac are known as *selective serotonin reuptake inhibitors (SSRIs)*. SSRIs selectively increase another monoamine, serotonin, and are often used to treat depression (Barton et al., 2008; SSRIs and other medications are discussed in Chapter 15). Yet depression is not simply due to a lack of norepinephrine or serotonin. For example, research has found that medications that reduce serotonin can also alleviate depression (Nickel et al., 2003). At this time, there is not a clear understanding of the role of neurotransmitters in the development of depressive disorders.

In addition, studies of brain function have suggested that certain neural structures may be involved in mood disorders. Damage to the left prefrontal cortex can lead to depression, but damage to the right hemisphere does not. The brain waves of people with depression show low activity in the left prefrontal cortex (Allen, Coan, & Nazarian, 2004), irrespective of the person's current mood (Stewart, Coan, Towers, & Allen, 2011). Interestingly, this pattern persists in patients who have been depressed but are currently in remission (Henriques & Davidson, 1990). The pattern may therefore be a biological marker of a predisposition to depression.

Biological rhythms have also been implicated in depression. Depressed patients enter REM sleep more quickly and have more of it. In fact, one symptom of depression is excessive sleeping and tiredness. In addition, many people show a cyclical pattern of depression, depending on the season. This condition, *seasonal affective disorder (SAD),* results in periods of depression that correspond to the shorter days of winter in northern latitudes.

SITUATIONAL COMPONENTS Situational factors also play a role in depression. A number of studies have implicated life stressors in many cases of depression (Hammen, 2005). Particularly relevant for depression is interpersonal loss, such as the death of a loved one or a divorce (Paykel, 2003). Depression is especially likely in the face of multiple negative events (Brown & Harris, 1978), and patients with depression have often experienced negative life events during the year before the onset of their depression (Dohrenwend, Shrout, Link, Skodol, & Martin, 1986).

How an individual reacts to stress, however, can be influenced by interpersonal relationships, which play an extremely important role in depression (Joiner, Coyne, & Blalock, 1999). Regardless of any other factors, relationships contribute to the development of depression, alter people's experiences when depressed, and ultimately may be damaged by the constant needs of the person with depression. Many people report negative reactions to people with depression, perhaps because of their frequent complaining. Over time, people may avoid interactions with those suffering from depression, thus initiating a downward spiral by making the sufferers even more depressed (Dykman, Horowitz, Abramson, & Usher, 1991). By contrast, a person who has a close friend or group of friends is less likely to become depressed when faced with stress. This protective factor is not related to the number of friends. It is related to the quality of the friendships. One good friend is more protective than a large number of casual acquaintances.

COGNITIVE COMPONENTS Finally, cognitive processes play a role in depressive disorders. The psychologist Aaron Beck has hypothesized that people with depression think negatively about themselves ("I am worthless"; "I am a failure"; "I am ugly"), about their situations ("Everybody hates me"; "the world is unfair"), and about the future ("Things are hopeless"; "I can't change"). Beck refers to these negative thoughts about self, situation, and the future as the *cognitive triad* (Beck, 1967, 1976; Beck, Brown, Seer, Eidelson, & Riskind, 1987; Beck, Rush, Shaw, & Emery, 1979; **FIGURE 14.20**).

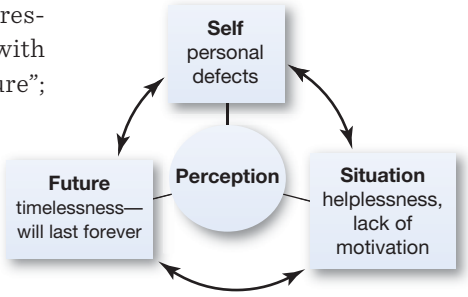


FIGURE 14.20
Cognitive Triad
According to Beck, people suffering from depression perceive themselves, their situations, and the future negatively. These perceptions influence each other and contribute to the disorder.

People with depression blame misfortunes on personal defects while seeing positive occurrences as the result of luck. People who are not suffering from depression do the opposite. Beck also notes that people with depression make errors in logic. For example, they overgeneralize based on single events, magnify the seriousness of bad events, think in extremes (such as believing they should either be perfect or not try), and take responsibility for bad events that actually have little to do with them.

A second cognitive model of depression is based on **learned helplessness** (Seligman, 1974, 1975). "Learned helplessness" means that people come to see themselves as unable to have any effect on events in their lives. The psychologist Martin Seligman based this model on years of animal research. When animals are placed in aversive situations they cannot escape (such as receiving unescapable shock), the animals eventually become passive and unresponsive. They end up lacking the motivation to try new methods of escape when given the opportunity. Similarly, people suffering from learned helplessness come to expect that bad things will happen to them and believe they are powerless to avoid negative events. The *attributions,* or explanations, they make for negative events refer to personal factors that are stable and global, rather than to situational factors that are temporary and specific. This attributional pattern leads people to feel hopeless about making positive changes in their lives (Abramson, Metalsky, & Alloy, 1989). According to the scientific evidence, dysfunctional cognitive patterns are a cause rather than a consequence of depression.

learned helplessness
A cognitive model of depression in which people feel unable to control events in their lives.

Bipolar Disorders Involve Depression and Mania

We all experience variations in mood. Our normal fluctuations from sadness to exuberance seem minuscule, however, compared with the extremes experienced by people with *bipolar disorders.* Recall the discussion, at the opening of this chapter, of Kay Redfield Jamison's extreme depression and episodes of mania. *Mania* refers to an elevated mood that feels like being "on the top of the world." This positive mood can vary in degree and is accompanied by major shifts in energy level and physical activity (**FIGURE 14.21**).

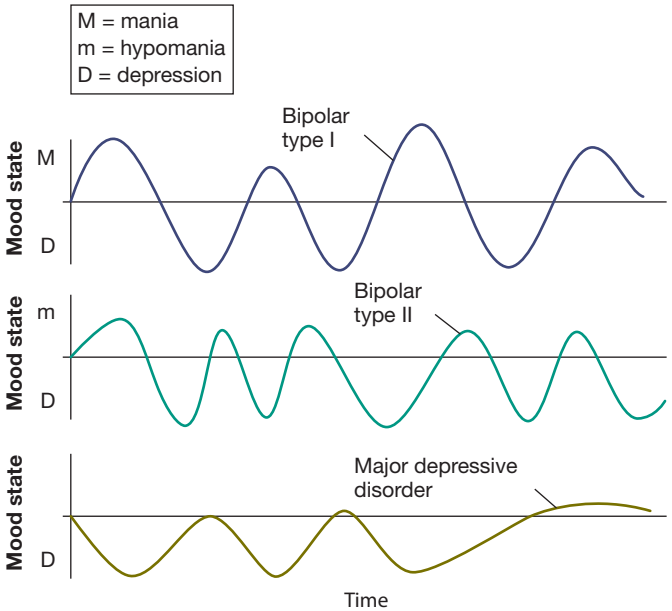


FIGURE 14.21
Bipolar I, Bipolar II, and Major Depressive Disorders
These graphs compare the mood changes over time for three disorders that involve mood states.

True *manic episodes* last at least one week and are characterized by abnormally and persistently elevated mood, increased activity, diminished need for sleep, grandiose ideas, racing thoughts, and extreme distractibility. During episodes of mania, heightened levels of activity and extreme happiness often result in excessive involvement in pleasurable but foolish activities. People may engage in sexual indiscretions, buying sprees, risky business ventures, and

Using Psychology in Your Life

I Think My Friend Might Be Suicidal. What Should I Do?

Many people contemplate suicide at some point in their lives. Tragically, as of 2007, suicide was the third leading cause of death among Americans ages 10 to 24 (American Association of Suicidology, 2011). As a result, many college students will be or have been touched by suicide. Perhaps you know someone who died by suicide. Perhaps a friend of yours talks about wanting to die. Or maybe you have considered taking your own life. Understanding the risk factors associated with suicide is an important step toward preventing suicide. Knowing where and how to find support can save lives.

In his book *Why People Die by Suicide* (2005), the clinical psychologist Thomas Joiner considers two key questions about suicide: Who *wants* to commit suicide? And who *can* commit suicide? In answering the first question, Joiner argues that "people desire death when two fundamental needs are frustrated to the point of extinction" (p. 47). The first of these fundamental needs is the need to belong, to feel connected with others. We all want to have positive interactions with others who care about us. If we do not perceive those things in our lives, our need to belong is thwarted. The second of these fundamental needs is the need for competence. We all want to be capable agents in the world. If we do not perceive ourselves as able to do the things we think we should be able to do, our need for competence is thwarted. Joiner says that when the need to belong and the need for competence are frustrated, we desire death.

But as Joiner points out, just because a person wants to commit suicide does not mean she or he will be able to do so. Evolution has hardwired us with a tremendously strong self-preservation instinct. What makes a person able to endure the tremendous physical pain or overwhelming psychological fear many of us would experience if we tried to kill ourselves? Joiner presents a straightforward answer: practice. He writes that "those prone to serious suicidal behavior have reached that status through a process of exposure to self-injury and other provocative experiences" (pp. 85–86) and "when people get used to dangerous behavior . . . the groundwork for catastrophe is laid" (p. 48). For example, a person who drives recklessly, engages in self-cutting, and/or experiments with drugs is more practiced at self-harm than someone who does not engage in any of these behaviors. Thus, the person who engages in dangerous behavior is more likely to have the capacity to carry out lethal self-injury.

Take a look at **FIGURE 14.22.** The larger oval represents the people in the world who desire suicide. These individuals perceive themselves to be burdens on others and do not perceive themselves as having frequent and positive interactions with others who care about them.

similar "out of character" behaviors that they regret once the mania has subsided. They might also have severe thought disturbances and hallucinations. This form of the condition is known as **bipolar I disorder.** Bipolar I disorder is based more on the manic episodes than on depression. Although those with bipolar I disorder often have depressive episodes, these episodes are not necessary for a *DSM-5* diagnosis. The manic episodes in bipolar I disorder cause significant impairment in daily living and can often result in hospitalization.

Whereas people with bipolar I disorder experience true manic episodes, those with **bipolar II disorder** may experience less extreme mood elevations called *hypomania* (Phillips & Kupfer, 2013). These episodes are often characterized by heightened creativity and productivity, and they can be extremely pleasurable and rewarding. As mentioned in the chapter opener, the singer Demi Lovato and the actor Catherine Zeta-Jones have both revealed that they have been diagnosed with

bipolar I disorder
A disorder characterized by extremely elevated moods during manic episodes and, frequently, depressive episodes as well.

bipolar II disorder
A disorder characterized by alternating periods of extremely depressed and mildly elevated moods.

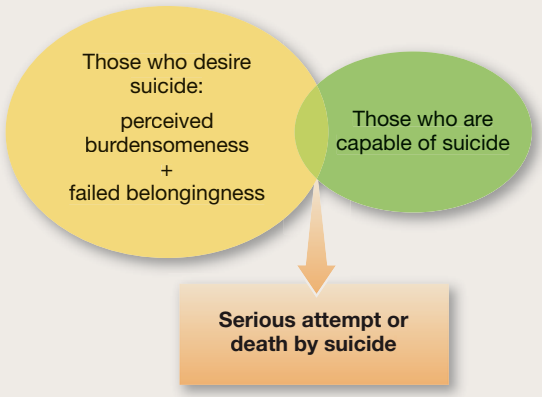


FIGURE 14.22
The Risk of Suicide: Desire + Capability = Attempt?
According to Joiner, the individuals who are *most* at risk of dying by suicide both want to do so and are able to do so.

In other words, these are the people who may want to commit suicide. The smaller oval represents the people who, over time, have developed the ability to lethally injure themselves. The overlap between the ovals represents a small fraction of the people who want to commit suicide and are able to do so. It also represents, conversely, the small fraction of the people who are well practiced at endangering themselves and want to die. Again, Joiner posits that the individuals who are *most* at risk of dying by suicide both want to do so and are able to do so.

Of course, like so many other topics you have learned about in this book, suicide is a very complex psychological phenomenon. Perhaps you have heard that suicide tends to run in families or that everyone who commits suicide has a psychological disorder. Indeed, the data support a genetic risk factor for suicide (Roy, 1992), and the majority of people who commit suicide seem to suffer from psychological disorders (Cavanagh, Carson, Sharpe, & Lawrie, 2003). How do these factors figure into Joiner's model? He points out: "Genes, neurobiology, impulsivity, childhood adversity, and mental disorders are interconnected strands that converge and influence whether people acquire the ability for lethal self-injury, feel a burden on others, and fail to feel they belong" (Joiner, 2005, p. 202). In other words, many factors might lead someone to want to commit suicide. In addition, many factors might prompt someone to arm himself or herself with the ability to endure self-harm.

With such risk factors in mind, we can now turn to the important question of what to do if you think a friend might be suicidal. First and foremost, take suicidal threats seriously. Second, get help. Someone who is considering suicide should be screened by a trained professional. Contact a counselor at your school, ask a religious leader for help, or speak to someone at the National Suicide Prevention Lifeline: 1-800-273-TALK (8255). These individuals can help you get your friend the support he or she needs. Third, let your friend know you care.

Remember, suicide risk is particularly high when people do not feel a sense of connection with others and when they feel a lack of competence. You can remind the suicidal person that you value your relationship, that you care about her or his well-being, that you would be devastated if that person were no longer in your life. These forms of support can challenge the suicidal person's sense that she or he lacks belongingness. To challenge the person's perceived incompetence, you can remind your friend about the reasons you admire her or him, or you can ask for help on a project or issue you are genuinely struggling with.

