

65-5 Why do some psychologists criticize the use of diagnostic labels?

- Other critics view DSM diagnoses as arbitrary labels that create preconceptions which bias perceptions of the labeled person's past and present behavior. The legal label, "insanity," raises moral and ethical questions about whether society should hold people with disorders responsible for their violent actions.
- Most people with disorders are nonviolent and are more likely to be victims than attackers.

Multiple-Choice Questions

1. Which of the following describes the idea that psychological disorders can be diagnosed and treated?
 - a. Taijin-kyofusho
 - b. The DSM
 - c. The biopsychosocial approach
 - d. Amok
 - e. The medical model
2. Which of the following is the primary purpose of the DSM?
 - a. Diagnosis of mental disorders
 - b. Selection of appropriate psychological therapies for mental disorders
 - c. Placement of mental disorders in appropriate cultural context
 - d. Selection of appropriate medicines to treat mental disorders
 - e. Understanding the causes of mental disorders

Practice FRQs

1. Name and describe the two major approaches to understanding psychological disorders.

Answer

2 points: The medical model, which is an attempt to first diagnose and then treat psychological disorders.

2 points: The biopsychosocial approach, which is an attempt to understand psychological disorders as an interaction of biological, psychological, and social-cultural factors.

65-6 How many people suffer, or have suffered, from a psychological disorder? Is poverty a risk factor?

- Psychological disorder rates vary, depending on the time and place of the survey. In one multinational survey, rates for any disorder ranged from less than 5 percent (Shanghai) to more than 25 percent (the United States).
- Poverty is a risk factor: Conditions and experiences associated with poverty contribute to the development of psychological disorders. But some disorders, such as schizophrenia, can drive people into poverty.

3. Which of the following disorders do Americans report most frequently?
 - a. Schizophrenia
 - b. Mood disorders
 - c. Posttraumatic stress disorder (PTSD)
 - d. Obsessive-compulsive disorder (OCD)
 - e. Attention-deficit/hyperactivity disorder (ADHD)

2. Explain two criticisms of the DSM. (2 points)

Module 66

Anxiety Disorders, Obsessive-Compulsive Disorder, and Posttraumatic Stress Disorder

Module Learning Objectives

- 66-1 Identify the different anxiety disorders.
- 66-2 Describe obsessive-compulsive disorder.
- 66-3 Describe posttraumatic stress disorder.
- 66-4 Describe how the learning and biological perspectives explain anxiety disorders, OCD, and PTSD.

66-1 What are the different anxiety disorders?

Anxiety is part of life. Speaking in front of a class, peering down from a ladder, or waiting to play in a big game, any one of us might feel anxious (even seasoned performers like Green Day's Billie Joe Armstrong, whose anxiety and substance abuse resulted in cancelled concerts in 2012 and 2013). At times we may feel enough anxiety to avoid making eye contact or talking with someone—"shyness," we call it. Fortunately for most of us, our uneasiness is not intense and persistent.

Some of us, however, are more prone to notice and remember threats (Mitte, 2008). This tendency may place us at risk for one of the **anxiety disorders**, marked by distressing, persistent anxiety or dysfunctional anxiety-reducing behaviors. We will consider these three:

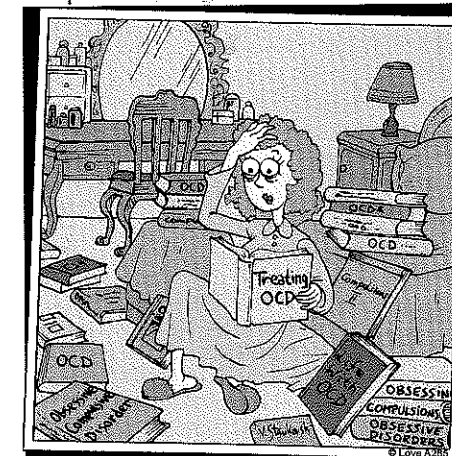
- *Generalized anxiety disorder*, in which a person is unexplainably and continually tense and uneasy
- *Panic disorder*, in which a person experiences sudden episodes of intense dread
- *Phobias*, in which a person is intensely and irrationally afraid of a specific object or situation

Two other disorders involve anxiety, though the DSM-5 now classifies them separately:

- *Obsessive-compulsive disorder*, in which a person is troubled by repetitive thoughts or actions
- *Posttraumatic stress disorder*, in which a person has lingering memories, nightmares, and other symptoms for weeks after a severely threatening, uncontrollable event

