10.1 INTRODUCTION

10.1.1 Why Study Psychological Disorders?
If you have experienced personally, or through family and friends, the pain and bewilderment of a psychological disorder (also called psychopathology or mental disorder), you may be familiar with the magnitude of the toll it takes on the well-being and productivity of a person—and her/his loved ones. Psychological disorders can bring irrational and paralyzing fear, uncontrolable urges, unexplained physical symptoms, or detachment from reality. They can devitalize a person’s soul to the point that she/he is unable to learn, to work, to love, or to find meaning in life. Because of the nature of the disorder itself, afflicted individuals sometimes deny, or are unable to recognize, the severity of their problems. Yet those at a distance can often see the toll quite clearly.
People are often fascinated by behaviors that are unpredictable, irrational, unsafe, or simply out of the ordinary, and casually use words like “crazy,” “insane,” and “mad” to describe them. But these terms do not always mean presence of a psychopathology. Even if a person’s behavior is seriously disturbed, labeling her/him as “crazy” tells us nothing meaningful. What are the person’s specific symptoms? Why is she/he having the symptoms? How long will they last? And how can she/he be helped? A branch of psychology that focuses on these questions is clinical psychology—an integration of science, theory and clinical knowledge to understand, treat, and prevent psychological disorders.

Do you always understand why you feel what you feel, think what you think, and behave as you do? Untangling the ever-complex human mind is no easy task. After decades of research, we are still some way from understanding the various processes underlying psychopathologies. In this chapter, let’s first examine the key factors that must be weighed in differentiating a disordered mind from normality. The chapter will then provide an overview of how psychopathologies are explained, classified, and treated, and how the effectiveness of treatments is evaluated. Next, we’ll focus on some of the major psychological disorders to increase your understanding of how they influence a person’s actions, thoughts, and emotions, the factors known to contribute to their development, and the approaches to help people suffering from them. Finally, we’ll examine a special topic on psychological wellness in college life.

10.2 UNDERSTANDING PSYCHOLOGICAL DISORDERS

10.2.1 When Does a Psychological Problem Become a Disorder?

Box 10.1

- Being terrified of spiders
- Eating only carrots and celery to stay thin
- Believing that Lady Gaga is in love with you, although you’ve never met her
- Breaking into a cold sweat at the thought of being trapped in an elevator
- Drinking a 6-pack daily to be “sociable”
- Spending 3 hours every morning washing and rewashing yourself—and scraping away the outside layer of your bar of soap between baths to “decontaminate” it
- Spacing out while reading a textbook and having to read the page several times
Which of the behaviors above do you think are abnormal? When does a problem behavior become a psychological disorder?

A common misconception is that an abnormal behavior is one that occurs very infrequently, i.e., a deviation from the norm (statistically speaking). This is currently used as one of the criteria for diagnosing intellectual disabilities (an IQ score well below the average of 100). But if we use this definition, wouldn’t a person who has an extremely high IQ score also be classified as abnormal? What about Olympic athletes and world-renowned artists? Having an exceptional ability is infrequent, but few would regard these individuals as candidates for psychological treatment.

Another aspect to consider when determining abnormality is whether the behavior is a deviation from the social norm (culturally speaking). Criminal acts and suicide attempts are examples of such a deviation. However, cultural diversity can influence what people view as socially normal and acceptable; the norm in one culture—wearing shoes in the house, eating bugs, or communicating with the dead, to name a few—may be abnormal in another. Furthermore, standards for social deviance change with time. For example, homosexuality was considered a mental disorder until 1973 when the American Psychiatric Association (APA) removed it from its classification system.

We cannot, therefore, consider a behavior as abnormal simply because the majority of people do not exhibit it. In most cases, the problem behavior is merely an extreme form of what we would call a “normal” or “adaptive” behavior. It is difficult to know when a behavior becomes a problem-behavior, or when a problem-behavior becomes a psychological disorder. Problem behaviors exist along a continuum, which is a spectrum of behavior ranging from mild to severe, infrequent to constant, controllable to uncontrollable, with no clear dividing line to indicate when normal becomes abnormal. (Figure 10.1). We all have to deal with life’s difficulties. We all worry and get depressed now and then, but many of us use our own strategies to cope with these difficulties; we exercise, listen to music, get support from family and friends, and in some cases seek help from a therapist or a general physician. Sometimes, our worries and depression may become so extreme, persistent, and uncontrollable as to cause significant anguish and to interfere with everyday living. These indicators of personal distress and functional impairment are important criteria for a psychological disorder, according to the APA. Although personal distress is a subjective state that varies from person to person, it is typically characterized by emotional pain and suffering. Functional impairment occurs when a person is unable to fulfill school or work obligations, sustain social relationships, or take care of oneself or children. Further, the symptoms must stem from internal dysfunction that may be biological, psychological, or both. For example, distress caused by the death of a loved one is not considered a psychological disorder because bereavement is a normal, expected response that does not originate in internal dysfunction. Table 10.1 lists the APA criteria for a psychological disorder.
Table 10.1 APA definition of psychological disorder

Defining characteristics:
A pattern of behaviors, thoughts, or emotions that occurs in an individual and are associated with:
1. Present distress (e.g., a painful symptom), or
2. Disability (impairment in one or more important areas of functioning), or with
3. A significantly increased risk of suffering death, pain, disability, or an important loss of freedom

Conditions not considered as psychological disorder:
1. An expectable and culturally sanctioned response to a particular event (e.g., the death of a loved one)
2. Deviant behavior (e.g., actions of political, religious, or sexual minorities)
3. Conflicts between the individual and society (e.g., voluntary efforts to express individuality)

10.2.2 What Causes A Psychological Disorder?
Perspectives on the etiology (the origin or cause) of abnormal behavior have changed significantly over the course of history. Until the 18th century, in many ancient civilizations, “mad” people were believed to be possessed by evil spirits (this is known as demonology); and that the only way to exorcise these evil spirits was to use elaborate rituals, often involving direct physical assaults on the afflicted person’s body (e.g., torture, flogging, or starvation). In many societies, people exhibiting symptoms of psychopathology have been feared, ridiculed, and treated as criminals or subhuman.