And remember, suicide is forever. The problems that prompt a person to feel suicidal, however, are often temporary. If you ever find yourself or a friend feeling that suicide offers the best way out of an overwhelming or hopeless situation, know that other options exist. You or your friend might not be able to see those options right away. Reach out to someone who can help you or your friend see the ways out of current problems and into the future.

bipolar II disorder. Although these less extreme positive moods may be somewhat disruptive to a person's life, they do not cause significant impairment in daily living or require hospitalization. However, the bipolar II diagnosis does require at least one major depressive episode, and therefore the depression might cause significant impairments. Thus, the impairments to daily living for bipolar I disorder are the manic episodes, but the impairments for bipolar II disorder are the major depressive episodes.

Bipolar disorders are much less common than depression. The lifetime prevalence for any type is estimated at around 3–4 percent (Kessler & Wang, 2008). In addition, whereas depression is more common in women, bipolar disorders are equally prevalent in women and men. Bipolar disorders emerge most commonly during late adolescence or early adulthood, with bipolar I disorder typically first diagnosed at a younger age than bipolar II disorder.

CAUSE OF BIPOLAR DISORDERS A family history of a bipolar disorder is the strongest and most consistent risk factor for bipolar disorders (Craddock & Sklar, 2013). The concordance rate for bipolar disorders in identical twins is more than 70 percent, versus only 20 percent for fraternal, or dizygotic, twins (Nurnberger, Goldin, & Gershon, 1994).

In the 1980s, the Amish community was involved in a genetic research study. The Amish were an ideal population for this sort of research because they keep good genealogical records and few outsiders marry into the community. In addition, substance abuse is virtually nonexistent among Amish adults, so psychological disorders are easier to detect. The research results revealed that bipolar disorders ran in a limited number of families and that all of those afflicted had a similar genetic defect (Egeland et al., 1987).

Genetic research suggests, however, that the hereditary nature of bipolar disorders is complex and not linked to just one gene. Current research focuses on identifying several genes that may be involved (Wray, Byrne, Stinger, & Mowry, 2014). In addition, it appears that in families with bipolar disorders, successive generations have more-severe disorders and earlier ages of onset (Petronis & Kennedy, 1995; Post et al., 2013). Research on this pattern of transmission may help reveal the genetics of the disorder, but the specific nature of the heritability of bipolar disorders remains to be discovered.

Summing Up

Which Disorders Emphasize Emotions or Moods?

- Anxiety disorders are characterized by excessive fear and anxiety in the absence of true danger.
- Common anxiety disorders include specific phobia, social anxiety disorder, generalized anxiety disorder, and panic disorder.
- Obsessive-compulsive disorder (OCD) involves frequent intrusive thoughts and compulsive actions. OCD may involve learned behaviors or may be caused by biological factors.
- Posttraumatic stress disorder (PTSD) is a trauma- or stressor-related disorder that appears after exposure to a traumatic event. PTSD affects women more than men.
- PTSD is characterized by frequent and recurring unwanted thoughts related to the trauma, nightmares, intrusive thoughts, flashbacks, and avoidance of situations related to the event.
- Major depressive disorder is characterized by sad, empty, or irritable mood or a loss of interest in pleasurable activities, among other symptoms. Persistent depressive disorder is less disruptive but leaves a person feeling sad on more days than not for at least two years.
- Depressive disorders have biological components, including dysfunction of the monoamine neurotransmitters norepinephrine and serotonin, low left frontal lobe function, and disrupted biological rhythms.
- Situational factors (such as poor relationships and stress) and cognitive factors (such as the cognitive triad and learned helplessness) also contribute to the occurrence of depression.
- Bipolar disorders include episodes of both mania and depression. The impairments to daily living for bipolar I disorder are the manic episodes, whereas the impairments for bipolar II disorder are the major depressive episodes.
- The best predictor of bipolar disorder is a family history of the disorder, suggesting that genetic factors are an important cause.

Measuring Up

1. **Indicate whether each of the following empirical findings supports a cognitive, situational, or biological underpinning of anxiety disorders.**
   - **a.** Adults who were categorized as inhibited versus uninhibited during childhood show differential patterns of amygdala activation when viewing novel faces (Schwartz et al., 2003).
   - **b.** Anxious individuals tend to focus excessive attention on perceived threats (Rinck et al., 2005).
   - **c.** Monkeys tend to develop a fear of snakes if they observe other monkeys responding to snakes fearfully (Mineka, Davidson, Cook, & Keir, 1984).
   - **d.** When presented with ambiguous or neutral situations, anxious individuals generally perceive them as threatening, whereas nonanxious individuals perceive them as nonthreatening (Eysenck et al., 1991).
2. **Which of the following statements represent dysfunctional cognitive patterns believed to cause depression? If a statement is an example of dysfunctional cognition, briefly describe why.**
   - **a.** "I didn't make the soccer team. I fail at everything."
   - **b.** "I didn't get a raise because I was late to work a number of times over the past quarter."
   - **c.** "There's nothing I can do about the fact that my boss is so mean to me."
   - **d.** "This assignment is really hard. I need to see my instructor during office hours."

ANSWERS: (1) a. biological; **b.** biological; **c.** situational; **d.** cognitive.
(2) a. (shows evidence of overgeneralizing based on a single event); **c.** (shows a perceived powerlessness to avoid negative events).

14.3 Which Disorders Emphasize Thought Disturbances?

As we have seen, many psychological disorders include emotional impairments that influence how people think. For example, those with depression can have distorted thoughts about themselves or their futures. By contrast, disorders that revolve around thinking involve disruptions in the connection between thoughts and experiences, such as people losing their sense of identity or feeling that external forces are controlling their thoughts. Many disorders of thought involve *psychosis*, which is a break from reality in which the person has difficulty distinguishing what thoughts or perceptions are real versus what are imagined. People experiencing this disorder have extreme difficulty functioning in everyday life.

Learning Objectives

- Describe dissociative amnesia, dissociative fugue, and dissociative identity disorder.
- Discuss the controversy regarding dissociative identity disorder.
- Describe the five symptoms of schizophrenia.
- Distinguish between negative and positive symptoms of schizophrenia.
- Identify biological and environmental factors that contribute to schizophrenia.

Dissociative Disorders Are Disruptions in Memory, Awareness, and Identity

As noted in Chapter 5, we sometimes get lost in our thoughts or daydreams, even to the point of losing track of what is going on around us. Many of us have had the experience of forgetting what we are doing while in the middle of an action ("Why was I headed to the kitchen?"). When we wake up in an unfamiliar location, we may momentarily be disoriented and not know where we are. In other words, our thoughts and experiences can become dissociated, or split, from the external world.

Dissociative disorders are extreme versions of this phenomenon. These disorders involve disruptions of identity, of memory, or of conscious awareness (Kihlstrom,

dissociative disorders
Disorders that involve disruptions of identity, of memory, or of conscious awareness.

FIGURE 14.23
The Two Forms of Amnesia
Jeff Ingram, pictured here, developed retrograde amnesia after leaving his home, in Washington state. When he arrived in Denver, Colorado, four days later, he had no memory of his previous life. He was recognized two months later, when he appeared on the news pleading for help from anyone who knew who he was. Though he did not remember his three-year relationship with his fiancée (here seated next to him), the two eventually married.

2005). The commonality among dissociative disorders is the splitting off of some parts of memory from conscious awareness. Dissociative disorders are believed to result from extreme stress. That is, the person with a dissociative disorder has split off a traumatic event in order to protect the self. Some researchers believe that people prone to dissociative disorders are also prone to PTSD (Cardeña & Carlson, 2011).

DISSOCIATIVE AMNESIA In *dissociative amnesia,* a person forgets that an event happened or loses awareness of a substantial block of time. For example, the person with this disorder may suddenly lose memory for personal facts, including his or her identity and place of residence. These memory failures cannot be accounted for by ordinary forgetting (such as momentarily forgetting where you parked your car) or by the effects of drugs or alcohol.

Consider the case of Dorothy Joudrie, from Calgary, Canada. In 1995, after suffering years of physical abuse from her husband, Joudrie shot her husband six times. Her husband survived, and he described her behavior during the shooting as very calm, as if she were detached from what she was doing. When the police arrived, however, Joudrie was extremely distraught. She had no memory of the shooting and told the police that she simply found her husband shot and lying on the garage floor, at which time she called for help. Joudrie was found not criminally responsible for her actions because of her dissociative state (Butcher, Mineka, & Hooley, 2007).

DISSOCIATIVE FUGUE The rarest and most extreme form of dissociative amnesia is *dissociative fugue.* The disorder involves a loss of identity. In addition, it involves travel to another location (the French word *fugue* means "flight") and sometimes the assumption of a new identity. The fugue state often ends suddenly, with the person unsure how she or he ended up in unfamiliar surroundings. Typically, the person does not remember events that occurred during the fugue state.

Consider the case of Jeff Ingram, who developed retrograde amnesia, a form of dissociative amnesia (**FIGURE 14.23**). After Ingram found himself in Denver not knowing who he was, his fiancée brought him home to Washington state. Ingram did not recognize his fiancée's face, but she felt familiar to him, as did his home.

DISSOCIATIVE IDENTITY DISORDER According to *DSM-5,* **dissociative identity disorder (DID)** consists of the occurrence of two or more distinct identities in the same individual, along with memory gaps in which the person does not recall everyday events. It used to be known as *multiple personality disorder.* Consider the strange case of Billy Milligan, who in 1978 was found innocent of robbery and rape charges on the grounds that he had dissociative identity disorder. Milligan clearly committed the robberies and rapes, but his lawyers successfully argued that he had multiple personalities and that different ones committed the crimes. Therefore, Billy could not be held responsible.

In his book *The Minds of Billy Milligan* (1981), Daniel Keyes describes the 24 separate personalities sharing the body of 26-year-old Billy Milligan. One is Arthur, who at age 22 speaks with a British accent and is self-taught in physics and biology. He reads and writes fluent Arabic. Eight-year-old David is the keeper of the pain. Anytime something physically painful happens, David experiences it. Christene is a 3-year-old dyslexic girl who likes to draw flowers and butterflies. Regan is 23 and Yugoslavian, speaks with a marked Slavic accent, and reads, writes, and speaks Serbo-Croatian. He is the protector of the "family" and acknowledges robbing his victims, but he denies raping them. Adalana, a 19-year-old lesbian who writes poetry, cooks, and keeps house for the others, later admitted to committing the rapes.

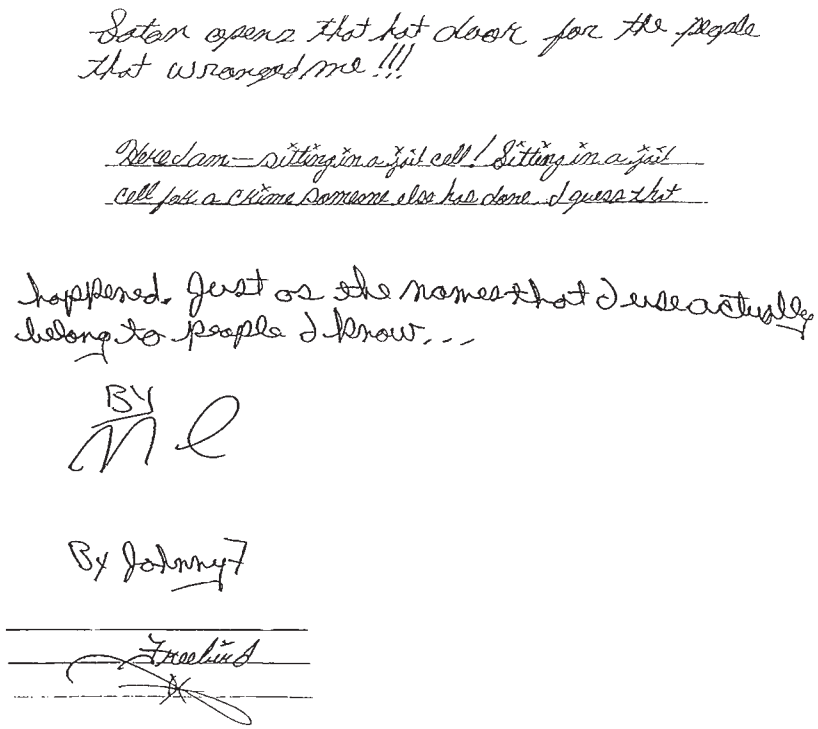
After his acquittal, Milligan spent close to a decade in various mental hospitals. In 1988, psychiatrists declared that Milligan's 24 personalities had merged into one and that he was no longer a danger to society. Milligan was released and reportedly has lived

dissociative identity disorder (DID)
The occurrence of two or more distinct identities in the same individual.

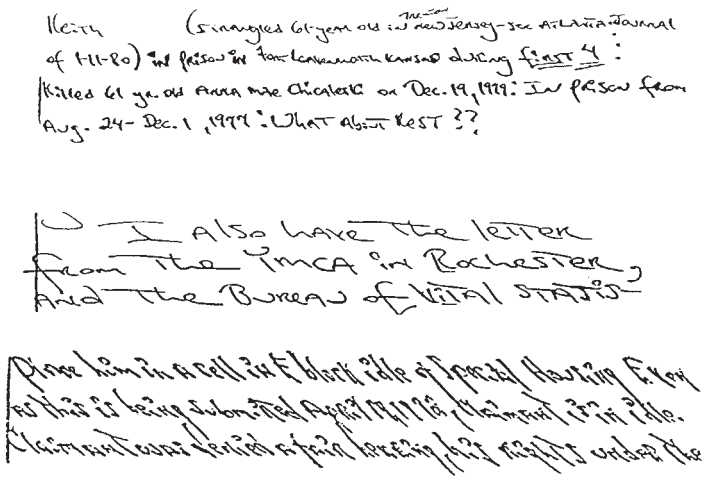
quietly since then. Many people respond to reports such as this with astonishment and incredulity, believing that people such as Milligan must be faking. To judge the facts, we need to examine what is known about this condition and how it is diagnosed.