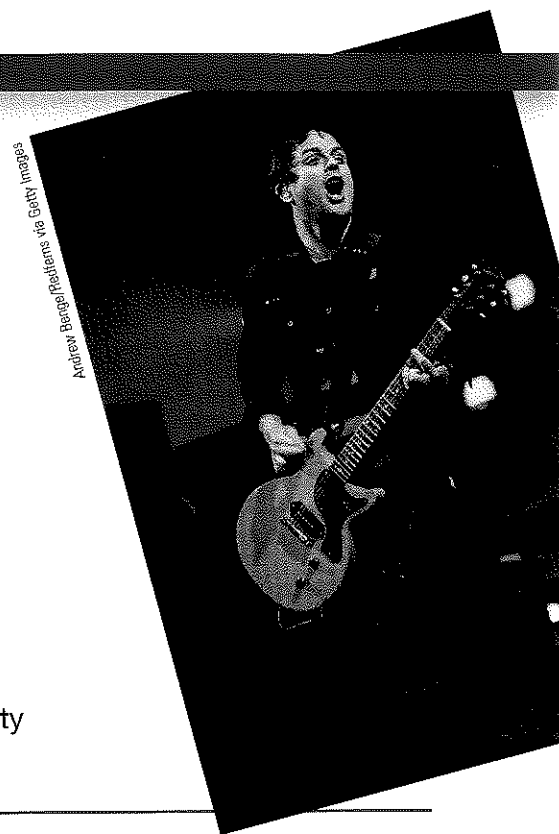
anxiety disorders psychological disorders characterized by distressing, persistent anxiety or maladaptive behaviors that reduce anxiety.

Snapshots



Obsessing about obsessive-compulsive disorder

Andrew Bergel/RedHemans via Getty Images



AP® Exam Tip

The way disorders are classified can be confusing, so it's worth taking some time to keep the organization straight. Sometimes, there is a broad classification that includes more specific disorders—the broad category of anxiety disorders, for example, includes generalized anxiety disorder, panic disorder, and phobia. Other times, there is just one level of classification. Obsessive-compulsive disorder and posttraumatic stress disorder do not fit into broader categories.

Generalized Anxiety Disorder

For the past two years, Tom, a 27-year-old electrician, has been bothered by dizziness, sweating palms, heart palpitations, and ringing in his ears. He feels edgy and sometimes finds himself shaking. With reasonable success, he hides his symptoms from his family and co-workers. But he allows himself few other social contacts, and occasionally he has to leave work. His family doctor and a neurologist can find no physical problem.

Tom's unfocused, out-of-control, agitated feelings suggest a **generalized anxiety disorder**, which is marked by pathological worry. The symptoms of this disorder are commonplace; their persistence, for six months or more, is not. People with this condition—two-thirds are women (McLean & Anderson, 2009)—worry continually, and they are often jittery, agitated, and sleep-deprived. Concentration is difficult as attention switches from worry to worry, and their tension and apprehension may leak out through furrowed brows, twitching eyelids, trembling, perspiration, or fidgeting.

One of generalized anxiety disorder's worst characteristics is that the person may not be able to identify, and therefore deal with or avoid, its cause. To use Sigmund Freud's term, the anxiety is *free-floating*. Generalized anxiety disorder is often accompanied by depressed mood, but even without depression it tends to be disabling (Hunt et al., 2004; Moffitt et al., 2007b). Moreover, it may lead to physical problems, such as high blood pressure.

Many people with generalized anxiety disorder were maltreated and inhibited as children (Moffitt et al., 2007a). As time passes, however, emotions tend to mellow, and by age 50, generalized anxiety disorder becomes fairly rare (Rubio & López-Ibor, 2007).

Panic Disorder

Panic disorder entails an anxiety tornado. Panic strikes suddenly, wreaks havoc, and disappears. For the 1 person in 75 with this disorder, anxiety suddenly escalates into a terrifying *panic attack*—a minutes-long episode of intense fear that something horrible is about to happen. Heart palpitations, shortness of breath, choking sensations, trembling, or dizziness typically accompany the panic, which may be misperceived as a heart attack or other serious physical ailment. Smokers have at least a doubled risk of panic disorder (Zvolensky & Bernstein, 2005). Because nicotine is a stimulant, lighting up doesn't lighten up.

One woman recalled suddenly feeling "hot and as though I couldn't breathe. My heart was racing and I started to sweat and tremble and I was sure I was going to faint. Then my fingers started to feel numb and tingly and things seemed unreal. It was so bad I wondered if I was dying and asked my husband to take me to the emergency room. By the time we got there (about 10 minutes) the worst of the attack was over and I just felt washed out" (Greist et al., 1986).