Box 10.2

Interior of a Madhouse, Francisco de Goya (1746–1828), 1815–19. Early treatment of mental disorders amounted to little more than imprisonment.
In the 19th century, it became apparent that many forms of behavior typical of psychological disorders were the result of physical illnesses such as viral or bacterial infections (e.g., syphilis), and the concept of “madness” gradually shifted toward treating it as a disease caused by biological dysfunction. Over the past 200 years, this medical model has become the predominant force in industrialized societies to explain abnormal behavior. This has resulted in a large body of scientific knowledge about psychological disorders based on the medicine-based field of psychiatry. The medical model suggests that each type of psychological disorder has a specifiable cause (etiology), a common set of behavioral indicators (symptoms), and a predictable course over time (prognosis). This model further implies that we have sufficient scientific knowledge to identify causes and indicators of a disorder and make predictions about what is likely to happen, with and without treatment. The medical model, however, is too simplistic to be applied to complex human behavior.

Does it seem likely that all people with depression share a specific biological cause that suggests a specific cure? Today, the most useful framework to understand abnormal behavior is the biopsychosocial approach. Pretend, for a moment, that you have been experiencing depressed mood off and on for the past few months. To understand what is contributing to your depressed mood, we need to look at biological, psychological, and social factors that could be contributing to your mood. What comes to mind? Perhaps there is a long history of depression in your family, which suggests genetic predisposition; or you have not been getting enough sleep. Maybe you have a tendency to blame most things that go wrong on yourself, and you don’t believe you have the power to change things in your life. You live in an overcrowded, noisy, and dangerous part of town because that’s all you can afford, and you don’t always feel safe. All three factors are represented in this description and explanation.

A central theme of this course is the following equation that illustrates how to think about behavior.

Recall that $B = f(P + E + PE)$, where

- $B =$ the behavior of the person with a disorder, and
- $P =$ internal factors pertaining to the person, and
- $E =$ external factors pertaining to the environment, and
- $PE =$ the complex interaction of person and environment.

The diathesis-stress model proposes a mechanism for explaining how psychological disorders can develop. According to the diathesis-stress model, the development of a mental disorder (sometimes referred to as psychopathology) requires the presence of P factors (the diathesis) and E factors (the stressor) in order to manifest itself. A diathesis is a predisposition, biological and/or psychological, that increases a person’s chance of developing a disorder. For example, genetic predisposition—having a close relative with the disorder—is an important component of most psychological disorders. Other biological diatheses include poor nutrition, maternal viral infection or smoking during pregnancy, and oxygen deprivation during birth. Each of these conditions may lead to changes in the brain structure or biochemistry that predispose a person toward psychopathology. On the psychological side, low self-esteem, chronic hopelessness, maladaptive coping, poor social skills, and certain personality traits (e.g., introversion, impulsivity, perfectionism) may increase one’s vulnerability to psychopathology. Psychological diatheses may arise for a variety of reasons. Some, such as personality characteristics, may be determined in part by genetics. Others may be learned (behavioral perspective) or result from a biased pattern of thinking (cognitive perspective) or unconscious conflict that developed in early childhood (psychodynamic perspective). Sociocultural influence also plays an important role; for example, cultural standards of beauty may lead to an intense fear of being fat and thus predispose people to eating disorders.
These diatheses, however, are not sufficient in and of themselves to produce a psychological disorder. In other words, they do not manifest in psychopathology unless triggered by stressful life experience. Such stressors may range from major traumatic events (e.g., moving away from home to go to college, surviving a hurricane, divorce), to sociocultural inequities (e.g., poverty, discrimination), to daily hassles (e.g., losing keys, getting stuck in traffic). The key feature of the diathesis-stress model is that both diathesis and stress are necessary in the development of disorders (Figure 10.2). A person with a genetic diathesis may never encounter the triggering stress: heredity is not destiny. On the other hand, someone may have a very low vulnerability for anxiety, yet develop an anxiety disorder after experiencing an intense and prolonged pattern of stressors.

**Figure 10.2 Diathesis-stress model**

People with a high diathesis (strong predisposition) require only a moderate amount of stress to develop psychopathology, whereas a low diathesis (slight predisposition) requires a large amount of stress to produce psychopathology. Stress level has no effect on those without the diathesis.

The diathesis–stress model also highlights the point that psychopathology is unlikely to result from the impact of any single factor. For example, childhood experience of sexual or physical abuse is associated with a range of psychological disorders later in life. But this does not imply a direct causal relationship between childhood abuse and psychopathology. (If you were a researcher, how would you test if childhood abuse causes psychological disorders? Can you?) Childhood abuse may lead to psychological changes that predispose some individuals toward psychological disorder (diathesis), and for some others, it may act as a triggering stressor. Childhood abuse, therefore, is a risk factor, not the cause of psychopathology. The development of psychopathology is likely to involve a complex network of biopsychosocial factors—which also suggests there may not be a single best treatment.

**10.2.3 How Are Psychological Disorders Classified?**

What is the role of classification in science? In the study of abnormal behavior, classification serves not only to describe and categorize disorders, but also to predict their course (prognosis), guide appropriate treatment, facilitate communication among professionals, and stimulate research on causes and treatments.
The most comprehensive and widely adopted classification system for psychopathologies is the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), published by the APA. First published in 1952, it has undergone several revisions as the fields of psychiatry and psychology have evolved. The DSM, therefore, is a “work in progress” that takes into account the weaknesses of previous versions and incorporates recent research findings. The most recent version, *Fourth Edition, Text Revision (DSM-IV-TR)*, was published in 2000. APA task forces are currently working on the next revision, DSM-5, scheduled to be published in 2013 (http://www.dsm5.org).

DSM-IV-TR focuses on the *what* of behavior, but not the *why*—it describes the symptoms and explicit criteria that must be met to make a diagnosis, without any suggestion about the etiology of a disorder (unless the cause has been clearly established). In this chapter, you will take a close look at three of the many categories of mental disorders—anxiety disorders, mood disorders, and schizophrenia. Keep in mind that the DSM classifies psychological disorders, not individuals with psychological disorders. A disorder is an attribute of a person, not her/his totality. In addition, most individuals with the same diagnosis do not present identical symptoms, and their symptoms have varying degrees of severity. What then, do you think about the common expressions such as “She’s a schizophrenic,” and “He’s an autistic child”?