Most people diagnosed with DID are women who report being severely abused as children. According to the most common theory of DID, children cope with abuse by pretending it is happening to someone else. They enter a trancelike state in which they dissociate their mental states from their physical bodies. Over time, this dissociated state takes on its own identity. Different identities develop to deal with different traumas. Often the identities have periods of amnesia, and sometimes only one identity is aware of the others. Indeed, diagnosis often occurs only when a person has difficulty accounting for large chunks of his or her day. The separate identities usually differ substantially, such as in gender identity, sexual orientation, age, language spoken, interests, physiological profiles, and patterns of brain activation (Reinders et al., 2003). Even their handwritings can differ (**FIGURE 14.24**).

Participant 1



Participant 2



Participant 3

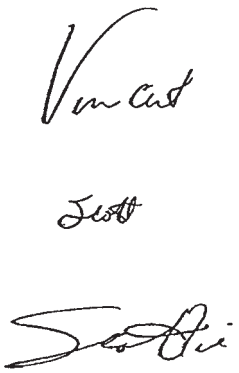


FIGURE 14.24
Handwriting Samples of Three People Diagnosed with Dissociative Identity Disorder
When researchers studied 12 murderers diagnosed with DID, writing samples from 10 of the participants revealed markedly different handwriting in each of their identities. Here handwriting samples from three of the participants show different identities expressing themselves.

schizophrenia
A psychological disorder characterized by a split between thought and emotion; it involves alterations in thoughts, perceptions, or consciousness.

Despite this evidence, many researchers remain skeptical about whether DID is a genuine psychological disorder or whether it exists at all (Kihlstrom, 2005). Moreover, some people may have ulterior motives for claiming DID. A diagnosis of DID often occurs after someone has been accused of committing a crime. This timing raises the possibility that people are pretending to have multiple identities to avoid conviction. Other skeptics point to the sharp rise in reported cases as evidence that the disorder might not be real or that it is diagnosed far too often. The 1980s and 1990s saw a surge of therapists who believed that childhood trauma frequently was repressed and that it needed to be uncovered during treatment. These therapists tended to use hypnosis, and they might have suggested DID symptoms to the patients they were assessing while the patients were hypnotized.

Ultimately, how can we know whether a diagnosis of DID is valid? As mentioned earlier, most often there is no objective, definitive test for diagnosing a psychological disorder. It can be difficult to tell if a person is faking, has come to believe what a therapist said, or has a genuine psychological disorder. Individuals who fake DID tend to report well-publicized symptoms of the disorder but neglect to mention the more subtle symptoms that are extremely common, such as major depressive episodes or PTSD (American Psychiatric Association, 2013). Those faking it seem indifferent or even proud of the disorder. Those truly afflicted are ashamed of or overwhelmed by their symptoms.

Schizophrenia Involves a Split Between Thought and Emotion

The term *schizophrenia* literally means "splitting of the mind." The psychological disorder **schizophrenia** is characterized by a split between thought and emotion (**FIGURE 14.25**). In popular culture, schizophrenia is often confused with dissociative identity disorder, or split personality, but the two disorders are unrelated. With DID, the "self" is split. Schizophrenia involves alterations in thought, perceptions, or consciousness. The essence of schizophrenia is a disconnection from reality, or psychosis.

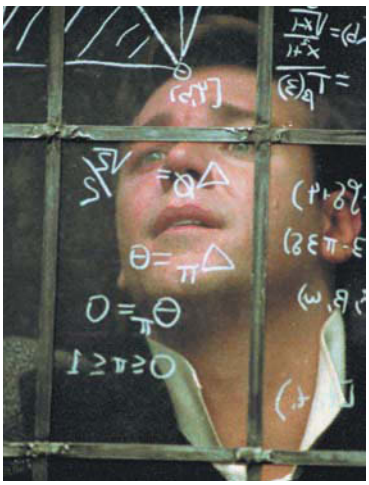


FIGURE 14.25
Schizophrenia
In the 2001 film *A Beautiful Mind,* Russell Crowe plays the real-life Princeton mathematics professor and Nobel laureate John Forbes Nash, who has suffered from schizophrenia.

According to current estimates, between 0.5 percent and 1.0 percent of the population has schizophrenia (Tandon, Keshavan, & Nasrallah, 2008). A meta-analysis of 188 studies from 46 countries found similar rates for men and women, roughly 4 to 7 per 1,000 people (Saha, Chant, Welham, & McGrath, 2006). These researchers also found that the rate of schizophrenia was slightly lower in developing nations. Interestingly, the prognosis is better in developing than in developed cultures (Kulhara & Chakrabarti, 2001). Perhaps there is more tolerance for symptoms or greater sympathy for unusual or different people in developing countries (Waxler, 1979). It is also possible that methods of defining and assessing recovery vary across countries, thereby exaggerating recovery in developing nations (Jääskeläinen et al., 2013).

Schizophrenia is arguably the most devastating disorder for the people who have it and the relatives and friends who support them. It is characterized by a combination of motor, cognitive, behavioral, and perceptual abnormalities. These abnormalities result in impaired social, personal, or vocational functioning. According to *DSM-5,* to be diagnosed with schizophrenia a person has to have shown continuous signs of disturbances for at least six months. There are five major *DSM-5* symptoms for schizophrenia, and a diagnosis requires a person to show two or more of the symptoms. At least one of those symptoms has to be among the first three listed in criterion A of **TABLE 14.4** (i.e., delusions, hallucinations, and disorganized speech). By tradition, researchers tend to group symptoms into two categories: positive and negative.

Table 14.4 *DSM-5* Diagnostic Criteria for Schizophrenia

A. Two (or more) of the following, present for a significant portion of time during a 1-month period. At least one of these must be (1), (2), or (3).

1. Delusions
2. Hallucinations
3. Disorganized speech (e.g., frequent incoherence)
4. Grossly disorganized or catatonic behavior
5. Negative symptoms (i.e., diminished emotional response or lack of motivation)

B. For a significant portion of time since the onset of the disturbance, level of functioning in one or more major areas, such as work, interpersonal relations, or self-care, is markedly below the level achieved prior to the onset.

C. Continuous signs of the disturbance persist for at least 6 months. This 6-month period must include at least 1 month of symptoms that meet criteria A (i.e., active phase symptoms) and may include periods where the symptoms are less extreme.

D. Other disorders and conditions have been ruled out (e.g., bipolar disorder, reactions to drugs, or other medical condition).

SOURCE: Based on American Psychiatric Association (2013).

Positive symptoms are excesses. They are not positive in the sense of being good or desirable, but in the sense of adding abnormal behaviors. The first four *DSM-5* criteria in Table 14.4 are considered positive symptoms.

As you will see, *negative symptoms* are deficits in functioning, such as apathy, lack of emotion, and slowed speech and movement.

DELUSIONS One of the positive (i.e., excessive) symptoms most commonly associated with schizophrenia is **delusions.** Delusions are false beliefs based on incorrect inferences about reality. (Common types of delusions are listed in **TABLE 14.5.**) Delusional people persist in their beliefs despite evidence that contradicts those beliefs.

delusions
False beliefs based on incorrect inferences about reality.

Delusions are characteristic of schizophrenia regardless of the culture, but the type of delusion can be influenced by cultural factors (Tateyama et al., 1993). When the delusions of German and Japanese patients with schizophrenia were compared, the two groups had similar rates of grandiose delusions, believing themselves much more powerful and important than they really were. The two groups differed significantly, however, for other types of delusions. The German patients had delusions that involved guilt and sin, particularly as these concepts related to religion. By contrast, the Japanese patients had delusions of harassment, such as the belief that they were being slandered by others. The types of delusions that people with schizophrenia have can also be affected by current events:

Table 14.5 Delusions and Associated Beliefs

Persecutory	Belief that others are persecuting, spying on, or trying to harm one
Referential	Belief that objects, events, or other people have particular significance to one
Grandiose	Belief that one has great power, knowledge, or talent
Identity	Belief that one is someone else, such as Jesus Christ or the president of the United States
Guilt	Belief that one has committed a terrible sin
Control	Belief that one's thoughts and behaviors are being controlled by external forces

> In summer, 1994, mass media in the U.S. reported that North Korea was developing nuclear weapons. At that time, in New York, a middle-age woman with schizophrenia told me that she feared a Korean invasion. In fall, 1995, during a psychiatric interview a young woman with psychotic disorder told me that she had secret connections with the United Nations, the Pope, and O. J. Simpson, and they were helping her. The celebration of the 50th Anniversary of the United Nations, the visit of the Pope to the U.S., and the O. J. Simpson criminal trial were the highly publicized events in the United States at that time. (Sher, 2000, p. 507)

HALLUCINATIONS Another positive symptom commonly associated with schizophrenia is **hallucinations.** Hallucinations are false sensory perceptions that are experienced without an external source. They are vivid and clear, and they seem real to the person experiencing them. Frequently auditory, they can also be visual, olfactory, or somatosensory:

> I was afraid to go outside and when I looked out of the window, it seemed that everyone outside was yelling, "Kill her, kill her.". . . Things continued to get worse. I imagined that I had a foul body odor and I sometimes took up to six showers a day. I recall going to the grocery store one day, and I imagined that the people in the store were saying "Get saved, Jesus is the answer." (O'Neal, 1984, pp. 109–110)

Auditory hallucinations are often accusatory voices. These voices may tell the person with schizophrenia that he or she is evil or inept, or they may command the person to do dangerous things. Sometimes the person hears a cacophony of sounds with voices intermingled.

The cause of hallucinations remains unclear. Neuroimaging studies suggest, however, that hallucinations are associated with activation in areas of the cortex that process external sensory stimuli. For example, auditory hallucinations accompany increased activation in brain areas that are normally activated when people engage in inner speech (Stein & Richardson, 1999). This finding has led to speculation that auditory hallucinations might be caused by a difficulty in distinguishing normal inner speech (i.e., the type we all engage in) from external sounds. People with schizophrenia need to learn to ignore the voices in their heads, but doing so is extremely difficult and sometimes impossible.

DISORGANIZED SPEECH Another key positive symptom of schizophrenia is **disorganized speech.** It is disorganized in the sense that it is incoherent, failing to follow a normal conversational structure. A person with schizophrenia may respond to questions with tangential or irrelevant information. It is very difficult to follow what those with schizophrenia are talking about because they frequently change topics, which is known as a *loosening of associations.* These shifts make it difficult or impossible for a listener to follow the speaker's train of thought:

hallucinations
False sensory perceptions that are experienced without an external source.

disorganized speech
Speaking in an incoherent fashion that involves frequently changing topics and saying strange or inappropriate things.

> They're destroying too many cattle and oil just to make soap. If we need soap when you can jump into a pool of water, and then when you go to buy your gasoline, my folks always thought they could get pop, but the best thing to get is motor oil, and money. May as well go there and trade in some pop caps and, uh, tires, and tractors to car garages, so they can pull cars away from wrecks, is what I believed in. (Andreasen, 1984, p. 115)

In more extreme cases, speech is so disorganized that it is totally incomprehensible, which is described by clinicians as *word salad.* This jumbling can also involve *clang associations:* the stringing together of words that rhyme but have no other

apparent link. Those with schizophrenia might also display strange and inappropriate emotions while talking. Such strange speaking patterns make it very difficult for people with schizophrenia to communicate (Docherty, 2005).

DISORGANIZED BEHAVIOR Another common symptom of schizophrenia is **disorganized behavior.** People with schizophrenia often act strangely, such as displaying unpredictable agitation or childish silliness. People exhibiting this symptom might wear multiple layers of clothing even on hot summer days, walk along muttering to themselves, alternate between anger and laughter, or pace and wring their hands as if extremely worried. They also have poor hygiene, failing to bathe or change clothes regularly. They have problems performing many activities, which interferes with daily living.

Sometimes those with schizophrenia may display *catatonic behavior,* where they show a decrease in responsiveness to the environment. For example, they might remain immobilized in one position for hours. Some have speculated that catatonic behavior may be an extreme fear response, akin to how animals respond to sudden dangers—the person is literally "scared stiff" (Moskowitz, 2004). Catatonic features can also include a rigid, masklike facial expression with eyes staring into the distance. In addition, people exhibiting catatonic behavior might mindlessly repeat words they hear, which is called *echolalia.*

NEGATIVE SYMPTOMS A number of behavioral deficits, called **negative symptoms,** associated with schizophrenia result in patients' becoming isolated and withdrawn. People with schizophrenia often avoid eye contact and seem apathetic. They do not express emotion even when discussing emotional subjects. Their speech is slowed, they say less than normal, and they use a monotonous tone of voice. Their speech may be characterized by long pauses before answering, failure to respond to a question, or inability to complete an utterance after initiating it. There is often a similar reduction in overt behavior: Patients' movements may be slowed and their overall amount of movement reduced, with little initiation of behavior and no interest in social participation. These symptoms, though less dramatic than delusions and hallucinations, can be equally serious. Negative symptoms are more common in men than in women (Raesaenen, Pakaslahti, Syvaelahti, Jones, & Isohanni, 2000). They are associated with a poorer prognosis.