Phobias

Phobias are anxiety disorders in which an irrational fear causes the person to avoid some object, activity, or situation. Many people accept their phobias and live with them, but others are incapacitated by their efforts to avoid the feared situation. Marilyn, an otherwise healthy and happy 28-year-old, fears thunderstorms so intensely that she feels anxious as soon as a weather forecaster mentions possible storms later in the week. If her husband is away and a storm is forecast, she may stay with a close relative. During a storm, she hides from windows and buries her head to avoid seeing the lightning.

Other *specific phobias* may focus on animals, insects, heights, blood, or enclosed spaces (**FIGURE 66.1**). People avoid the stimulus that arouses the fear, hiding during thunderstorms or avoiding high places.

Not all phobias have such specific triggers. **Social anxiety disorder** (formerly called *social phobia*) is shyness taken to an extreme. Those with social anxiety disorder,

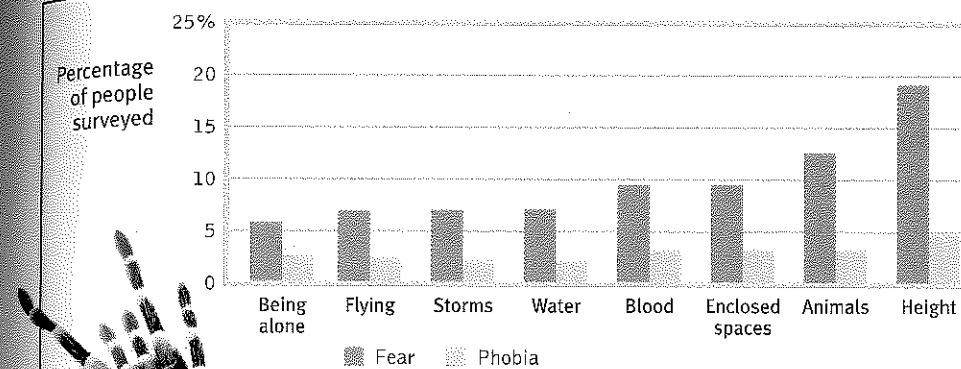
generalized anxiety disorder

an anxiety disorder in which a person is continually tense, apprehensive, and in a state of autonomic nervous system arousal.

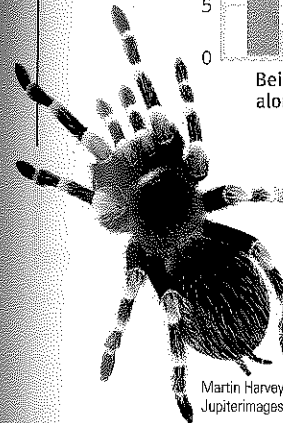
panic disorder an anxiety disorder marked by unpredictable, minutes-long episodes of intense dread in which a person experiences terror and accompanying chest pain, choking, or other frightening sensations. Often followed by worry over a possible next attack.

phobia an anxiety disorder marked by a persistent, irrational fear and avoidance of a specific object, activity, or situation.

social anxiety disorder intense fear of social situations, leading to avoidance of such. (Formerly called *social phobia*.)

**Figure 66.1**

Some common and uncommon specific fears This Dutch national interview study identified the commonality of various specific fears. A strong fear becomes a phobia if it provokes a compelling but irrational desire to avoid the dreaded object or situation. (From Delpa et al., 2008.)



Martin Harvey/
Jupiterimages

an intense fear of being scrutinized by others, avoid potentially embarrassing social situations, such as speaking up, eating out, or going to parties—or will sweat or tremble when doing so.

Much as fretting over insomnia may, ironically, cause insomnia, so worries about anxiety—perhaps fearing another panic attack, or fearing anxiety-caused sweating in public—can amplify anxiety symptoms (Olatunji & Wolitzky-Taylor, 2009). People who have experienced several panic attacks may come to avoid situations where the panic has struck before. If the fear is intense enough, it may become **agoraphobia**, fear or avoidance of situations in which escape might be difficult or help unavailable when panic strikes. Given such fear, people may avoid being outside the home, in a crowd, on a bus, or on an elevator.

After spending five years sailing the world, Charles Darwin began suffering panic disorder at age 28. Because of the attacks, he moved to the country, avoided social gatherings, and traveled only in his wife's company. But the relative seclusion did free him to focus on developing his evolutionary theory. "Even ill health," he reflected, "has saved me from the distraction of society and its amusements" (quoted in Ma, 1997).