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**Box 10.3**

**A Question of Dignity—Louise’s Personal Story**

“During an episode of depression accompanied by anxiety, I shared aspects of my illness with a large number of people. In retrospect, now that the depression is lifting, I realize that this was a grave mistake, at least in light of the way our society functions... When I was deeply depressed, I noticed that some friends departed. I understand now that they could not cope with depression and withdrew. In a few cases the rejection was rude and cruel and those who had seemed to be friends were found not to be so...

In some cases I became a ‘second class citizen.’ I could be treated with a briskness and dismissive air that had never been present before. I could be rudely dismissed and ignored on special occasions. My presence was clearly thought to be potentially threatening. Perhaps I wouldn’t be happy enough or would introduce inappropriate topics. I had laid bare my weakness and others were not about to forget it. These people, like all human beings, probably thought that they were doing the right thing. They were saving others from my presence. They also probably thought that they were treating me as my merits deserved. I had permanently lost the respect and consideration that I had once received.

...It is no wonder that people conceal serious illnesses, whether cancer, heart disease, or mental illness. Once exposed, these illnesses prove to be unforgettable to others. People never walk with the same dignity again. Their weakness has been exposed and it is this that others always observe. To some this weakness justifies treatment that shows no respect to the person as a human being. Somehow the person is seen to be responsible for the weakness and therefore appropriately blamed. The person has lost the right to be treated with honor. This honor is accorded only to those who are strong, healthy, and successful.”

*Source: http://www.mentalhealth.com/story/p52-dp11.html*
Indeed, a diagnostic label can have negative effects on a person—the fundamental problem in the classification of psychological disorders. Imagine, for example, how your life might be changed after you are diagnosed with schizophrenia. What are the stereotypes people have about individuals with mental illness? And how might these affect the way you would be treated and how you would feel about yourself and the world?

Research confirms that stigma—negative attitudes and beliefs that motivate the general public to fear, reject, avoid, and discriminate against people with psychopathology—is widespread in the U.S. and other industrialized countries. The fact that a person is a “former patient” may hamper her/his social relationships and employment. Inappropriate and demeaning, stigma acts as a barrier to recovery and deters people from seeking help for their mental health problems. In classifying psychopathologies, therefore, we must consider not only whether it is useful in the scientific and professional sense, but also whether it will minimize stigma experienced by persons with disorders. So, going back to “a schizophrenic” and “an autistic child,” what descriptions can be used instead to be more respectful toward the individual?

While DSM-IV-TR provides a more objective and reliable set of diagnostic criteria than its earlier versions, it has room for some major improvements. First, DSM-IV-TR is based on categorical classification (i.e., you either have or do not have the disorder). But as we discussed earlier, abnormal behavior exists on a continuum; symptoms of a diagnosable disorder may simply be more extreme forms of everyday behavior. Therefore, most psychopathologies may be better described by a dimensional, rather than categorical, classification.

Second, DSM-IV-TR lists hundreds of disorders, each named and classified as though it were a distinct illness. But in the real world, psychological disorders regularly co-occur in an individual. The co-occurrence of two or more disorders is known as comorbidity. The frequency of comorbidity raises an important question: Are psychopathologies as defined by DSM-IV-TR truly discrete disorders? For example, take a look at Figure 10.3.

**Figure 10.3 Comorbidity of depression and anxiety disorders**

![Figure 10.3 Comorbidity of depression and anxiety disorders](image)

Of 394 patients diagnosed with depression (major depression or dysthymia), large percentages also had current diagnosis of one or more anxiety disorders. What are the possible explanations for this substantial comorbidity of depression and anxiety disorders?
Third, while some disorders (e.g., schizophrenia, depression) are known to occur worldwide, many of the other DSM-IV-TR diagnoses do not exist in non-Western cultures. How could that be?

As you are aware, sociocultural factors impact how stress and mental health problems manifest themselves. For example, people in the West often experience anxiety and depression in response to stress; but in Asian cultures, stress is more likely to manifest in physical symptoms such as fatigue, weakness, and bodily aches/pains. Also, some psychopathologies are culture-specific (i.e., have a set of symptoms found only in that particular culture). It is important to remember that although the DSM has become widely used, its diagnostic criteria reflect white Euro-American norms and values. When diagnosing psychological disorders, clinicians must be sensitive to cultural variations in the expression of symptoms and work to minimize bias stemming from their own cultural background.

**Box 10.4**

Some Examples of Culture-specific Psychological Disorders

**Ataque de nervios** is a type of distress principally reported among Latinos from the Caribbean but recognized in many Latin American and Latin Mediterranean groups. Commonly reported symptoms include uncontrollable shouting, attacks of crying, trembling, heat in the chest rising into the head, and verbal/physical aggression. Seizure-like or fainting episodes and suicidal gestures are prominent in some attacks, but absent in others. The onset is associated with a stressful event related to family (e.g., death of a loved one, divorce, conflicts with children).

A term originally used in West Africa, **brain fag** refers to a condition experienced by high school or university students in response to academic stress. Symptoms include “fatigued brain,” blurred vision, heat, and pain, pressure or tightness around the head and neck.

**Mal de ojo** (a Spanish phrase translated into English as “evil eye”) is a concept widely found in Mediterranean cultures and elsewhere in the world and is believed to result from looking at someone, usually a child, with envy. The target of the envy can develop a variety of symptoms, including fitful sleep, crying with no apparent cause, diarrhea, vomiting, and fever.

Usually affecting young Japanese males, **taijin kyofusho** is characterized by extreme social anxiety and avoidance of social situations due to intense fear that one’s appearance, odor, facial expressions, or body language will offend, insult, or embarrass other people.

**10.2.4 How Common Are Psychological Disorders?**

Just how common (prevalent) are psychological disorders? Well, quite common—perhaps a lot more common than you think.