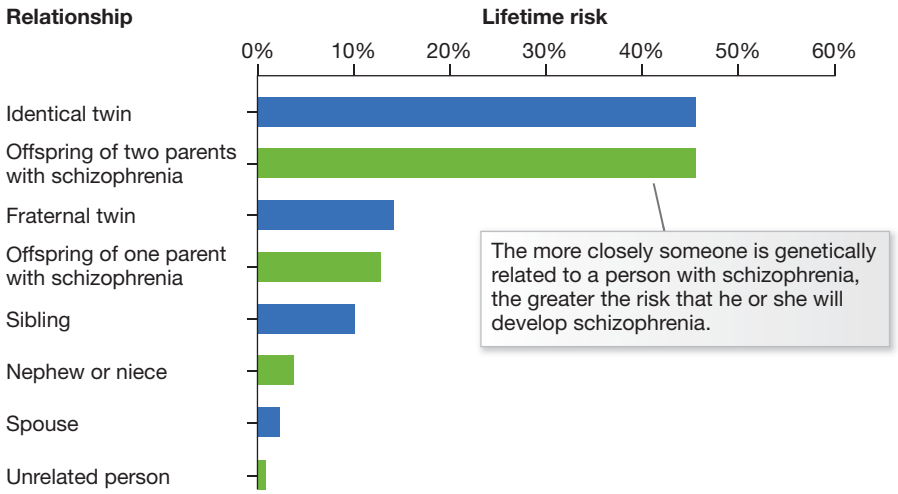
Although the positive symptoms of schizophrenia (i.e., delusions, hallucinations, and disorganized speech and behavior) can be dramatically reduced or eliminated with antipsychotic medications, the negative symptoms often persist. Because negative symptoms are more resistant to medications, researchers have speculated that positive and negative symptoms have different organic causes. Since positive symptoms respond to a class of medications (known as *antipsychotics*) that act on neurotransmitter systems, these symptoms are thought to result from neurotransmitter dysfunction. In contrast, negative symptoms may be associated with abnormal brain anatomy, since structural brain deficits are not affected by changes in neurochemistry. The apparent differences in biological causality lead some researchers to believe that schizophrenia with negative symptoms is in fact a separate disorder from schizophrenia with positive symptoms (Messias et al., 2004).

BIOLOGICAL CAUSES The etiology of schizophrenia is complex and not well understood. Early theories attributed this disorder to the patients' mothers. According to these theories, the mothers simultaneously accepted and rejected their children. This contradictory behavior caused the children to develop schizophrenia. There is no evidence

disorganized behavior
Acting in strange or unusual ways, including strange movement of limbs, bizarre speech, and inappropriate self-care, such as failing to dress properly or bathe.

negative symptoms
Symptoms of schizophrenia that are marked by deficits in functioning, such as apathy, lack of emotion, and slowed speech and movement.

FIGURE 14.26
Genetics and Schizophrenia



to support this belief. Schizophrenia runs in families, however, and it is clear that genetics plays a role in the development of the disorder (**FIGURE 14.26**). If one twin develops schizophrenia, the likelihood of the other twin's developing it is almost 50 percent if the twins are identical but only 14 percent if the twins are fraternal. If one parent has schizophrenia, the risk of a child's developing the disease is 13 percent. If, however, both parents have schizophrenia, the risk jumps to almost 50 percent (Gottesman, 1991).

People with schizophrenia have rare mutations of their DNA about three to four times more often than healthy individuals do, especially in genes related to brain development and to neurological function (Fromer et al., 2014; Walsh et al., 2008). These mutations may result in abnormal brain development, which might lead to schizophrenia. No single gene causes schizophrenia. Instead, it is likely that multiple genes or gene mutations contribute in subtle ways to the expression of the disorder (Purcell et al., 2014). More than 100 candidate genes might modestly influence the development of schizophrenia (Schizophrenia Working Group of the Psychiatric Genomics Consortium, 2014).

Schizophrenia is primarily a brain disorder (Walker, Kestler, Bollini, & Hochman, 2004). As seen in imaging that shows the structure of the brain, the ventricles are enlarged in people with schizophrenia (see Figure 14.8). In other words, actual brain tissue is reduced. Moreover, greater reductions in brain tissue are associated with more negative outcomes (Mitelman, Shihabuddin, Brickman, Hazlett, & Buchsbaum, 2005), and longitudinal studies show continued reductions over time (Ho et al., 2003; van Haren et al., 2011). This reduction of tissue occurs in many regions of the brain, especially the frontal lobes and medial temporal lobes. In addition, as seen in imaging that shows the functioning of the brain, activity is typically reduced in the frontal and temporal regions in people with schizophrenia (Barch, Sheline, Csernansky, & Snyder, 2003). Given that abnormalities occur throughout many brain regions in people with schizophrenia, some researchers have speculated that schizophrenia is more likely a problem of connection between brain regions than the result of diminished or changed functions of any particular brain region (Walker et al., 2004).

One possibility is that schizophrenia results from abnormality in neurotransmitters. Since the 1950s, scientists have believed that dopamine may play an important role. Drugs that block dopamine activity decrease symptoms, whereas drugs that increase the activity of dopamine neurons increase symptoms. There is now also evidence that a number of other neurotransmitter systems are involved. More recently, researchers have suggested that schizophrenia might involve abnormalities in the glial cells that make up the myelin sheath (Davis et al., 2003; Moises & Gottesman, 2004). Such abnormalities would impair neurotransmission throughout the brain.

If schizophrenia is a brain disorder, when do these brain abnormalities emerge? Because schizophrenia is most often diagnosed when people are in their 20s or 30s, it is hard to assess whether brain impairments occur earlier in life. There is evidence that some neurological signs of schizophrenia can be observed long before the disorder is diagnosed. Elaine Walker and colleagues (2004) have analyzed home movies taken by parents whose children later developed schizophrenia. Compared with their siblings, those who developed the disorder displayed unusual social behaviors, more-severe negative emotions, and motor disturbances. All of these differences often went unnoticed during the children's early years.

One study followed a group of children at risk for developing psychopathology because their parents suffered from a psychological disorder (Amminger et al., 1999). Adults who developed schizophrenia were much more likely to have displayed behavioral problems as children—such as fighting or not getting along with others—than those who developed mood disorders or drug abuse problems or did not develop any disorders in adulthood. Children at risk for schizophrenia display increasingly abnormal motor movements, such as strange facial expressions, as they progress through adolescence (Mittal, Neumann, Saczawa, & Walker, 2008).

In another study, Walker and colleagues followed a group of children, ages 11 to 13, with a high genetic risk of schizophrenia (Schiffman et al., 2004). These children were videotaped eating lunch in 1972. Those who later developed schizophrenia showed greater impairments in social behavior and motor functioning than those who developed other psychological disorders or those who developed no problems. Another team of researchers followed 291 high-risk youths (average age 16) over 2.5 years (Cannon et al., 2008). These psychologists determined that five factors predicted the onset of psychotic disorders: a family history of schizophrenia, greater social impairment, higher levels of suspicion/paranoia, a history of substance abuse, and higher levels of unusual thoughts. When youths had two or three of the first three factors, nearly 80 percent of them developed full-blown psychosis. Studies such as these suggest that schizophrenia develops over the life course but that obvious symptoms often emerge by late adolescence. Hints of future problems may even be evident in young children.

ENVIRONMENTAL FACTORS Since genetics does not account fully for the onset and severity of schizophrenia, other factors must also be at work. In those at risk for schizophrenia, environmental stress seems to contribute to its development (Walker et al., 2004). One study looked at adopted children whose biological mothers were diagnosed with schizophrenia (Tienari et al., 1990, 1994). If the adoptive families were psychologically healthy, none of the children became psychotic. If the adoptive families were severely disturbed, 11 percent of the children became psychotic and 41 percent had severe psychological disorders. More generally, growing up in a dysfunctional family may increase the risk of developing schizophrenia for those who are genetically at risk (Tienari et al., 2004; **FIGURE 14.27**).

Some researchers have theorized that the increased stress of urban environments can trigger the onset of the disorder, since being born or raised in an urban area approximately doubles the risk of developing schizophrenia later in life (Torrey, 1999). Others have speculated that some kind of *schizovirus* exists. If so, the close quarters of a big city increase the likelihood of the virus spreading. In support of the virus hypothesis, some researchers have reported finding antibodies in the blood of people with schizophrenia that are not found in those without the disorder (Waltrip et al., 1997). Moreover, people with schizophrenia are more likely to have been born during late winter and early spring (Mednick, Huttunen, & Machon, 1994; Torrey, Torrey, & Peterson, 1977). Consider that mothers of children born in late winter and early spring were in their second trimester of pregnancy during flu season. Retrospective studies suggest

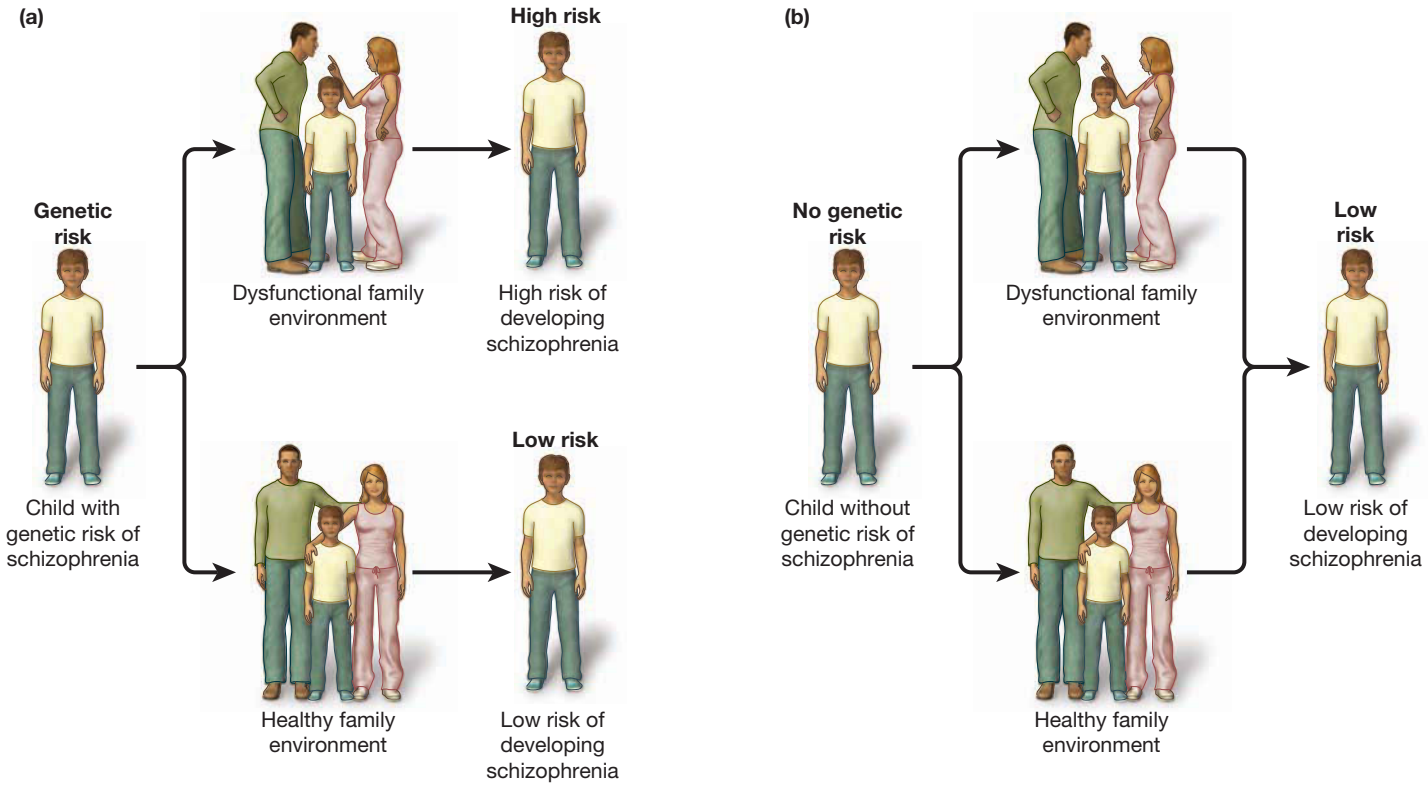


FIGURE 14.27
Effects of Biology and Environment on Schizophrenia
(a) If a child has a genetic risk for schizophrenia and is raised in a dysfunctional family environment, he or she will have a high risk of developing schizophrenia. **(b)** By contrast, if a child has no genetic risk for schizophrenia, the child will have a low risk of developing the disorder whether raised in a dysfunctional family environment or a healthy family environment.

that the mothers of people with schizophrenia are more likely than other mothers to have contracted influenza during this critical period (Limosin, Rouillon, Payan, Cohen, & Strub, 2003; Mednick et al., 1994). During the second trimester, a great deal of fetal brain development occurs. At that time, trauma or pathogens can interfere with the organization of brain regions.

Summing Up

Which Disorders Emphasize Thought Disturbances?

- Dissociative disorders involve disruptions of identity, memory, or conscious awareness.
- Dissociative amnesia involves forgetting that an event happened or losing awareness of a substantial block of time. Dissociative fugue involves a loss of identity.
- Dissociative identity disorder involves the occurrence of two or more distinct identities in the same individual, along with memory gaps for everyday events.
- Dissociative identity disorder is believed to emerge as a consequence of severe abuse—through repeated dissociation, different identities develop to cope with different traumas. However, dissociative identity disorder remains a controversial diagnosis for two reasons: The condition is often diagnosed after someone has been accused of a crime, and a sharp rise in reported cases has occurred in recent years.