Obsessive-Compulsive Disorder**66-2 What is obsessive-compulsive disorder?**

As with generalized anxiety and phobias, we can see aspects of **obsessive-compulsive disorder (OCD)** in our everyday behavior. We all may at times be obsessed with senseless or offensive thoughts that will not go away. Or we may engage in compulsive behaviors, perhaps lining up books and pencils "just so" before studying.

Obsessive thoughts and compulsive behaviors cross the fine line between normality and disorder when they persistently interfere with everyday living and cause distress. Checking to see you locked the door is normal; checking 10 times is not. Washing your hands is normal; washing so often that your skin becomes raw is not. (**TABLE 66.1** on the next page offers more examples.) At some time during their lives, often during their late teens or twenties, 2 to 3 percent of people cross that line from normal preoccupations and fussiness to debilitating disorder (Karno et al., 1988). Although the person knows them to be irrational, the anxiety-fueled obsessive thoughts become so haunting, the compulsive rituals so senselessly time-consuming, that effective functioning becomes impossible.

agoraphobia fear or avoidance of situations, such as crowds or wide open places, where one has felt loss of control and panic.

obsessive-compulsive disorder (OCD) a disorder characterized by unwanted repetitive thoughts (obsessions) and/or actions (compulsions).

Making everything perfect Soccer star David Beckham has openly discussed his obsessive-compulsive tendencies, which have driven him to line up objects in pairs or to spend hours straightening furniture (Adams, 2011).



Stephan Dumit/Getty Images

Table 66.1 Common Obsessions and Compulsions Among Children and Adolescents With Obsessive-Compulsive Disorder

Thought or Behavior	Percentage Reporting Symptom
Obsessions (repetitive <i>thoughts</i>)	
Concern with dirt, germs, or toxins	40
Something terrible happening (fire, death, illness)	24
Symmetry, order, or exactness	17
Compulsions (repetitive <i>behaviors</i>)	
Excessive hand washing, bathing, toothbrushing, or grooming	85
Repeating rituals (in/out of a door, up/down from a chair)	51
Checking doors, locks, appliances, car brakes, homework	46

Source: Adapted from Rapoport, 1989.

posttraumatic stress disorder (PTSD) a disorder characterized by haunting memories, nightmares, social withdrawal, jumpy anxiety, numbness of feeling, and/or insomnia that lingers for four weeks or more after a traumatic experience.

OCD is more common among teens and young adults than among older people (Samuels & Nestadt, 1997). A 40-year follow-up study of 144 Swedish people diagnosed with the disorder found that, for most, the obsessions and compulsions had gradually lessened, though only 1 in 5 had completely recovered (Skoog & Skoog, 1999).

Posttraumatic Stress Disorder

What is posttraumatic stress disorder?

As an Iraq war soldier, Jesse “saw the murder of children, women. It was just horrible for anyone to experience.” After calling in a helicopter strike on one house where he had seen ammunition crates carried in, he heard the screams of children from within. “I didn’t know there were kids there,” he recalls. Back home in Texas, he suffered “real bad flashbacks” (Welch, 2005).

Our memories exist in part to protect us in the future. So there is biological wisdom in not being able to forget our most emotional or traumatic experiences—our greatest embarrassments, our worst accidents, our most horrid experiences. But sometimes, for some of us, the unforgettable takes over our lives. The complaints of battle-scarred veterans such as Jesse—recurring haunting memories and nightmares, a numbed social withdrawal, jumpy anxiety, insomnia—are typical of what once was called “shellshock” or “battle fatigue” and now is called **posttraumatic stress disorder (PTSD)** (Babson & Feldner, 2010; Yufik & Simms, 2010). What defines and explains PTSD is less the event itself than the severity and persistence of the trauma memory (Rubin et al., 2008).

PTSD symptoms have also been reported by survivors of accidents, disasters, and violent and sexual assaults (including an estimated two-thirds of prostitutes) (Brewin et al., 1999; Farley et al., 1998; Taylor et al., 1998). A month after the 9/11 terrorist attacks, a survey of Manhattan residents indicated that 8.5 percent were suffering PTSD, most as a result of the attack (Galea et al., 2002). Among those living near the World Trade Center, 20 percent reported such telltale signs as nightmares, severe anxiety, and fear of public places (Susser et al., 2002).

Bringing the war home Nearly a quarter of a million Iraq and Afghanistan war veterans have been diagnosed with PTSD or traumatic brain injury (TBI). Many vets participate in an intensive recovery program using deep breathing, massage, and group and individual discussion techniques to treat their PTSD or TBI.