**Epidemiology** is the study of the frequency and distribution of disorders within specific populations over a specified period of time. Epidemiological research usually takes the form of a large-scale survey and tends to be descriptive in the sense that it attempts to provide details mainly about the prevalence of disorders. In the most recent epidemiological study of psychological disorders in the
U.S., the National Comorbidity Survey Replication (NCS-R), a nationally representative sample of over 9,000 adults were interviewed. Figure 10.3 shows lifetime prevalence of the most common DSM-IV disorders reported in the NCS-R. You can see that disturbances of the mind are a serious modern-day plague on humanity: more than half of us experience symptoms of a psychopathology at some point in our lives. Severe mental illness affects 3-6% of the population. Figure 10.4 also highlights the impact of culture on the prevalence of psychopathologies.

About 57% of the sample experienced the symptoms of a DSM-IV disorder at some point in their life. The lifetime prevalence of “any disorder” is similar for men and women, but what about specific disorders? What are the possible explanations for the gender differences in the prevalence of psychopathologies?


As discussed earlier, comorbidity affects most people with a lifetime history of a psychological disorder. Depression and anxiety disorders often co-occur not only with each other, but also with other disorders. Substance use disorders and personality disorders are also highly comorbid with other diagnoses. Comorbidity may be found within the same diagnostic category; for example, it is not uncommon for people to be diagnosed with two or more anxiety disorders.

The NCS-R also found that one-third of the sample met the criteria for a DSM-IV diagnosis during the past year (12-month prevalence of 32%), but most of them had not received any treatment for their symptoms. Many of us use our own coping strategies to weather symptoms of a psychological disorder without becoming completely debilitated and needing professional help. Mild to moderate symptoms may sometimes go away simply with the passage of time. Yet many other people, if left untreated, must endure prolonged suffering and may face significant adverse consequence—at substantial personal and social cost. Worldwide, psychological disorders are the second-leading contributor (after heart disease) to lost years of healthy life and are the leading cause of disabilities among youths. We have already discussed the negative impact of stigma. What else might prevent people who could benefit from mental health treatment from seeking it?
Since its first edition in 1952, the number of diagnosable mental disorders has nearly quadrupled from a little over 100 then to almost 400 today. As you might imagine, the number of people in the U.S. who meet criteria for psychological disorder has increased proportionately, resulting in higher prevalence rates than ever before. Particularly noteworthy is the three-fold growth in the number of children diagnosed with mental illness since the early 1990s. The legitimacy of today’s high prevalence of psychological disorders is highly debatable.

**Box 10.5**

“It seems that Americans are in the midst of a raging epidemic of mental illness ... What is going on here? Is the prevalence of mental illness really that high and still climbing? Particularly if these disorders are biologically determined and not a result of environmental influences, is it plausible to suppose that such an increase is real? Or are we learning to recognize and diagnose mental disorders that were always there? On the other hand, are we simply expanding the criteria for mental illness so that nearly everyone has one? And what about the drugs that are now the mainstay of treatment? Do they work? If they do, shouldn’t we expect the prevalence of mental illness to be declining, not rising?”

—Marcia Angell, M.D.


### 10.2.5 How Are Psychological Disorders Treated?

Given the complexity in the etiology and manifestation of psychopathologies, you can probably imagine the challenges of pinpointing how best to help people suffering from them. Indeed, the field of psychology is only beginning to make real progress in this area.

*Treatment* is provided by a variety of mental health professionals who aim to provide clients with relief from distress caused by their symptoms, medically and/or through self-awareness and insight into their problems, and/or coping and problem-solving skills. There are two major forms of such treatments: *biomedical therapy* and *psychotherapy*. Based on the medical model, biomedical therapy attempts to correct the specific biological defects underlying disorders and alleviate symptoms, often using drugs. However, most biomedical therapies in common use have not been derived from knowledge of a given disorder’s etiology.

In psychotherapy, a trained clinician interacts with a client to help her/him feel, think, and behave differently. People seek psychotherapy for a variety of reasons—to cope with grief, major life transitions, or “tough time” at school, work, or home—and not all who seek psychotherapy can be said to have a psychological disorder. While standard and traditional psychotherapy entails one-to-one meetings between a therapist and a client, individuals with similar problems may benefit from group therapy (e.g., self-help groups), and relationship dynamics contributing to psychopathologies may be addressed in family therapy. Most recently, the need for more cost-effective and efficient intervention has led to innovative modes of therapies conducted over the telephone or internet (e-therapy). Specific techniques and goals of psychotherapy vary by theoretical approach (Table 10.2).
Table 10.2  Major psychotherapeutic approaches

<table>
<thead>
<tr>
<th>Psychoanalytic therapies attempt to uncover unconscious conflicts from early life that may be causing symptoms of psychopathology.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanistic therapies aim to promote the client’s natural growth toward self-acceptance and self-fulfillment by providing genuine, unconditional positive regards and empathy.</td>
</tr>
<tr>
<td>Cognitive therapies identify maladaptive patterns of thinking and interpretations, and replace them with more realistic and adaptive ones.</td>
</tr>
<tr>
<td>Behavior therapies use learning principles to directly change problem behaviors.</td>
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</table>

Favored treatment depends not only on the therapist’s viewpoint, but also (and largely) on the nature of the psychopathology. For example, biomedical therapy is an essential component in helping people with schizophrenia, where biological diatheses play a major role. Suppose you had a depressed friend who recently broke up with his partner and believes nobody cares about him. What type of therapy would be most helpful to him? If you had a habit of biting your nails until they bleed, what type of therapy might benefit you the most?

PsychInvestigator Activity: Mental Illness—To view this material, refer to eBook.

The work of clinicians and researchers is informed by the knowledge of pros and cons of various theories. And as you are aware, current thinking about psychopathology integrates biological, psychological, and sociocultural perspectives: B = f (P + E + PE). Furthermore, over the past decade, the mental health field has come to promote evidence-based practice, where clinicians incorporate (1) the best available research evidence with (2) clinical expertise and (3) knowledge of the client (e.g., sociocultural background, preferences, and values). What would you consider to be good reasons to advocate for evidence-based practice in helping people with psychological disorders?