- Schizophrenia is characterized by a split between thought and emotion.
- The positive symptoms associated with schizophrenia reflect excesses and include delusions, hallucinations, disorganized speech, and disorganized behavior. The negative symptoms of schizophrenia reflect deficits and include apathy, lack of emotion, and slowed speech.
- Research suggests that schizophrenia is largely a biological disorder. Twin, adoption, and family studies have highlighted the critical role of genetics in the development of schizophrenia, and recent advances in genetic analysis have indicated that multiple genes may contribute to this disorder. Research has also shown that schizophrenia is associated with abnormalities in brain anatomy and neurotransmitters.
- Most researchers agree that environmental factors play a role in schizophrenia. In particular, environmental stressors such as dysfunctional family dynamics, urban stress, and exposure to pathogens may contribute to the genesis of schizophrenia.

Measuring Up

1. **Which of the following statements about fugue are true?**
   - **a.** It is a form of dissociative amnesia.
   - **b.** It involves a loss of identity.
   - **c.** It is also referred to as dissociative identity disorder.
   - **d.** It may occur as a result of alcohol or drug abuse.
   - **e.** It occurs concurrently with posttraumatic stress disorder.

2. **Indicate whether each of the following phenomena is a negative or a positive symptom of schizophrenia.**
   - **a.** social withdrawal
   - **b.** flat affect
   - **c.** delusions
   - **d.** hallucinations
   - **e.** slowed motor movement
   - **f.** loosening of associations

ANSWERS: **(1)** Choices a and b are true.
(2) a. negative; **b.** negative; **c.** positive; **d.** positive; **e.** negative; **f.** positive.

14.4 What Are Personality Disorders?

Learning Objectives

- Distinguish between the clusters of personality disorders.
- Understand controversies related to defining personality disorders.
- Identify the symptoms and possible causes of borderline personality disorder and antisocial personality disorder.

As discussed in Chapter 13, personality reflects each person's unique response to his or her environment. Although individuals change somewhat over time, the ways they interact with the world and cope with events are fairly fixed by the end of adolescence. For example, some people interact with the world in maladaptive and inflexible ways. When this style of interaction is long-lasting and causes problems in work and in social situations, it becomes a *personality disorder.*

Most people are likely to exhibit symptoms of personality disorders. At times anyone might be indecisive, self-absorbed, or emotionally unstable. In fact, true personality disorders are relatively common, affecting just under 1 in 10 people (Lenzenweger, Lane, Loranger, & Kessler, 2007). People with personality disorders consistently behave in maladaptive ways, show a more extreme level of maladaptive behavior, and experience more personal distress and more problems as a result of their behavior.

Personality Disorders Are Maladaptive Ways of Relating to the World

DSM-5 divides personality disorders into three clusters, as listed in **TABLE 14.6.** Disorders in the Cluster A group are characterized by odd or eccentric behavior. Paranoid, schizoid, and schizotypal personality disorders make up this group. People with these disorders are often reclusive and suspicious, and they have difficulty forming personal relationships because of their strange behavior and aloofness. As you might expect, people with personality disorders in this category show some similarities to people with schizophrenia, but their symptoms are far less severe.

Disorders in the Cluster B group are characterized by dramatic, emotional, or erratic behaviors. *Histrionic, narcissistic, borderline,* and *antisocial* personality disorders make up this group. Borderline and antisocial personality disorders have been the focus of much research, and they are considered in more detail in the following sections.

Disorders in the Cluster C group are characterized by anxious or fearful behavior. *Avoidant, dependent,* and *obsessive-compulsive* personality disorders make up this group. These disorders share some characteristics of anxiety disorders such as social anxiety disorder or generalized anxiety disorder. However, the personality disorders in this group are different from anxiety disorders in that they refer more to general ways of interacting with others and of responding to events. For instance, a person with an obsessive-compulsive personality disorder may be excessively neat and orderly. The person might always eat the same food at precisely the same time or perhaps read a newspaper in a particular order each time. This pattern becomes problematic only when it interferes with the person's life, as in making it impossible to travel or to maintain relationships.

Table 14.6 Personality Disorders and Associated Characteristics

CLUSTER A: ODD OR ECCENTRIC BEHAVIOR	
Paranoid	Tense, guarded, suspicious; holds grudges
Schizoid	Socially isolated, with restricted emotional expression
Schizotypal	Peculiarities of thought, appearance, and behavior that are disconcerting to others; emotionally detached and isolated
CLUSTER B: DRAMATIC, EMOTIONAL, OR ERRATIC BEHAVIOR	
Histrionic	Seductive behavior; needs immediate gratification and constant reassurance; rapidly changing moods; shallow emotions
Narcissistic	Self-absorbed; expects special treatment and adulation; envious of attention to others
Borderline	Cannot stand to be alone; intense, unstable moods and personal relationships; chronic anger; drug and alcohol abuse
Antisocial	Manipulative, exploitative; dishonest; disloyal; lacking in guilt; habitually breaks social rules; childhood history of such behavior; often in trouble with the law
CLUSTER C: ANXIOUS OR FEARFUL BEHAVIOR	
Avoidant	Easily hurt and embarrassed; few close friends; sticks to routines to avoid new and possibly stressful experiences
Dependent	Wants others to make decisions; needs constant advice and reassurance; fears being abandoned
Obsessive-compulsive	Perfectionistic; overconscientious; indecisive; preoccupied with details; stiff; unable to express affection

SOURCE: Adapted from American Psychiatric Association (2013).

In modern clinical practice, personality disorders are controversial for several reasons. First, personality disorders appear to be extreme versions of normal personality traits, demonstrating the continuum between what is considered normal versus abnormal (Clark & Ro, 2014; Widiger, 2011). For example, indecisiveness is characteristic of obsessive-compulsive personality disorder, but the *DSM* does not define the degree to which someone must be indecisive to be diagnosed as obsessive-compulsive. Second, there is overlap among the traits listed as characteristic of different personality disorders, so the majority of people diagnosed with one personality disorder also meet the criteria for another (Clark, 2007). This overlap suggests that the categories may not be mutually exclusive and that fewer types of personality disorders may exist than are listed in the *DSM*. Indeed, there is evidence that personality disorders can be conceptualized and organized as extreme versions of the Big Five personality traits, described in Chapter 13.

Acknowledging this weakness, but wanting to preserve continuity in current clinical practice, *DSM-5* describes an alternative model for personality disorders in Section III that aims to address many of the shortcomings of the traditional *DSM* approach. In this alternative model, personality disorders are viewed as impairments in personality functioning and the existence of pathological personality traits. That is, the person with the disorder shows extreme personality traits that interfere with successful functioning in society.

Personality disorders may not seem to affect daily life as much as do some of the other disorders discussed in this chapter, such as schizophrenia or bipolar disorders. Although people with personality disorders do not hallucinate or experience radical mood swings, their ways of interacting with the world can have serious consequences. The following in-depth considerations of borderline personality disorder and antisocial personality disorder illustrate the devastating effect of these disorders on the individual, family and friends, and society.

Borderline Personality Disorder Is Associated with Poor Self-Control

Borderline personality disorder is characterized by disturbances in identity, in affect, and in impulse control. This disorder was officially recognized as a diagnosis in 1980. The term *borderline* was initially used because these patients were considered on the border between normal and psychotic (Knight, 1953). As presented in **TABLE 14.7**, the wide variety of clinical features of this disorder reflects its complexity. Approximately 1–2 percent of adults meet the criteria for borderline personality disorder, and the disorder is more than twice as common in women as in men (Lenzenweger et al., 2007; Swartz, Blazer, George, & Winfield, 1990; Torgerson, Kringlen, & Cramer, 2001).

People with borderline personality disorder seem to lack a strong sense of self. They cannot tolerate being alone and have an intense fear of abandonment. Because they desperately need an exclusive and dependent relationship with another person, they can be very manipulative in their attempts to control relationships, as shown in the following example:

> A borderline patient periodically rented a motel room and, with a stockpile of pills nearby, would call her therapist's home with an urgent message. He would respond by engaging in long conversations in which he "talked her down." Even as he told her that she could not count on his always being available, he became more wary of going out evenings without detailed instructions about how he could be reached. One night the patient couldn't reach him due to a bad phone connection. She fatally overdosed from what was probably a miscalculated manipulation. (Gunderson, 1984, p. 93)

borderline personality disorder
A personality disorder characterized by disturbances in identity, in affect, and in impulse control.

Table 14.7 *DSM-5* Diagnostic Criteria of Borderline Personality Disorder

A pervasive pattern of instability of interpersonal relations, self-image, and affects, along with marked impulsivity, beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:

1. Frantic efforts to avoid real or imagined abandonment
2. A pattern of unstable and intense interpersonal relationships
3. Identity disturbance: markedly and persistently unstable self-image or sense of self
4. Impulsiveness in at least two areas that are potentially self-damaging (e.g., spending, sex, substance abuse, reckless driving, binge eating)
5. Recurrent suicidal behavior, gestures, or threats, or self-mutilating behavior
6. Affective instability due to a marked reactivity of mood, with periods of extreme depression, irritability, or anxiety usually lasting a few hours and only rarely more than a few days
7. Chronic feelings of emptiness
8. Inappropriate intense anger or difficulty controlling anger (e.g., displays of temper, constant anger, recurrent physical fights)
9. Transient, stress-related paranoid thoughts or severe dissociative symptoms

SOURCE: Based on American Psychiatric Association (2013).

In addition to problems with identity, borderline individuals have affective disturbances. Emotional instability is paramount. Episodes of depression, anxiety, anger, irritability, or some combination of these states can last from a few hours to a few days. Shifts from one mood to another usually occur with no obvious precipitating cause. Consider the therapist Molly Layton's description of her patient Vicki:

> She had chronic and debilitating feelings of emptiness and paralyzing numbness, during which she could only crawl under the covers of her bed and hide. On these days, she was sometimes driven to mutilate her thighs with scissors. Although highly accomplished as a medical student and researcher, who had garnered many grants and fellowships, she would sometimes panic and shut down in the middle of a project, creating unbearable pressures on herself to finish the work. While she longed for intimacy and friendship, she was disablingly shy around men. (Layton, 1995, p. 36)

The third hallmark of borderline personality disorder is impulsivity, which may explain the much higher rate of the disorder in prison populations (Conn et al., 2010). This characteristic can include sexual promiscuity, physical fighting, and binge eating and purging. As was the case with Vicki, however, self-mutilation is also commonly associated with this disorder. Cutting and burning of the skin are typical, as well as a high risk for suicide. Some evidence indicates that those with borderline personality disorder have diminished capacity in the frontal lobes, which normally help control behavior (Silbersweig et al., 2007).

In addition, people with borderline personality disorder often show sleep abnormalities characteristic of depression. One possible reason that borderline personality disorder and affective disorders such as depression may be linked is that both appear to involve the neurotransmitter serotonin. Evidence has linked low serotonin levels to the impulsive behavior seen in borderline personality disorder (Skodol et al., 2002).

Borderline personality disorder may also have an environmental component, as a strong relationship exists between the disorder and trauma or abuse (Lieb, Zanarini, Schmahl, Linehan, & Bohus, 2004). Some studies have reported that 70–80 percent

of those with borderline personality disorder have experienced physical or sexual abuse or observed some kind of extreme violence. Other theories implicate early interactions with caretakers. Clients with borderline personality disorder may have had caretakers who did not accept them or who were unreliable or unavailable. The constant rejection and criticism made it difficult for the individuals to learn to regulate emotions and understand emotional reactions to events (Linehan, 1987). An alternative theory is that caregivers encouraged dependence, preventing the individuals in their charge from adequately developing a sense of self. As a result, the individuals became overly sensitive to others' reactions: If rejected by others, they reject themselves.

antisocial personality disorder (APD)
A personality disorder in which people engage in socially undesirable behavior, are hedonistic and impulsive, and lack empathy.

Antisocial Personality Disorder Is Associated with a Lack of Empathy

In the 1800s, the term *psychopath* was coined to describe people who seem willing to take advantage of and to hurt others without any evidence of concern or of remorse (Koch, 1891). In his classic book *The Mask of Sanity* (1941), the psychiatrist Hervey Cleckley described characteristics of psychopaths from his clinical experience. For example, such individuals could be superficially charming and rational; be insincere, unsocial, and incapable of love; lack insight; and be shameless. In 1980, the *DSM* dropped the label *psychopath,* which was seen as pejorative, and adopted the term **antisocial personality disorder (APD).** This change has led to confusion because *psychopath* is still widely used to refer to a related but not identical type of personality disorder as defined by *DSM-5.*

APD is the catchall diagnosis for individuals who behave in socially undesirable ways, such as breaking the law, being deceitful and irresponsible, and feeling a lack of remorse for their behavior. People with this disorder tend to be hedonistic, seeking immediate gratification of wants and needs without any thought of others.