Lynn Johnson/National Geographic Society/Corbis

To pin down the frequency of this disorder, the U.S. Centers for Disease Control (1988) compared 7000 Vietnam combat veterans with 7000 noncombat veterans who served during the same years. On average, according to a reanalysis, 19 percent of all Vietnam veterans reported PTSD symptoms. The rate varied from 10 percent among those who had never seen combat to 32 percent among those who had experienced heavy combat (Dohrenwend et al., 2006). Similar variations in rates have been found among more recent combat veterans and among people who have experienced a natural disaster or have been kidnapped, held captive, tortured, or raped (Brewin et al., 2000; Brody, 2000; Kessler, 2000; Stone, 2005; Yaffe et al., 2010).

The toll seems at least as high for veterans of the Iraq war, where 1 in 6 U.S. combat infantry personnel has reported symptoms of PTSD, depression, or severe anxiety in the months after returning home (Hoge et al., 2006, 2007). In one study of 103,788 veterans returning from Iraq and Afghanistan, 1 in 4 was diagnosed with a psychological disorder, most frequently PTSD (Seal et al., 2007).

So what determines whether a person suffers PTSD after a traumatic event? Research indicates that the greater one’s emotional distress during a trauma, the higher the risk for posttraumatic symptoms (Ozer et al., 2003). Among New Yorkers who witnessed the 9/11 attacks, PTSD was doubled for survivors who were inside rather than outside the World Trade Center (Bonanno et al., 2006). And the more frequent an assault experience, the more adverse the long-term outcomes tend to be (Golding, 1999). In the 30 years after the Vietnam war, veterans who came home with a PTSD diagnosis had twice the normal likelihood of dying (Crawford et al., 2009).

A sensitive limbic system seems to increase vulnerability, by flooding the body with stress hormones again and again as images of the traumatic experience erupt into consciousness (Kosslyn, 2005; Ozer & Weiss, 2004). Brain scans of PTSD patients suffering memory flashbacks reveal an aberrant and persistent right temporal lobe activation (Engdahl et al., 2010). Genes may also play a role. In one study, combat-exposed men had identical twins who did not experience combat. But these nonexposed co-twins still tended to share their brother’s risk for cognitive difficulties, such as unfocused attention. Such findings suggest that some PTSD symptoms may actually be genetically predisposed (Gilbertson et al., 2006).

Some psychologists believe that PTSD has been overdiagnosed, due partly to a broadening definition of *trauma* (Dobbs, 2009; McNally, 2003). PTSD is actually infrequent, say those critics, and well-intentioned attempts to have people relive the trauma may exacerbate their emotions and pathologize normal stress reactions (Wakefield & Spitzer, 2002). “Debriefing” survivors right after a trauma by getting them to revisit the experience and vent emotions has actually proven generally ineffective and sometimes harmful (Bonanno et al., 2010).

Researchers have noted the impressive *survivor resiliency* of those who do *not* develop PTSD (Bonanno et al., 2010). About half of adults experience at least one traumatic event in their lifetime, but only about 1 in 10 women and 1 in 20 men develop PTSD (Olf et al., 2007; Ozer & Weiss, 2004; Tolin & Foa, 2006). More than 9 in 10 New Yorkers, although stunned and grief-stricken by 9/11, did *not* respond pathologically. By the following January, the stress symptoms of the rest had mostly subsided (Galea et al., 2002). Similarly, most combat-stressed veterans and most political dissidents who survive dozens of episodes of torture do not later exhibit PTSD (Mineka & Zinbarg, 1996). Likewise, the Holocaust survivors in 71 studies “showed remarkable resilience.” Despite some lingering stress symptoms, most experienced essentially normal physical health and cognitive functioning (Barel et al., 2010).

Psychologist Peter Suedfeld (1998, 2000; Cassel & Suedfeld, 2006), who as a boy survived the Holocaust under deprived conditions while his mother died in Auschwitz, has documented the *resilience* of Holocaust survivors, most of whom have lived productive lives. “It is not always true that ‘What doesn’t kill you makes you stronger,’ but it is often true,” he reports. And “what doesn’t kill you may reveal to you just how strong you really are.”

Indeed, suffering can lead to “benefit finding” (Aspinwall & Tedeschi, 2010a,b; Helgeson et al., 2006), and to what Richard Tedeschi and Lawrence Calhoun (2004) call **posttraumatic growth**. Tedeschi and Calhoun have found that the struggle with challenging crises, such as

FYI

A \$125 million, five-year U.S. Army program is currently assessing the well-being of 800,000 soldiers and training them in emotional resilience (Stix, 2011).

posttraumatic growth positive psychological changes as a result of struggling with extremely challenging circumstances and life crises.

facing cancer, often leads people later to report an increased appreciation for life, more meaningful relationships, increased personal strength, changed priorities, and a richer spiritual life. This idea—that suffering has transformative power—is also found in Judaism, Christianity, Hinduism, Buddhism, and Islam. The idea is confirmed by research with ordinary people. Compared with those with traumatic life histories and with those unchallenged by any significant adversity, people whose life history includes *some* adversity tend to enjoy better mental health and well-being (Seery et al., 2010). Out of even our worst experiences some good can come. Like the body, the mind has great recuperative powers and may grow stronger with exertion.