The treatment of psychological disorders with a combination of psychotherapy and biomedical therapy has become increasingly common. The majority of psychotherapists today do not rigidly adhere to a single theoretical perspective, but instead draw from a variety of techniques. This is called eclecticism; for example, to help someone with compulsive nail-biting, a psychodynamic therapist may attempt to increase the client’s insight into unconscious conflicts (e.g., unmet oral needs stemming from early childhood) and at the same time use a behavioral technique to control the symptoms. (Case in point: insight does not always lead to behavior change.) A widely used integrative approach, cognitive-behavioral therapy (CBT) aims to alter both thoughts and behavior. CBT is regarded as an evidence-based and cost-effective treatment that can be successfully applied to a wide range of psychopathologies and diverse client populations.
10.2.6 How Do We Know If And When Treatment Works?

How do we know if treatments work? Before getting into the methods of evaluating treatments, first consider the following questions. If a client simply says she/he is happy with the outcome of the therapy, does it mean the therapy was effective? If a client shows objective improvement in symptoms after treatment, does it necessarily mean that the treatment was effective?

Psychologists and other mental health professionals have a duty to ensure that the services they provide are effective. Yet objective assessment of treatment effectiveness is not as simple as you might think. When participants in a therapy study get better, the following three scenarios are possible: (1) the treatment indeed had an effect, (2) their symptoms improved or returned to normal level simply with the passage of time (spontaneous remission), or (3) their symptoms improved because they expected to get better (placebo effect). The current estimate is that nearly one-third of individuals diagnosed with anxiety or depressive disorders will get better without structured treatment. Research also shows that placebo effects are quite powerful and sometimes long-lasting. Spontaneous remission and placebo effects, therefore, are confounding variables in treatment studies.

Two popular and rigorous methods for evaluating the effectiveness of treatments are randomized controlled trials (RCTs) and meta-analyses. In RCTs, scientists control for the confounding variables using a control group and random assignments. The control group may receive no treatment (e.g., a “wait-list control group,” where clients stay home waiting until they can get treatment later), but withholding treatment from clients with symptoms of psychopathology presents ethical issues. For this reason, treatment studies commonly include a placebo control group. In drug studies, placebos are inactive drugs (e.g., sugar pills) given in the same way as the active drugs. In psychotherapy studies, placebos may be support groups or relaxation/meditation classes. RCTs may also include a comparative treatment group(s) receiving an alternative therapy known to have beneficial effects.

Ideally, treatments should be evaluated in double-blind RCTs, in which neither the client nor the researcher/therapist is aware of which intervention the client is receiving. Think about why. Keeping both the client and the therapist “in the dark” in drug studies is easy because placebos can be made to look like the active drugs. But is it even possible with psychotherapy studies?

Meta-analysis is a statistical procedure to combine, or pool, the strength of a particular finding across a number of studies investigating the same or similar topics. So meta-analyses can give us the big picture of an overall effect of specific treatments. One caveat is that meta-analyses often rely only on published studies, and published studies are far more likely to have significant results than non-significant results (this is called publication bias). Without including unpublished data, meta-analyses may end up in an overestimation of effects of certain treatments.
This graph depicts the rates of improvement for more than 2,000 people in weekly psychotherapy and for 500 people who did not receive psychotherapy. As you can see, after only eight weekly sessions, better than 50 percent of participants receiving psychotherapy were significantly improved. After the same length of time, only 4 percent of participants not receiving psychotherapy showed “spontaneous remission” of symptoms. Clearly, psychotherapy accelerates both the rate and degree of improvement for those experiencing psychological problems.

Source: Adapted from McNeilly & Howard (1991).

So, what do RCTs and meta-analyses say about treatments for psychological disorders? In a nutshell, therapy works; and treatment is significantly more effective than no treatment (e.g., Figure 10.5). Given the diversity of assumptions and techniques across different theories, is one type of therapy more effective than others? The answer is complex. Meta-analyses have shown very similar success rates across most standard psychotherapies. RCTs comparing the drug treatment and psychotherapy often show that, although either treatment is significantly better than placebo, the combination of treatments is not significantly more effective than one or the other (you will see some examples later in the chapter). How could this be? Some researchers argue that it is not the principles or techniques particular to a theory, but the non-specific factors shared by all forms of therapy that lead to better outcomes. One example of such non-specific factors is the therapeutic alliance (bond between therapist and client), which has been found to be the key aspect of effective therapy. Which factors may contribute to therapeutic alliance? (Hint: consider the therapist factors, client factors, and external factors.)

Still, some forms of therapy may be more effective for certain disorders. Clear-cut, behavioral problems (e.g., phobias, sexual problems, or bed-wetting) respond best to behavioral therapies. Recent studies find cognitive therapies and CBT are effective in coping with anxiety and depression and reducing suicide risk. People with severe psychopathologies are unlikely to benefit from psychotherapy alone. Insight-oriented therapies have been found to be of limited use—and are sometimes harmful—for individuals with schizophrenia. In sum, the best form of treatment for a given problem is one that is based on the etiology of the problem (if known), the effectiveness of the treatment, the
degree of emotional distress, and the extent to which the person is having difficulty functioning in everyday life. Depending upon the answers to all of these questions, treatment may consist of group or individual psychotherapy, with or without drugs, on an in-patient or out-patient basis.

10.2.7 Which Psychopathologies Should We Study, Why, And How?

In this chapter, you will take a close look at three of the many categories of mental disorders—anxiety disorders, mood disorders, and schizophrenia. These psychopathologies represent some of the most common and/or debilitating psychological problems. Through the study of these disorder groups, you will ask, and eventually be able to answer the fundamental questions that form the basis of the field known as abnormal psychology. The first goal of psychology (and any science) is to describe what is of interest, in this case, behavior. To describe objectively, clearly, accurately, and thoroughly requires the observer to answer what and when questions. Doing so often involves classifying and organizing behaviors according to a system that groups behaviors together according to their commonalities. Questions might include the following: When does a behavior problem become a disorder? What are the key features and course of the disorder? What distinguishes the disorder from other disorders? Next, you will explain the disorder, which involves posing questions about how it came to be, and why it occurs in one person but not another. How is it explained using the diathesis-stress model? To predict the future behavior of any given individual is a challenging task that is only as good as our descriptions and explanations of others who behave similarly, and even then, it is based on probabilities, not certainties. Predict questions might include the following: What is likely to happen to this person if she does not receive treatment, or does receive treatment? Can we expect a recurrence of symptoms? If we change the environment, what will happen? Finally and ultimately, the goal of psychology is to change, even control as well as prevent behavior. In the case of disorders, one change goal is to accomplish the aims of therapy, which are to provide clients with relief from distress caused by their symptoms, medically and/or through self-awareness and insight into their problems, and/or coping and problem-solving skills. By what means are these aims best accomplished? Under what conditions is it ethical and desirable to change or control a person’s behavior, and at what cost? By learning to ask and answer these questions, you will be able to apply a scientific way of thinking to any disorder or problem behavior. Asking and answering these essential questions is more important than memorizing the names of specific disorders and their corresponding symptoms.