True psychopaths display more extreme behaviors than those with APD. They also tend to have other personality characteristics not found in those with APD, such as glibness, a grandiose sense of self-worth, shallow affect, and cunning/manipulativeness. Psychopaths would be classified as APD under *DSM-5*, but they are an extreme version of the disorder. Psychopaths are pathological in their degree of callousness and are particularly dangerous. For instance, one study of murderers found that those with psychopathic tendencies nearly always kill intentionally. They want to gain something, such as money, sex, or drugs. People without psychopathic tendencies are much more likely to commit murder impulsively, when provoked or angry (Woodworth & Porter, 2002). Psychopaths fit the stereotype of cold-blooded killers. Infamous examples include Dennis Rader—the BTK strangler, who bound, tortured, and killed 10 victims—and Gary Gilmore (**FIGURE 14.28**). In 1977, Gilmore was executed for the murder he describes here:

> I went in and told the guy to give me the money. I told him to lay on the floor and then I shot him. I then walked out and was carrying the cash drawer with me. I took the money and threw the cash drawer in a bush and I tried to push the gun in the bush, too. But as I was pushing it in the bush, it went off and that's how come I was shot in the arm. It seems like things have always gone bad for me. It seems like I've always done dumb things that just caused trouble for me. I remember when I was a boy I would feel like I had to do things like sit on a railroad track until just before the train came and then I would dash off. Or I would put my finger over the end of a BB gun and pull the trigger to see if a BB was really in it. Sometimes I would stick my finger in water and then put my finger in a light socket to see if it would really shock me. (Spitzer et al., 1983, pp. 66–68)

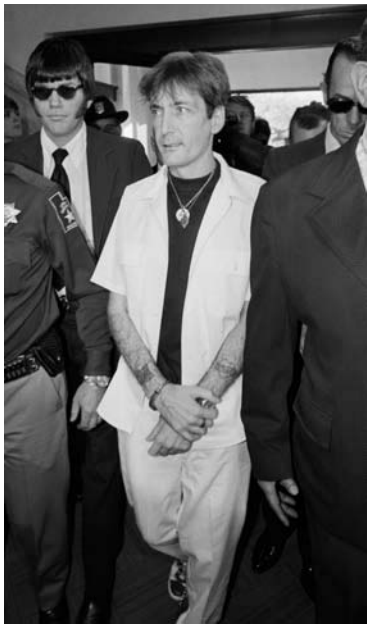


FIGURE 14.28
Gary Gilmore After His Arrest
Under *DSM-5,* Gilmore would have been given a diagnosis of antisocial personality disorder. He also showed psychopathic traits.

ASSESSMENT AND CONSEQUENCES It is estimated that 1–4 percent of the population have antisocial personality disorder (Compton, Conway, Stinson, Colliver, & Grant, 2005). People with this condition who also show more-extreme psychopathic traits are less common (Lenzenwegger et al., 2007). Both APD and psychopathy are much more common in men than in women (Robins & Regier, 1991).

Much of what psychologists know about the traits associated with antisocial personality disorder was discovered by the psychologist Robert Hare (1993). Hare also developed many of the assessment tools to identify people with psychopathic tendencies. He and colleagues have shown that the disorder (including its extreme version) is most apparent in late adolescence and early adulthood, and it generally improves around age 40 (Hare, McPherson, & Forth, 1988), at least for those without psychopathic traits. According to the *DSM-5* diagnostic criteria, APD cannot be diagnosed before age 18, but the person must have displayed antisocial conduct before age 15. This stipulation ensures that only those with a lifetime history of antisocial behaviors can be diagnosed with antisocial personality disorder. They also must meet other criteria, such as repeatedly performing illegal acts, repeatedly lying or using aliases, and showing reckless disregard for their own safety or the safety of others. Because many such individuals are quite bright and highly verbal, they can talk their way out of bad situations. In any event, punishment seems to have very little effect on them (Lykken, 1957, 1995), and they often repeat the problem behaviors a short time later.

Perhaps as many as 50 percent of prison inmates meet the criteria for antisocial personality disorder (Hare, 1993; Widiger & Corbitt, 1995). Because of the prevalence of the disorder in the prison population, much of the research on APD has been conducted in this setting. One researcher, however, came up with an ingenious way of finding research participants outside of prison. She put the following advertisement in a counterculture newspaper: "Wanted: charming, aggressive, carefree people who are impulsively irresponsible but are good at handling people and at looking after number one. Send name, address, phone, and short biography proving how interesting you are to . . ." (Widom, 1978, p. 72). Seventy-three people responded, and about one-third of them met the criteria for antisocial personality disorder. These individuals were then interviewed and given a battery of psychological tests. Their characteristics proved very similar to those of prisoners diagnosed with APD, except that the group responding to the ad had avoided imprisonment. Indeed, these findings fit Cleckley's view of people with psychopathic traits as often being charming and intelligent. Lacking remorse, willing to lie or cheat, and lacking empathy, some psychopaths manage to be successful professionals and to elude detection for crimes they may commit. Their psychopathic traits may even provide advantages in some occupations, such as business and politics (**FIGURE 14.29**).

FIGURE 14.29
American Psychopath
In the 2000 movie *American Psycho,* Christian Bale plays Patrick Bateman, who appears to be a suave man-about-town, a successful professional, and a serial killer. The movie, like the Bret Easton Ellis novel it is based on, raises questions about the connections between a slick presentation of self, a knack for making and spending money, and psychopathy.

THE ETIOLOGY OF ANTISOCIAL PERSONALITY DISORDER Various physiological abnormalities may play a role in antisocial personality disorder. In 1957, David Lykken reported that true psychopaths do not become anxious when they are subjected to aversive stimuli. He and other investigators have continued this line of work, showing that such individuals do not seem to feel fear or anxiety (Lykken, 1995).

Electroencephalogram (EEG) examinations have demonstrated that criminals who meet the criteria for antisocial personality disorder have slower alpha-wave activity (Raine, 1989). This finding indicates a lower overall level of arousal. It is possible that low arousal prompts people with APD to engage in sensation-seeking behavior. In addition, because of low arousal, these individuals do not learn from punishment because they do not experience punishment as particularly aversive. This pattern of reduced psychophysiological response in the face of punishment also occurs in adolescents at risk for developing psychopathy (Fung et al., 2005).

There is also evidence of amygdala abnormalities in those with antisocial tendencies, such as having a smaller amygdala and being less responsive to negative stimuli (Blair, 2003; Marsh et al., 2011). Deficits in frontal lobe functioning have also been found and may account for the lack of forethought and the inability to consider the implications of actions, both characteristic of antisocial personality disorder (Seguin, 2004).

Genetic and environmental factors appear to play roles in antisocial personality disorder. Genetics may be more important for the extreme psychopathic version, however. Identical twins have a higher concordance rate for criminal behavior than fraternal twins do (Lykken, 1995), although the research just cited did not rule out the role of a shared environment. A study of 14,000 adoptions found that adopted male children have a higher rate of crime if their biological fathers have criminal records (Mednick, Gabrielli, & Hutchings, 1987). In addition, the greater the criminal record of the biological father, the more likely it is that the adopted son will engage in criminal behavior.

Although genes may be at the root of antisocial behaviors and psychopathy, factors such as low socioeconomic status, dysfunctional families, and childhood abuse may also be important. Indeed, malnutrition at age 3 has been found to predict antisocial behavior at age 17 (Liu, Raine, Venables, & Mednick, 2004). An enrichment program for children that included a structured nutrition component was associated with less criminal and antisocial behavior 20 years later (Raine, Mellingen, Liu, Venables, & Mednick, 2003). This finding raises the possibility that malnutrition or other, similar environmental factors might contribute to the development of antisocial personality disorder.

Summing Up

What Are Personality Disorders?

- Ten personality disorders, clustered in three groups, are identified in the *DSM:* paranoid, schizoid, schizotypal (odd or eccentric cluster), histrionic, narcissistic, borderline, antisocial (dramatic, emotional, or erratic cluster), and avoidant, dependent, obsessive-compulsive (anxious or fearful cluster).
- Borderline personality disorder is characterized by disturbances in identity, in affect, and in impulse control.
- Research has shown that people with borderline personality disorder often have diminished frontal lobe capacity, low levels of serotonin, and a history of abuse or rejection by caregivers.
- Those with antisocial personality disorder engage in socially undesirable behavior, are hedonistic and impulsive, and lack empathy. Psychopaths have an extreme version of APD.
- Antisocial personality disorder is associated with lower levels of arousal, a smaller amygdala, and deficits in frontal lobe functioning.
- Twin and adoption studies suggest that genes play a role in antisocial personality disorder. However, environmental factors (such as low socioeconomic status, dysfunctional families, abuse, and malnutrition) also contribute to the development of this disorder.

Measuring Up

1. **Which of the following characteristics are *DSM-5* diagnostic criteria of borderline personality disorder?**
   - **a.** frantic efforts to avoid real or imagined abandonment
   - **b.** a pattern of unstable and intense relationships
   - **c.** a lack of guilt or remorse

d. a lack of empathy
e. an unstable self-image or sense of self
f. self-mutilating behavior
g. chronic feelings of emptiness

2. **Why would punishment be an ineffective means of treating those with antisocial personality disorder?**

a. The disorder is genetically based, and you cannot change genes.
b. Most people with the disorder have already been effectively punished by imprisonment.
c. People with the disorder do not find punishment aversive.
d. The best treatment is to provide a nutritionally balanced diet.

ANSWERS: (1) Choices a, b, e, f, and g apply. **(2) c.** People with the disorder do not find punishment aversive.

Learning Objectives

- Understand the childhood context of neurodevelopmental disorders.
- Identify the symptoms and possible causes of autism spectrum disorder.
- Identify the symptoms and possible causes of attention-deficit/hyperactivity disorder.

14.5 Which Psychological Disorders Are Prominent in Childhood?

In his classic text on the classification of psychological disorders, published in 1883, Emil Kraepelin did not mention childhood disorders. The first edition of the *DSM,* published 70 years later, essentially considered children small versions of adults. Consequently, the manual did not consider childhood disorders separately from adulthood disorders. The current version of the manual includes a wide range of childhood disorders (**TABLE 14.8**). Some of these conditions—such as specific learning disorders—affect only limited and particular areas of a child's world. Other

Table 14.8 *DSM-5* Neurodevelopmental Disorders

DISORDER	DESCRIPTION
Intellectual disabilities	Deficits in general mental abilities (e.g., reasoning, problem solving, planning, academic learning, learning from experience) and in adaptive functioning (e.g., independent living, working, social participation); begins during childhood or adolescence
Communication disorders	Deficits in language, speech, or communications, such as difficulty learning a language, stuttering, or failure to follow social rules for communication; begins in childhood
Autism spectrum disorder	Persistent impairment in social interaction; characterized by unresponsiveness; impaired language, social, and cognitive development; and restricted and repetitive behavior; begins during early childhood
Attention-deficit/hyperactivity disorder	A pattern of hyperactive, inattentive, and impulsive behavior that causes social or academic impairment; begins before age 12
Specific learning disorders	Difficulty learning and using academic skills; much lower performance in reading, mathematics, or written expression with regard to what is expected for age, amount of education, and intelligence; begins during school-age years
Motor disorders	Recurrent motor and vocal tics that cause marked distress or deficits in developing or being able to show coordinated motor skills; begins in childhood

SOURCE: Based on American Psychiatric Association (2013).

conditions—such as autism spectrum disorder, attention-deficit/hyperactivity disorder, and others listed in Table 14.8—affect every aspect of a child's life. Some of these disorders, such as autism spectrum disorder, usually do not get better over time. Others, such as attention-deficit/hyperactivity disorder, usually do improve over time.

All of the disorders in this category should be considered within the context of normal childhood development. Some symptoms of childhood psychological disorders are extreme manifestations of normal behavior or are actually normal behaviors for children at an earlier developmental stage. For example, bedwetting is normal for 2-year-olds but not for 10-year-olds. Other behaviors, however, deviate significantly from normal development. Two disorders of childhood, autism spectrum disorder and attention-deficit/hyperactivity, are explored here as illustrations.

Autism Spectrum Disorder Involves Social Deficits and Restricted Interests

Prior to *DSM-5,* a number of similar disorders were considered variants of *autistic disorder,* commonly known as *autism,* which is characterized by deficits in social interaction, by impaired communication, and by restricted interests (Volkmar, Chawarska, & Klin, 2005). The disorder was first described in 1943, by the psychiatrist and physician Leo Kanner. Struck by the profound isolation of some children, Kanner coined the term *early infantile autism.* Researchers and clinicians recognized that autism varied considerably in severity, from mild social impairments to severe social and intellectual impairments. For example, those with high-functioning autism were considered to have *Asperger's syndrome,* named after the pediatrician who first described it. A child with Asperger's has normal intelligence but deficits in social interaction. These deficits reflect an underdeveloped theory of mind. As discussed in Chapter 9, theory of mind is both the understanding that other people have mental states and the ability to predict their behavior accordingly.

Based on the *DSM-IV* diagnosis of autistic disorder, approximately 3 to 6 children out of 1,000 showed signs of autism, and males with the disorder outnumbered females 3 to 1 (Muhle, Trentacoste, & Rapin, 2004). From 1991 to 1997, a dramatic escalation—of 556 percent—occurred in the number of children diagnosed with autism (Stokstad, 2001). This increase was likely due to a greater awareness of symptoms by parents and physicians and a willingness to apply the diagnosis to a wider spectrum of behaviors (Rutter, 2005). For example, a study of all children born between 1983 and 1999 in Western Australia found that the apparent growth in the diagnosis of autistic disorder was due to changes in how it was diagnosed as well as expanded funding for psychological services for children showing signs of autism (Nassar et al., 2009). In other words, the notion that autism was epidemic was somewhat misleading because what changed was how it was defined, not how many new cases developed (Gernsbacher, Dawson, & Goldsmith, 2005).

Autism spectrum disorder is a new *DSM-5* disorder that groups together all the variants in symptoms of autism, including Asperger's syndrome. This diagnosis classification is an excellent example of the dimensional approach to psychopathology, in that there is clear recognition that the disorder varies along a single continuum from mild to severe impairment. In *DSM-5,* the two essential features of autism spectrum disorder are impairments in social interactions along with restrictive or repetitive behaviors, interests, or activities. These symptoms are present in early childhood and limit or impair everyday functioning. In the following sections, we use the terms *autism spectrum disorder* and *autism* interchangeably because most of the research to date has not used the *DSM-5* criteria for diagnosis. Most of our discussion focuses on the classic severe end of the autism spectrum, which definitely meets the *DSM-5* criteria.

autism spectrum disorder
A developmental disorder characterized by deficits in social interaction, by impaired communication, and by restricted interests.