Understanding Anxiety Disorders, OCD, and PTSD



How do the learning and biological perspectives explain anxiety disorders, OCD, and PTSD?

Anxiety is both a feeling and a cognition, a doubt-laden appraisal of one's safety or social skill. How do these anxious feelings and cognitions arise? Freud's psychoanalytic theory proposed that, beginning in childhood, people *repress* intolerable impulses, ideas, and feelings and that this submerged mental energy sometimes produces mystifying symptoms, such as anxiety. Today's psychologists have instead turned to two contemporary perspectives—learning and biological.

The Learning Perspective

CLASSICAL AND OPERANT CONDITIONING

When bad events happen unpredictably and uncontrollably, anxiety or other disorders often develop (Field, 2006b; Mineka & Oehlberg, 2008). Recall from Unit VI that dogs learn to fear neutral stimuli associated with shock and that infants come to fear furry objects associated with frightening noises. Using classical conditioning, researchers have also created chronically anxious, ulcer-prone rats by giving them unpredictable electric shocks (Schwartz, 1984). Like assault victims who report feeling anxious when returning to the scene of the crime, the rats become apprehensive in their lab environment. This link between conditioned fear and general anxiety helps explain why anxious or traumatized people are hyperattentive to possible threats, and how panic-prone people come to associate anxiety with certain cues (Bar-Haim et al., 2007; Bouton et al., 2001). In one survey, 58 percent of those with social anxiety disorder experienced their disorder after a traumatic event (Ost & Hugdahl, 1981).

Through conditioning, the short list of naturally painful and frightening events can multiply into a long list of human fears. My car was once struck by another whose driver missed a stop sign. For months afterward, I felt a twinge of unease when any car approached from a side street. Marilyn's phobia of thunderstorms may have been similarly conditioned during a terrifying or painful experience associated with a thunderstorm.

Two specific learning processes can contribute to these disorders. The first, *stimulus generalization*, occurs, for example, when a person attacked by a fierce dog later develops a fear of *all* dogs. The second learning process, *reinforcement*, helps maintain our phobias and compulsions after they arise. Avoiding or escaping the feared situation reduces anxiety, thus reinforcing the phobic behavior. Feeling anxious or fearing a panic attack, a person may go inside and be reinforced by feeling calmer (Antony et al., 1992). Compulsive behaviors operate similarly. If washing your hands relieves your feelings of anxiety, you may wash your hands again when those feelings return.

OBSERVATIONAL LEARNING

We may also learn fear through observational learning—by observing others' fears. Susan Mineka (1985, 2002) sought to explain why nearly all monkeys reared in the wild fear snakes, yet lab-reared monkeys do not. Surely, most wild monkeys do not actually suffer snake bites.

Do they learn their fear through observation? To find out, Mineka experimented with six monkeys reared in the wild (all strongly fearful of snakes) and their lab-reared offspring (virtually none of which feared snakes). After repeatedly observing their parents or peers refusing to reach for food in the presence of a snake, the younger monkeys developed a similar strong fear of snakes. When retested three months later, their learned fear persisted. Humans likewise learn fears by observing others (Olsson et al., 2007).

COGNITION

Observational learning is not the only cognitive influence on feelings of anxiety. As the next unit's discussion of cognitive-behavioral therapy illustrates, our interpretations and irrational beliefs can also cause feelings of anxiety. Whether we interpret the creaky sound in the old house simply as the wind or as a possible knife-wielding intruder determines whether we panic. People with anxiety disorder also tend to be *hypervigilant*. A pounding heart becomes a sign of a heart attack. A lone spider near the bed becomes a likely infestation. An everyday disagreement with a friend or boss spells possible doom for the relationship. Anxiety is especially common when people cannot switch off such intrusive thoughts and perceive a loss of control and sense of helplessness (Franklin & Foa, 2011).

The Biological Perspective

There is, however, more to anxiety, OCD, and PTSD than conditioning, observational learning, and cognition. The biological perspective can help us understand why few people develop lasting phobias after suffering traumas, why we learn some fears more readily, and why some individuals are more vulnerable.