10.3 ANXIETY DISORDERS

10.3.1 When Does Normal Anxiety Become A Disorder?

Very few of us go through even a week of our lives without experiencing tension, apprehension, or worry. Think about the feeling you get standing in front of the class to give a presentation, at an interview, before getting a flu shot, or on a first date. Normal anxiety and fear most often result from the anticipation of a threatening event or situation, and are perfectly natural—and often helpful. For example, anxiety motivates us to study for exams, do the right thing, and change for the better.

Recall though, that behaviors exist on a continuum from mild to severe, infrequent to frequent, controllable to uncontrollable, short duration to long duration, adaptive to pathological. Situation-specific, everyday worries experienced by healthy people are hardly comparable in intensity or duration, nor are they as debilitating, as those suffered by people with anxiety disorders. Pathological anxiety and fear are irrational, persistent, maladaptive, and uncontrollable, may strike
without a specific threat, and cause significant personal distress and functional impairment. Anxiety disorders affect nearly one in three people and are more common among women than men (Table 10.3). They frequently co-occur with other psychopathologies and can produce debilitating physical symptoms. As a result, anxiety disorders tend to be more chronic and incur greater social costs than most other psychopathologies. As you learn the key features of each anxiety disorder, pay close attention to how they are differentiated from normal anxiety or fear.

Table 10.3 Lifetime prevalence of anxiety disorders

<table>
<thead>
<tr>
<th>Disorder</th>
<th>ALL (% of population)</th>
<th>FEMALE (% of population)</th>
<th>MALE (% of population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generalized anxiety disorder</td>
<td>5.7%</td>
<td>7.1%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Specific phobia</td>
<td>12.5%</td>
<td>15.8%</td>
<td>8.9%</td>
</tr>
<tr>
<td>Social phobia</td>
<td>12.1%</td>
<td>13.0%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Panic disorder</td>
<td>4.7%</td>
<td>6.2%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Obsessive-compulsive disorder</td>
<td>2.3%</td>
<td>3.1%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Post-traumatic stress disorder</td>
<td>6.8%</td>
<td>9.7%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Any anxiety disorder</td>
<td>31.2%</td>
<td>36.4%</td>
<td>25.4%</td>
</tr>
</tbody>
</table>


Which type of anxiety disorder is most common? What do you notice about gender differences in the prevalence of anxiety disorders?

**Generalized Anxiety Disorder (GAD)**

Individuals with **GAD** worry about anything and everything—constantly—and find their worrying uncontrolled. They focus not only on major life issues (e.g., school/work performance, health, finances, relationships), but also on the “small stuff” most others would not perceive as threatening. Normally, anxiety subsides when a threatening situation is resolved; but in GAD, when one source of worry goes away, another quickly pops up to take its place. No wonder, GAD is often accompanied by physical symptoms such as chronic fatigue, restlessness, muscle tension, sleep problems, and difficulty concentrating.

**Phobia**

Consider what makes you really scared. A **phobia** is a strong or irrational fear of a specific object or situation. Many people are afraid of snakes, earthquakes, horror movies, or getting a root canal. Would having a phobia necessarily mean that the person has a psychological disorder?

**Specific phobia** is characterized by an excessive and irrational fear of a specific object or situation that interferes with a person’s everyday functioning. People with specific phobia recognize their fear is irrational. Yet encountering the feared object or situation can provoke a full-blown panic attack (see Panic disorder below), so they go to great lengths to avoid it. Triggers for specific phobia generally fall into the following four categories: (1) animals or insects, (2) natural environments (e.g., heights, water, lightening), (3) situations (e.g., flying, tunnels, enclosed places), or (4) blood or injury (including injections and other invasive medical/dental procedures). **Social phobia (or social anxiety disorder)**, on the other hand, involves a severe and persistent fear of being embarrassed,
humiliated, or negatively evaluated in social or performance situations. As seen in Box 10.6, social
phobia is far more debilitating than ordinary shyness. Recall *taijin kyofusho* in Japan, which also
involves extreme social anxiety (Box 10.4). In what way is *taijin kyofusho* distinct from social phobia
as defined in the West?

**Box 10.6**

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**Social Phobia—Jack’s Personal Story**

“Merely talking to other people makes me anxious. I often experience ‘phone fear.’ I avoid
social gatherings (particularly parties), which I find excruciating. Crowded settings, especially
without a perceptible escape route, cause me uneasiness, sometimes panic.

Anxiety-producing scrutiny affects me physically. My heart sledgehammers. My voice shakes.
My hands tremble; for decades, my palsied fingers barely managed to sign a check or credit
card receipt while being watched. My digestive apparatus stops cooperating, causing acute
discomfort, not to mention fear of vomiting or having diarrhea. Sweat pours profusely from
embarrassing body parts. Formal performances produce more severe symptoms, with anticipa-
tory anxiety arising days in advance.”