(a)

(b)

FIGURE 14.30
Scenes from Videotapes of Children's Birthday Parties
(a) This child focused more on objects than on people. The child was later diagnosed with autism. **(b)** This child focused appropriately on objects and on people. The child developed normally.

CORE SYMPTOMS OF AUTISM SPECTRUM DISORDER Children on the more extreme end of the autism spectrum are seemingly unaware of others. As babies, they do not smile at their caregivers, do not respond to vocalizations, and may actively reject physical contact with others. Children with autism do not establish eye contact and do not use their gazes to gain or direct the attention of those around them. Although they show attention to the eyes before 2 months of age, they stop making eye contact by 6 months of age (Jones & Klin, 2013). One group of researchers had participants view video footage of the first birthdays of children with autistic disorder to see if characteristics of autism could be detected before the children were diagnosed (Osterling & Dawson, 1994). By considering only the number of times a child looked at another person's face, the participants correctly classified the children as having or not having autism 77 percent of the time (**FIGURE 14.30**).

Deficits in communication are the second major cluster of behaviors characteristic of autism spectrum disorders. Such deficits are evident by 14 months of age among children who are subsequently diagnosed with autism (Landa, Holman, & Garrett-Mayer, 2007). Children with autism show severe impairments in verbal and nonverbal communication. Even if they vocalize, it is often not with any intent to communicate. Children with autism who develop language usually exhibit odd speech patterns, such as echolalia (the mindless repeating of words or phrases that someone else has spoken that is also observed in those with schizophrenia). The repeater may imitate the first speaker's intonation or may use a high-pitched monotone. Those who develop functional language also often interpret words literally, use language inappropriately, and lack verbal spontaneity.

A third category of deficits includes restricted activities and interests. Children with autism spectrum disorder appear oblivious to people around them, but they are acutely aware of their surroundings. Although most children automatically pay attention to the social aspects of a situation, those with autism may focus on seemingly inconsequential details (Klin, Jones, Schultz, & Volkmar, 2003; **FIGURE 14.31**).

Any changes in daily routine or in the placement of furniture or of toys are very upsetting for children with autism. Once they are upset, the children can become extremely agitated or throw tantrums. In addition, the play of children with autism tends to be repetitive and obsessive, with a focus on objects' sensory aspects. They may smell and taste objects, or they may spin and flick them for visual stimulation. Similarly, their own behavior tends to be repetitive, with strange hand movements, body rocking, and hand flapping. Self-injury is common, and some children must be forcibly restrained to keep them from hurting themselves.

BIOLOGICAL BASIS OF AUTISM SPECTRUM DISORDER Kanner, one of the first scientists to study autism, believed the disorder was innate in some children but exacerbated by cold and unresponsive mothers, whom he called "ice box mothers" or "refrigerator mothers." He described the parents of children with autism as insensitive, meticulous, introverted, and highly intellectual. This view is given little credence today, as it is now well established that autism spectrum disorder is the result of biological factors. For example, there is evidence for a genetic component to autism. A number of studies have found concordance rates to be as high as 70–90 percent for identical twins (Holmboe et al., 2013; Hyman, 2008; Ronald & Hoekstra, 2011; Steffenburg et al., 1989).

In addition to autism being heritable, it also appears that gene mutations may play a role (Ronemus, Iossifov, Levy, & Wigler, 2014). An international study that compared 996 children with autism to 1,287 control children found a number of rare gene abnormalities (Pinto et al., 2010). These rare mutations involve cells having an abnormal number of copies of DNA segments. An independent study of over 1,000

individuals with autism spectrum disorders who had an unaffected sibling found that these mutations were much more common in the children with autism (Levy et al., 2011). The mutations may affect the way neural networks are formed during childhood development (Gilman et al., 2011). There is growing evidence that autism and schizophrenia share the same gene mutations (Fromer et al., 2014; McCarthy et al., 2014). There are also some similarities in the symptoms for the two disorders, including social impairment and avoiding eye contact. Recall the RDoC initiative, discussed earlier in the chapter, that integrates findings across multiple disorders rather than classifying by *DSM* diagnostic categories. The RDoC approach suggests that schizophrenia and ASD may be related disorders or involve similar deficits in core psychological domains.

FIGURE 14.31
Toddler Viewer with Autism
As shown in these combined video images from a 1994 study of autism, a 2-year-old with autism will focus on the unimportant details in the scene rather than on the social interaction.

Research into the causes of autism also points to prenatal and/or early childhood events that may result in brain dysfunction. The brains of children with autism grow unusually large during the first two years of life, and then growth slows until age 5 (Courchesne et al., 2007; Courchesne, Redcay, & Kennedy, 2004). The brains of children with autism also do not develop normally during adolescence (Amaral, Schumann, & Nordahl, 2008). Researchers are investigating genetic factors, such as mutations, and nongenetic factors that might explain this overgrowth/undergrowth pattern.

Some recent work suggests that exposure to antibodies in the womb may affect brain development. Investigators found abnormal antibodies in the blood of the mothers of 11 percent of children with autism but not in a large sample of mothers with healthy children or mothers of children with other developmental disorders (Braunschweig et al., 2008). Following up on this study, researchers injected four pregnant rhesus monkeys with the antibodies from the mothers of children with autism. All the offspring of these monkeys demonstrated unusual behaviors characteristic of autism, such as repetitive movements and hyperactive limb movements (Martin et al., 2008). None of the offspring of monkeys injected with normal antibodies from mothers of healthy children showed this unusual behavior.

In addition, there is evidence that the brains of people with autism have faulty wiring in a large number of areas (Minshew & Williams, 2007). Some of those brain areas are associated with social thinking, and others might support attention to social aspects of the environment (Minshew & Keller, 2010).

One line of research examined the possibility that those with autism have impairments in the mirror neuron system. (Recall from Chapter 6 that mirror neurons are involved in observational learning and are activated when someone watches other people performing actions.) This connection between mirror neurons and autism was suggested by an imaging study that found weaker activation in the mirror neuron system for those with autism than for those without (Dapretto et al., 2006). Other researchers, however, have not found impairments in mirror neuron activity for gestures and movements (Dinstein et al., 2010; Southgate & Hamilton, 2008). What might these apparently contradictory findings mean?

It is possible that impairments in the mirror neuron system prevent the person with autism from understanding the *why* of actions, not the *what* of actions (Rizzolatti & Fabbri-Destro, 2010). For example, suppose that the person with autism knows that another person is lifting a pair of scissors. The person with autism may have little insight into what the person intends to do with the scissors.

What to Believe? Using Psychological Reasoning

Seeing Relationships That Do Not Exist: Do Vaccinations Cause Autism Spectrum Disorder?

What if you heard about a study in which researchers found that moving to Florida or Arizona is a leading cause of death? Or that wearing dentures is another leading cause of death, along with retiring, wearing bifocals, or moving to a nursing home? As a critical thinker, you probably noticed that these things are all associated with aging. It is getting older, rather than moving to Florida or buying bifocals, that is associated with dying. As you have been reminded throughout this book, correlation does not equal causation. We need to be especially vigilant for lurking third variables that might explain apparent correlations between unrelated variables.

Recognizing the third variable problem is especially important when trying to understand claims about causes of psychological disorders. In 1998, the British physician Andrew Wakefield published a study in the prestigious journal *Lancet* claiming to find a connection, in 12 children, between receiving vaccinations to prevent measles, mumps, and rubella (MMR) and developing autism (Wakefield et al., 1998). This finding was widely reported in the media even though most scientists were skeptical and urged people to be patient until the result could be replicated with larger samples. But many people panicked. In 2007, the celebrity Jenny McCarthy publicly blamed the MMR vaccine for her son's autism. She became a prominent spokesperson for the anti-vaccine movement, appearing on television shows such as *Oprah* to warn people about "the autism shot" (**FIGURE 14.32**). Deirdre Imus, the wife of the outspoken radio host Don Imus, joined the publicity war against vaccinations, claiming that the chemical thimerosal in the solutions used to administer vaccines is responsible for autism. Thimerosal is a preservative that contains small amounts of mercury and was widely used before 2000. Since then, it has been removed in all childhood vaccines except for one type of flu shot.

Unfortunately, the Wakefield study was fraudulent. Wakefield altered medical records and lied about several aspects of his study, including a financial conflict of interest (Godlee, Smith, & Marcovitch, 2011). His coauthors had earlier retracted the paper when they had developed doubts about the data and conclusions (Murch et al., 2004). Wakefield has subsequently been banished by the British medical community, and his license to practice medicine has been taken away.

The original *Lancet* report prompted several large international studies to examine the possibility of a link between autism spectrum disorders and the MMR vaccine. A thorough review of these studies by the Institute of Medicine found no evidence of any link between MMR vaccinations and autism (Immunization Safety Review Committee, 2004). Recent studies have continued to find no evidence of any link between childhood vaccinations and ASD (e.g., DeStefano, Price, & Weintraub, 2013). The results of dozens upon dozens of carefully designed studies have provided a firm conclusion: Vaccines do not cause ASD.

FIGURE 14.32
Anti-Vaccination Statements
Jenny McCarthy speaks to the audience at a Green Our Vaccines press conference outside the U.S. Capitol in 2008.

But the fear of ASD led many parents around the globe to forgo vaccinating their children. As one researcher noted, "Unfortunately, the media has given celebrities who comment on an autism-MMR link far more attention than they deserve, and the public, unfamiliar with the background science, has confused celebrity status with authority" (Poland, 2011, p. 870). Even today, with overwhelming scientific evidence that vaccines do not cause ASD, many parents refuse to vaccinate their children because of worries that it might do so (Opel et al., 2014).

As a consequence of the decline in childhood immunizations, there has been an increase in outbreaks of diseases that had become quite rare because of successful vaccine programs. In 2011, France had 14,000 cases of measles, 6 of them fatal. In 2012, the Centers for Disease Control reported the largest number of cases of whooping cough in 60 years. In the first four months of 2013, rubella cases in Japan jumped from a few a year to more than 5,000. The reemergence of these diseases is occurring in many European nations (Eisenstein, 2014). Meanwhile, researchers at the CDC estimate that for children born between 1994 and 2013, vaccinations prevented an estimated 322 million illnesses, 21 million hospitalizations, and 732,000 deaths over their lifetimes (Whitney, Zhou, Singleton, & Schuchat, 2014).

Wakefield originally conducted his study because the parents of the 12 children with autism told him that they remembered the autism starting right after their children were immunized. Jenny McCarthy told Oprah that

immediately after her son received the vaccine, "Boom—the soul's gone from his eyes" (September 18, 2007). Many have disputed her account, but the bottom line is that vaccines are given to children at about the same developmental period that symptoms of ASD become apparent. Think about the other characteristics that emerge at the same time in development. For example, lower molars emerge in children's mouths during early childhood. However, few people would suggest that being vaccinated causes molars to grow. Children start speaking at about this age, but no one thinks vaccines cause this ability. People see an apparent connection between vaccines and ASD, but the lurking third variable is age.

The results of dozens upon dozens of carefully designed studies have provided a firm conclusion: Vaccines do not cause ASD.

Since Wakefield's 1998 publication, cases of ASD have increased even though thimerosal is no longer used in vaccines and the number of children being immunized has dropped. These facts would indicate that vaccination and ASD are negatively correlated! As noted in the text, however, definitional changes in the diagnostic criteria are likely a better explanation for the increase in ASD.

Attention-Deficit/Hyperactivity Disorder Is a Disruptive Impulse Control Disorder

Suppose you are a child who exhibits hyperactivity. At home, you might have difficulty remembering not to trail your dirty hand along the clean wall as you run from the front door to the kitchen. While playing games with your peers, you might spontaneously change the rules. At school, you might ask what you are supposed to do immediately after the teacher has presented detailed instructions to the entire class. You might make warbling noises or other strange sounds that inadvertently disturb anyone nearby. You might seem to have more than your share of accidents—for example, knocking over the tower your classmates are erecting, spilling your juice, or tripping over the television cord while retrieving the family cat, thereby disconnecting the set in the middle of the Super Bowl (Whalen, 1989).

Symptoms such as these can seem humorous in the retelling, but the reality is a different story. Children with **attention-deficit/hyperactivity disorder (ADHD)** are restless, inattentive, and impulsive. They need to have directions repeated and rules explained over and over. Although these children are often friendly and talkative, they can have trouble making and keeping friends because they miss subtle social cues and make unintentional social mistakes. Many of these symptoms are exaggerations of typical toddler behavior, and thus the line between normal and abnormal behavior is hard to draw. The *DSM-5* requires at least six or more symptoms of inattention (e.g., careless mistakes, not listening, losing things, easily distracted) and six or more symptoms of hyperactivity or impulsiveness (e.g., fidgeting, running about when inappropriate, talking excessively, difficulty waiting) that last for at least six months and interfere with functioning or development. Several of these symptoms must be prior to age 12 and occur in multiple settings. Estimates of the prevalence of ADHD vary widely. The best available evidence for children in the United States is that 11 percent of boys and 4 percent of girls have the disorder (Bloom & Cohen, 2007).

THE ETIOLOGY OF ADHD The causes of this disorder are unknown. One of the difficulties in pinpointing the etiology is that ADHD is most likely a heterogeneous disorder. In other words, the behavioral profiles of children with ADHD vary, so the causes of the disorder most likely vary as well. Children with ADHD may be more likely than other children to come from disturbed families. Factors such as poor parenting and social disadvantage may contribute to the onset of symptoms,

attention-deficit/hyperactivity disorder (ADHD)
A disorder characterized by restlessness, inattentiveness, and impulsivity.