NATURAL SELECTION

We humans seem biologically prepared to fear threats faced by our ancestors. Our phobias focus on such specific fears: spiders, snakes, and other animals; enclosed spaces and heights; storms and darkness. (Those fearless about these occasional threats were less likely to survive and leave descendants.) Thus, even in Britain, with only one poisonous snake species, people often fear snakes. And preschool children more speedily detect snakes in a scene than flowers, caterpillars, or frogs (LoBue & DeLoache, 2008). It is easy to condition and hard to extinguish fears of such "evolutionarily relevant" stimuli (Coelho & Purkis, 2009; Davey, 1995; Öhman, 2009).

Our modern fears can also have an evolutionary explanation. For example, a fear of flying may come from our biological predisposition to fear confinement and heights. Moreover, consider what people tend *not* to learn to fear. World War II air raids produced remarkably few lasting phobias. As the air blitzes continued, the British, Japanese, and German populations became not more panicked, but rather more indifferent to planes outside their immediate neighborhoods (Mineka & Zinbarg, 1996). Evolution has not prepared us to fear bombs dropping from the sky.

Just as our phobias focus on dangers faced by our ancestors, our compulsive acts typically exaggerate behaviors that contributed to our species' survival. Grooming gone wild becomes hair pulling. Washing up becomes ritual hand washing. Checking territorial boundaries becomes rechecking an already locked door (Rapoport, 1989).

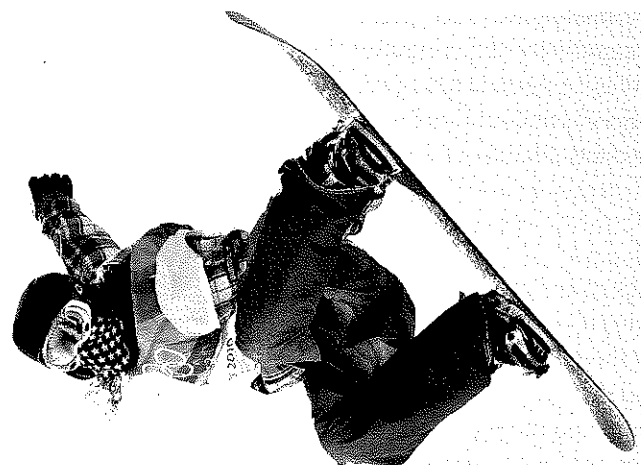
GENES

Some people are more anxious than others. Genes matter. Pair a traumatic event with a sensitive, high-strung temperament and the result may be a new phobia (Belsky & Pluess, 2009). Some of us have genes that make us like orchids—fragile, yet capable of beauty under favorable circumstances. Others of us are like dandelions—hardy, and able to thrive in varied circumstances (Ellis & Boyce, 2008).

Among monkeys, fearfulness runs in families. Individual monkeys react more strongly to stress if their close biological relatives are anxiously reactive (Suomi, 1986).

AP® Exam Tip

This is a good time to return to Unit VI and review the principles of classical and operant conditioning.



Fearless The biological perspective helps us understand why most people would be too afraid to try U.S. Olympic snowboarder Shaun White's tricks. White is less vulnerable to a fear of heights than most of us!

In humans, vulnerability to anxiety disorders rises when an afflicted relative is an identical twin (Hettema et al., 2001; Kendler et al., 1992, 1999, 2002a,b). Identical twins also may develop similar phobias, even when raised separately (Carey, 1990; Eckert et al., 1981). One pair of 35-year-old female identical twins independently became so afraid of water that each would wade in the ocean backward and only up to the knees.

Given the genetic contribution to anxiety disorders, researchers are now sleuthing the culprit genes. One research team has identified 17 genes that appear to be expressed with typical anxiety disorder symptoms (Hovatta et al., 2005). Other teams have found genes associated specifically with OCD (Dodman et al., 2010; Hu et al., 2006).

Genes influence disorders by regulating neurotransmitters. Some studies point to an anxiety gene that affects brain levels of *serotonin*, a neurotransmitter that influences sleep and mood (Canli, 2008). Other studies implicate genes that regulate the neurotransmitter *glutamate* (Lafleur et al., 2006; Welch et al., 2007). With too much glutamate, the brain's alarm centers become overactive.