*Source: http://www.adaa.org/living-with-anxiety/personal-stories/much-more-shy*

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**Panic Disorder**

People sometimes use the word “panic” to mean becoming frantic—or having an “Oh, crap!” mo-
mant—in response to acute stress (e.g., realizing you had studied the wrong material on the day
of a test, locking yourself out of your own home). Imagine, instead, the wave of sheer terror that
might wash over you if, during a severe thunderstorm, the airplane you are in suddenly drops 100
feet mid-air. Persons suffering from *panic attacks* are frequently overwhelmed by such intense fear—
often without actual danger. A panic attack is like a tornado; it strikes suddenly, escalates rapidly
into a minutes-long episode of frightening physical symptoms (pounding heart, shortness of breath,
sweating, choking sensations, dizziness, etc.) accompanied by feelings of impending doom (e.g.,
“I’m going crazy! I’m going to die!”), and gradually subsides. When panic attacks occur frequently,
*panic disorder* is diagnosed. Some individuals with panic disorder develop *agoraphobia*, debilitating
fear and avoidance of situations in which getting help or escape might be difficult in the event of
having a panic attack. *Ataque de nervios* (see Box 10.4) may be considered a cultural variant of panic
disorder.

**Obsessive-Compulsive Disorder (OCD)**

We all at times feel annoyed by senseless and disturbing thoughts we cannot get out of our head
or double- or triple-check to be sure that we turned off the stove. In *OCD*, such thoughts and ac-
tions dominate a person’s life, causing significant distress and impairment in everyday functioning.
*Obsessions* are repeated, intrusive, and uncontrollable thoughts or mental images. Common obses-
sions take the form of pathological doubts (e.g., “Did I really lock the door?”) or an irrational fear of
contamination, of harming someone, or of acting on some sexual or violent impulse. *Compulsions*
are repetitive, ritualized behaviors that the person feels driven to perform to reduce the anxiety caused
by the obsessions. Common compulsions include checking, cleaning/washing, and counting. Compulsive rituals can occupy many hours of each day. While most people with OCD recognize their compulsions are excessive and even silly, their attempt to resist performing the ritual often ends up intensifying the anxiety, tension, and distress.

**Post-traumatic Stress Disorder (PTSD)**

People with PTSD are plagued by chronic anxiety that has developed after experiencing or witnessing an extremely frightening—often life-threatening—traumatic event. Such events include combat during war, sexual or physical assault, accidents, natural disasters, or terrorist attacks. **PTSD** is marked by three core symptoms: (1) unwanted, intrusive *re-experiencing* of the traumatic event (e.g., flashbacks, nightmares), (2) *numbing of emotions* and avoidance of situations that might trigger memories of the event, and (3) *increased arousal*, which includes being easily startled, hyper-vigilance, difficulty sleeping, irritability or outbursts of anger, and difficulty concentrating. Associated problems and symptoms include depression, guilt, social withdrawal, interpersonal problems, substance abuse, and sexual dysfunction.

**Box 10.7**

| Earthquake and tsunami, and subsequent nuclear crisis in northeast Japan, 2011 | Terrorist attack on the World Trade Center on September 11, 2001 |

According to epidemiological studies, about one in six survivors of the 9/11 terrorist attacks (those who evacuated World Trade Center towers) met criteria for PTSD several years after the attacks. Why is it that some people develop PTSD while others who have been through the same traumatic event do not?
10.3.2 What Causes Anxiety Disorders?

Now that you are familiar with the symptoms of some anxiety disorders, that is, you can describe them, let’s pursue the next goal of science and try to explain them. How did the disorder begin? What caused it in the first place, and what keeps it from going away? Using the diathesis-stress model as our guide, let’s first look at some psychological diatheses.

The onset of anxiety disorders often follows periods of stress, a stressful event, or trauma—a bad event that are unpredictable and uncontrollable. According to the behavioral perspective, irrational anxiety and fear are learned. Recall the principles of classical conditioning. A person who has been stung (UCS) by a wasp, for example, may come to associate wasps (a previously neutral stimulus, now a CS) with pain (CR); through stimulus generalization, she/he may develop a phobia of all kinds of bugs. Researchers can create chronically anxious, ulcer-prone rats by giving them unpredictable electric shocks. This link between conditioned fear and chronic anxiety may explain why individuals with anxiety disorders are hypersensitive to certain cues. Operant conditioning, on the other hand, may explain how avoidance behavior and compulsions are maintained. If washing your hands 100 times relieves your anxiety and tension, you are likely to do it again when those feelings return—in this scenario, what type of reinforcement is hand-washing? Finally, pathological fear may be learned via modeling; for example, children who observe their parents “freak out” over small insects may exhibit the same behavior.

Psychological diatheses can also involve misperceptions and unfounded beliefs. The cognitive perspective of irrational anxiety and fear focuses on the involvement of a cognitive bias toward processing threatening information or interpreting ambiguous information negatively. For example, a tendency to catastrophize (making a mountain out of a molehill) is a cognitive diathesis for anxiety disorders; imagine how a student with GAD would react to getting a “C” in a pop quiz in class. Panic disorder may be maintained by catastrophic misinterpretation of bodily sensations. People who experience panic attacks may be hypersensitive to physiological signs of anxiety, which they interpret as leading to disastrous consequences for their well-being. This interpretation adds to their physiological arousal and, in a vicious cycle, intensifies the symptoms. Dysfunctional core beliefs such as “the world is a dangerous place” or “I am totally incompetent” may increase one’s vulnerability to PTSD.

However, the etiology of anxiety disorders cannot be fully explained by learning theory or dysfunctional core beliefs. Studies show that many people with severe phobias do not recall any bad event involving the object or situation they fear. And many people who experience highly traumatic experiences do not develop enduring fears. Why are some individuals more vulnerable to anxiety disorders?

The biomedical perspective points to research evidence that supports the role of biological diatheses in the development of anxiety disorders. First, compared to an average person, some individuals may be biologically inclined to heightened physiological arousal (rapid heart rate, shortness of breath, sweaty palms, dizziness, etc.). Second, anxiety disorders run in families. Paired with a traumatic event, high-strung temperament (which is largely genetically determined) may result in pathological anxiety. Third, neurochemical imbalance in the brain has been linked to some anxiety disorders. For example, drugs that increase the availability of serotonin can reduce symptoms of OCD, and some patients with GAD respond to treatment with drugs that enhance the release of gamma-aminobutyric acid (GABA). However, the fact that a drug relieves the symptoms does not necessarily mean that GAD was caused by an imbalance in GABA; chronic worrying may change the brain neurochemistry. (Remember that the cure does not always point to the cause!)
10.3.3 How Are Anxiety Disorders Best Treated?