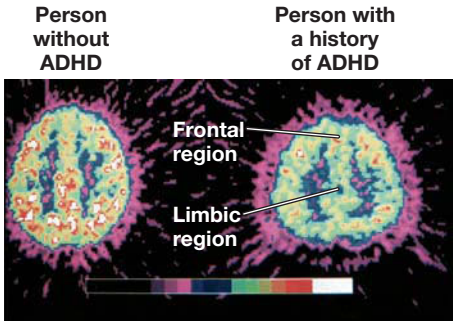


FIGURE 14.33
ADHD and the Brain
The brain image of a person with a history of ADHD shows less overall activation (at the red and white levels), especially in the frontal and limbic regions.

as is true for all psychological disorders. Still, ADHD clearly has a genetic component: Concordance is estimated at 55 percent in identical twins and 32 percent in dizygotic twins (Goodman & Stevenson, 1989; Sherman, McGue, & Iacono, 1997).

In an early imaging study, Alan Zametkin and colleagues (1990) found that adults who had been diagnosed with ADHD in childhood had reduced metabolism in brain regions involved in the self-regulation of motor functions and of attentional systems (**FIGURE 14.33**). These researchers theorized that the connection between the frontal lobes and the limbic system is impaired in ADHD patients. In fact, the symptoms of ADHD are similar to those seen in patients with frontal lobe damage: problems with planning, sustaining concentration, using feedback, and thinking flexibly. Other imaging studies have found that when adolescents with ADHD perform tasks that require them to inhibit motor responses, greater impairments in performance on the tasks are associated with abnormal activation of prefrontal regions (Schulz et al., 2004).

Researchers have also demonstrated differences in the basal ganglia in the brains of some ADHD patients (Aylward, Reiss, Reader, & Singer, 1996; Castellanos, Giedd, Eckberg, & Marsh, 1998; Fillipek et al., 1997). Because this structure is involved in regulating motor behavior and impulse control, dysfunction in the basal ganglia could contribute to the hyperactivity characteristic of ADHD.

ADHD ACROSS THE LIFE SPAN Children generally are not given diagnoses of ADHD until they enter structured settings in which they must conform to rules, get along with peers, and sit in their seats for long periods. In the past, these things happened when children entered school, between ages 5 and 7. Now, with the increasing prevalence of structured day care settings, the demands on children to conform are occurring much earlier.

According to longitudinal studies, children do not outgrow ADHD by the time they enter adulthood (McGough & Barkley, 2004). Adults with ADHD symptoms, about 4 percent of the population (Kessler et al., 2006), may struggle academically and vocationally. They generally reach a lower-than-expected socioeconomic level and change jobs more often than other adults (Bellak & Black, 1992; Mannuzza et al., 1991). At the same time, many adults with ADHD learn how to adapt to their condition, such as by reducing distractions while they work (**FIGURE 14.34**).

FIGURE 14.34
Living with ADHD
Paula Luper, of North Carolina, was diagnosed with ADHD in elementary school. Here, as a senior in high school, she is taking a quiz in the teachers lounge to avoid distraction.

Summing Up

Which Psychological Disorders Are Prominent in Childhood?

- Disorders in children are considered within the context of normal development.
- In some cases, psychological disorders identified in childhood have lasting impacts on the individual, and the problems apparent early in life continue throughout maturation.
- Autism spectrum disorder is characterized by impaired social interaction, deficits in communication, and restricted interests.
- Research suggests that autism is heritable.
- Causes of autism include gene mutations, unusual patterns of brain growth, exposure to unusual antibodies in the womb, faulty brain wiring, and impairments in mirror neuron activity.
- ADHD is characterized by inattentiveness, restlessness, and impulsivity.
- Environmental and genetic factors contribute to the development of ADHD.
- Abnormalities associated with the frontal lobes, limbic system, and basal ganglia have been identified in individuals with ADHD.

Measuring Up

1. **Identify whether each of the following characteristics is observed in children with autism spectrum disorder or observed in children with attention-deficit/hyperactivity disorder.**

   a. impulsivity and restlessness
   b. restricted activities and interests
   c. focus on objects rather than on people
   d. easily distracted
   e. failure to make and maintain eye contact

2. **Compared with people without ADHD, people with ADHD show _____ activation in the _____ of the brain.**

   a. less; frontal lobes and limbic regions
   b. less; temporal lobes and Broca's area
   c. more; frontal lobes and limbic regions
   d. more; temporal lobes and Broca's area

ANSWERS: **(1) a.** ADHD; **b.** autism; **c.** autism; **d.** ADHD; **e.** autism.
(2) a. less; frontal lobes and limbic regions.

Your Chapter Review

Chapter Summary

14.1 How Are Psychological Disorders Conceptualized and Classified?

- **Psychopathology Is Different from Everyday Problems:** Psychological disorders are common in all societies. Individuals with psychological disorders behave in ways that deviate from cultural norms and that are maladaptive.
- **Psychological Disorders Are Classified into Categories:** The *Diagnostic and Statistical Manual of Mental Disorders* is a system for diagnosing psychological disorders. The current version is *DSM-5*. Psychological disorders are often comorbid—that is, they occur together. Due to comorbidity, it has been proposed that all psychological disorders reflect a common factor, p. High scores on the p factor have been found to be associated with more-severe psychopathology. Rather than classifying disorders, the Research Domain Criteria (RDoC) method strives to understand the processes that give rise to disordered thoughts, emotions, and behaviors. The RDoC defines basic domains of functioning, such as attention and social communication, and considers them across multiple levels of analysis, from genes to brain systems to behavior.
- **Psychological Disorders Must Be Assessed:** Assessment is the process of examining a person's mental functions and psychological health to make a diagnosis. Assessment is accomplished through interviews, behavioral observations, psychological testing, and neuropsychological testing.
- **Psychological Disorders Have Many Causes:** According to the diathesis-stress model, mental health problems arise from a vulnerability coupled with a stressful precipitating event. Psychological disorders may arise from biological factors, psychological factors, or cognitive-behavioral factors. Females are more likely than males to exhibit internalizing disorders (such as major depressive disorder and generalized anxiety disorder). Males are more likely than females to exhibit externalizing disorders (such as alcohol use disorder and conduct disorders). Most psychological disorders show some universal symptoms, but the *DSM* recognizes a number of cultural syndromes related to mental health problems.

14.2 Which Disorders Emphasize Emotions or Moods?

- **Anxiety Disorders Make People Apprehensive and Tense:** Specific phobias are exaggerated fears of specific stimuli. Generalized anxiety disorder is diffuse and omnipresent. Social anxiety disorder is a fear of being negatively evaluated by others. Panic attacks cause sudden overwhelming terror and may lead to agoraphobia. Cognitive, situational, and biological factors contribute to the onset of anxiety disorders.
- **Unwanted Thoughts Create Anxiety in Obsessive-Compulsive Disorders:** Obsessive-compulsive disorder involves frequent intrusive thoughts and compulsive behaviors. OCD occurs in approximately 1–2 percent of the population and affects women more than men. OCD may involve learned behaviors or be caused by biological factors.
- **Posttraumatic Stress Disorder Results from Trauma:** Posttraumatic stress disorder involves frequent and recurring nightmares, intrusive thoughts, and flashbacks related to an earlier trauma. PTSD occurs in approximately 7 percent of the population and affects women more than men.
- **Depressive Disorders Consist of Sad, Empty, or Irritable Mood:** Major depressive disorder is characterized by a number of symptoms, including depressed mood and a loss of interest in pleasurable activities. Persistent depressive disorder is less severe, with people being sad on more days than not for at least two years.
- **Depressive Disorders Have Biological, Situational, and Cognitive Components:** Depressive disorders have biological components, including possible dysfunction of the monoamine neurotransmitters norepinephrine and serotonin, low left frontal lobe function, and disrupted biological rhythms. Situational factors (such as poor relationships and stress) and cognitive factors (such as the cognitive triad and learned helplessness) also contribute to the occurrence of depression.
- **Bipolar Disorders Involve Depression and Mania:** Bipolar disorder is characterized by depression and manic episodes—that is, episodes of increased activity and euphoria. The impairment in bipolar I disorder is due to manic episodes, whereas the impairment in bipolar II disorder is due to depressive episodes. Genes may play a role in bipolar disorders.

14.3 Which Disorders Emphasize Thought Disturbances?

- **Dissociative Disorders Are Disruptions in Memory, Awareness, and Identity:** Dissociative disorders involve disruptions of identity, memory, or conscious awareness. Dissociative amnesia involves forgetting that an event happened or losing awareness of a substantial block of time. Dissociative fugue involves a loss of identity. Dissociative identity disorder involves the occurrence of two or more distinct identities in the same individual, along with memory gaps for everyday events. Dissociative identity disorder is believed to emerge as a consequence of severe abuse—through repeated dissociation, different identities develop to cope with different traumas. Dissociative identity disorder remains a controversial diagnosis for two reasons: The condition is often diagnosed after someone has been accused of a crime, and a sharp rise in reported cases has occurred in recent years.
- **Schizophrenia Involves a Split Between Thought and Emotion:** Schizophrenia is characterized by a split between thought and emotion. The positive symptoms associated with schizophrenia reflect excesses and include delusions, hallucinations, disorganized speech, and disorganized behavior. The negative symptoms of schizophrenia reflect deficits and include apathy, lack of emotion, and slowed speech. Research suggests that schizophrenia is largely a biological disorder. Environmental factors also play a

role in the development of schizophrenia, including dysfunctional family dynamics, urban stress, and exposure to pathogens.

14.4 What Are Personality Disorders?

- **Personality Disorders Are Maladaptive Ways of Relating to the World:** The *DSM* identifies 10 personality disorders clustered in three groups. Paranoid, schizoid, and schizotypal make up the odd and eccentric cluster. Histrionic, narcissistic, borderline, and antisocial make up the dramatic, emotional, and erratic cluster. Avoidant, dependent, and obsessive-compulsive make up the anxious and fearful cluster.
- **Borderline Personality Disorder Is Associated with Poor Self-Control:** Borderline personality disorder involves disturbances in identity, affect, and impulse control. Borderline personality disorder is associated with reduced frontal lobe capacity, low levels of serotonin, and a history of trauma and abuse.
- **Antisocial Personality Disorder Is Associated with a Lack of Empathy:** Antisocial personality disorder is characterized by socially undesirable behavior, hedonism, sensation seeking, and a lack of remorse. Antisocial personality disorder is associated with lower levels of arousal, a smaller amygdala, and deficits in frontal lobe functioning. Both genetics and environment seem to contribute to the development of antisocial personality disorder.

14.5 Which Psychological Disorders Are Prominent in Childhood?

- **Autism Spectrum Disorder Involves Social Deficits and Restricted Interests:** Autism spectrum disorder emerges in infancy and is marked by impaired social functioning and communication and restricted interests. Autism is heritable and may result from genetic mutations. Autism has been linked to abnormal brain growth, exposure to antibodies in the womb, faulty brain wiring, and mirror neuron impairment.
- **Attention-Deficit/Hyperactivity Disorder Is a Disruptive Impulse Control Disorder:** Children with ADHD are restless, inattentive, and impulsive. The causes of ADHD may include environmental factors such as poor parenting and social disadvantages; genetic factors; and brain abnormalities, particularly with regard to activation of the frontal lobes, limbic system, and basal ganglia. ADHD continues into adulthood, presenting challenges to academic work and to career pursuits.

Key Terms

agoraphobia, p. 614
antisocial personality disorder (APD), p. 639
anxiety disorder, p. 612
assessment, p. 605
attention-deficit/hyperactivity disorder (ADHD), p. 647
autism spectrum disorder, p. 643
bipolar I disorder, p. 622
bipolar II disorder, p. 622
borderline personality disorder, p. 637
cognitive-behavioral approach, p. 608
delusions, p. 629
diathesis-stress model, p. 606
disorganized behavior, p. 631
disorganized speech, p. 630
dissociative disorders, p. 625
dissociative identity disorder (DID), p. 626
etiology, p. 600
family systems model, p. 607
generalized anxiety disorder (GAD), p. 613
hallucinations, p. 630
learned helplessness, p. 621
major depressive disorder, p. 618
negative symptoms, p. 631
obsessive-compulsive disorder (OCD), p. 616
panic disorder, p. 614
persistent depressive disorder, p. 619
posttraumatic stress disorder (PTSD), p. 617
psychopathology, p. 600
Research Domain Criteria (RDoC), p. 604
schizophrenia, p. 628
sociocultural model, p. 607

Practice Test

1. Which of the following questions would a clinician consider in order to determine whether a behavior represents psychopathology? Select all that apply.
   a. Does the behavior deviate from cultural norms?
   b. Is the behavior causing the individual personal distress?
   c. Is the behavior maladaptive?
   d. Is the behavior unusual?
   e. Is the behavior upsetting to members of the client's social network?
2. Two students visit the campus health center. Student A describes feeling constantly fearful and anxious. Student B describes feeling persistently agitated and often exhibiting violent outbursts. Student A's symptoms are consistent with an _____ disorder, which is more common in _____; student B's symptoms are consistent with an _____ disorder, which is more common in _____.
   a. externalizing, females; internalizing, males
   b. externalizing, males; internalizing, females
   c. internalizing, females; externalizing, males
   d. internalizing, males; externalizing, females
3. True or false: The *DSM-5* is proven to offer definitive and accurate diagnoses coupled with the best recommended treatment options for all accepted psychological disorders.
4. Which of the following are examples of neuropsychologial assessments?
   a. the patient's self-report of symptoms
   b. reports from interviews with people who know the patient well
   c. blood tests
   d. card-sorting tasks
   e. having the person copy a picture by hand
   f. having the person place blocks on a mat while blindfolded
   g. having the person draw designs from memory

The answer key for the Practice Tests can be found at the back of the book.