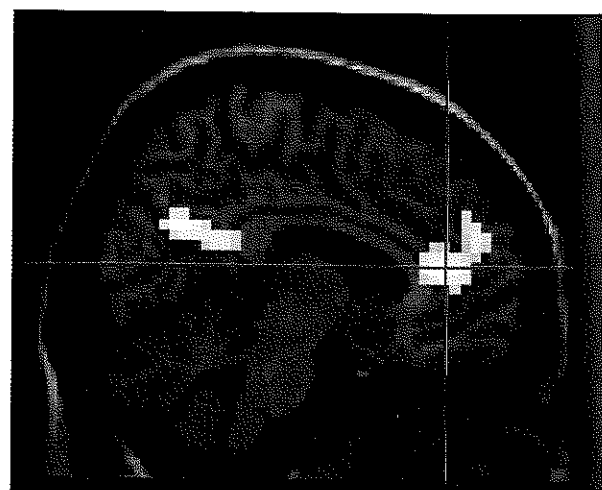
THE BRAIN

Generalized anxiety, panic attacks, PTSD, and even obsessions and compulsions are manifested biologically as an overarousal of brain areas involved in impulse control and habitual behaviors. When the disordered brain detects that something is amiss, it seems to generate a mental hiccup of repeating thoughts or actions (Gehring et al., 2000). Brain scans of people with OCD reveal elevated activity in specific brain areas during behaviors such as compulsive hand washing, checking, ordering, or hoarding (Insel, 2010; Mataix-Cols et al., 2004, 2005). As **FIGURE 66.2** shows, the *anterior cingulate cortex*, a brain region that monitors our actions and checks for errors, seems especially likely to be hyperactive in those with OCD (Maltby et al., 2005). Fear-learning experiences that traumatize the brain can also create fear circuits within the amygdala (Etkin & Wager, 2007; Kolassa & Elbert, 2007; Maren, 2007). Some antidepressant drugs dampen this fear-circuit activity and its associated obsessive-compulsive behavior.

Fears can also be blunted by giving people drugs, such as propranolol or D-Cycloserine, as they recall and then rerecord ("reconsolidate") a traumatic experience (Kindt et al., 2009; Norberg, et al., 2008). Although they don't forget the experience, the associated emotion is largely erased.

Figure 66.2

An obsessive-compulsive brain Neuroscientists Nicholas Maltby, David Tolin, and their colleagues (2005) used functional MRI scans to compare the brains of those with and without OCD as they engaged in a challenging cognitive task. The scans of those with OCD showed elevated activity in the anterior cingulate cortex in the brain's frontal area (indicated by the yellow area on the far right).



Reprinted from *NeuroImage*, 24, Maltby, N., Tolin, D. F., Worhunsky, P., O'Keefe, T. M., & Kiani, K. A. Dysthymic action monitoring hyperactivates frontal-striatal circuits in obsessive-compulsive disorder: An event-related fMRI study, 487-503, 2005, with permission from Elsevier.

Before You Move On

▶ ASK YOURSELF

Can you recall a fear that you have learned? What role, if any, was played by fear conditioning and by observational learning?

▶ TEST YOURSELF

How do generalized anxiety disorder, panic disorder, phobias, obsessive-compulsive disorder, and posttraumatic stress disorder differ?

Answers to the Test Yourself questions can be found in Appendix E at the end of the book.

Module 66 Review

66-1 What are the different anxiety disorders?

- Anxious feelings and behaviors are classified as an *anxiety disorder* only when they form a pattern of distressing, persistent anxiety or maladaptive behaviors that reduce anxiety.
- People with *generalized anxiety disorder* feel persistently and uncontrollably tense and apprehensive, for no apparent reason.
- In the more extreme *panic disorder*, anxiety escalates into periodic episodes of intense dread.
- Those with a *phobia* may be irrationally afraid of a specific object, activity, or situation.
- Two other disorders (obsessive-compulsive disorder and posttraumatic stress disorder) involve anxiety (though they are classified separately from the anxiety disorders).

66-2 What is obsessive-compulsive disorder?

- Persistent and repetitive thoughts (obsessions) and actions (compulsions) characterize *obsessive-compulsive disorder (OCD)*.

66-3 What is posttraumatic stress disorder?

- Symptoms of *posttraumatic stress disorder (PTSD)* include four or more weeks of haunting memories, nightmares, social withdrawal, jumpy anxiety, and sleep problems following some traumatic experience.

66-4 How do the learning and biological perspectives explain anxiety disorders, OCD, and PTSD?

- The learning perspective views anxiety disorders, OCD, and PTSD as products of fear conditioning, stimulus generalization, fearful-behavior reinforcement, and observational learning of others' fears and cognitions (interpretations, irrational beliefs, and hypervigilance).
- The biological perspective considers the role that fears of life-threatening animals, objects, or situations played in natural selection and evolution; genetic predispositions for high levels of emotional reactivity and neurotransmitter production; and abnormal responses in the brain's fear circuits.