Recall that the behavioral perspective assumes that if anxiety disorders were learned through classical conditioning, they could be “unlearned” by disrupting the association between conditioned stimulus (CS) and conditioned response (CR). Counterconditioning pairs CS (e.g., a wasp) with a new response that is incompatible with anxiety (e.g., relaxation). The principle of counterconditioning is behind exposure therapy, in which the client directly and repeatedly confronts anxiety-provoking objects and situations until they are no longer threatening.

Video Tool Kit Activity: Treating OCD: Exposure and Response Prevention—To view this material, refer to eBook.

One widely used exposure therapy is systematic desensitization. It involves three basic steps (suppose you were the client): First, you and your therapist work together to develop a hierarchy of feared situations, arranged from least to most distressing (Table 10.4). Second, you learn to relax deeply. This may involve breathing exercises, tightening and relaxing muscle groups, and visual imagery. The third step is the actual desensitization. While deeply relaxed, you imagine the least fearful situation on the hierarchy. If you can stay completely relaxed while imagining this scene, you move to the next. The trick is to proceed gradually: if relaxation cannot be maintained, the therapist guides you to return to a previous scene. (Notice how each imagined scene becomes paired with a new CR of relaxation rather than anxiety.) You work through the entire hierarchy over several therapy sessions. Once you can successfully manage your anxiety while imagining fearful events, you can use the technique in real life situations, i.e., in vivo exposure.

**Table 10.4 Examples of exposure hierarchies**

<table>
<thead>
<tr>
<th>SOCIAL PHOBIA</th>
<th>FEAR (0–100)</th>
<th>FEAR OF CONTAMINATION IN OCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make a presentation in front of class.</td>
<td>100</td>
<td>Put hands in toilet bowl water.</td>
</tr>
<tr>
<td>Raise a hand and ask a question during class.</td>
<td>95</td>
<td>Touch toilet seat.</td>
</tr>
<tr>
<td>Invite Michelle to have dinner and see a movie.</td>
<td>90</td>
<td>Touch floor beside toilet.</td>
</tr>
<tr>
<td>Go to an on-campus party and stay for 1 hour.</td>
<td>80</td>
<td>Handle raw poultry.</td>
</tr>
<tr>
<td>Eat lunch with classmates in campus cafeteria.</td>
<td>70</td>
<td>Touch washroom door handle.</td>
</tr>
<tr>
<td>Sit in the front row of class.</td>
<td>60</td>
<td>Touch the bottom of my shoe.</td>
</tr>
<tr>
<td>Talk to a stranger on bus.</td>
<td>50</td>
<td>Shake hands with a stranger.</td>
</tr>
<tr>
<td>Eat lunch alone in campus cafeteria.</td>
<td>40</td>
<td>Handle money.</td>
</tr>
<tr>
<td>Ask for directions at gas station.</td>
<td>30</td>
<td>Touch rim of own unwashed coffee cup.</td>
</tr>
<tr>
<td>Say hello to the cashier at grocery store.</td>
<td>20</td>
<td>Open a letter.</td>
</tr>
</tbody>
</table>
Cognitive therapy uses a principle technique called *cognitive restructuring*, where the client is taught to recognize her/his automatic, biased ways of thinking (e.g., catastrophizing, overgeneralization, personalization) that lead to anxiety and other negative emotions, and to interpret the same information in more realistic and healthy ways. Cognitive therapists use logic and evidence to challenge clients’ irrational beliefs, and guide them to do the same (see Box 10.8).

**Box 10.8**

**Cognitive Therapy for Panic Disorder**

The following transcript gives an example of how a cognitive therapist (T) would try to challenge the catastrophic beliefs of a client (C) who believes that signs of a panic attack are signals for an imminent heart attack.

C: When I’m panicking, it’s terrible, I can feel my heart pounding; it’s so bad I think it could burst through my chest.

T: What thoughts go through your mind when your heart is pounding like that?

C: Well, I’ll tell you what I think; it’s so bad that I think I’m going to have a heart attack. It can’t be good for your heart beating like that.

T: So you’re concerned that anxiety can damage your heart or cause a heart attack.

C: Yes, it must do you some damage. You hear of people dropping down dead from heart attacks caused by stress.

T: Do you think more people have stress in their lives than die of heart attacks?

C: Yes, I suppose so.

T: How can that be if stress causes heart attacks?

C: Well, I suppose it doesn’t always cause problems. Maybe it does only in some people.

T: Yes, that’s right; stress can cause some problems in some people. It tends to be people who have something wrong with their hearts in the first place. But stress is not necessarily the same as sudden anxiety or panic. When you panic your body releases adrenalin which causes the heart to speed up and your body to work faster. It’s a way of preparing you to deal better with danger. If adrenalin damaged the heart or body, how would people have evolved from dangerous primitive times? Wouldn’t we all have been wiped out?

C: Yes, I suppose so.

T: So maybe panic itself doesn’t cause heart attacks, there has to be something physically wrong for that to happen. When people have had heart attacks they are often given an injection of adrenalin directly into the heart in order to help start it again. Do you think they would do that if it damaged the heart even more?

C: No, I’m sure they wouldn’t.

T: So, how much do you now believe that anxiety and panic will damage your heart?

It is now known that in vivo exposure is the key ingredient for successful behavioral treatment. Today’s exposure therapy, therefore, tends to skip the imaginary part and go straight into gradual and progressive in vivo exposure. One important feature of exposure therapy is that it does put clients in situations where they can experience evidence against their dysfunctional beliefs (e.g., “If I speak up in class, everyone will think I’m a complete idiot”). CBT of anxiety disorders combine exposure therapy with cognitive restructuring. CBT is structured and action-oriented; after setting a specific goal, the therapist teaches the client new ways to think and behave through lessons and homework assignments (e.g., keeping a diary of automatic thoughts).

**Box 10.9**

*Virtual reality technology is offering new possibilities for treating people with psychopathologies. In virtual reality exposure therapy (VRET), the client wears a motion-sensitive headset that creates vivid, three-dimensional simulations and is progressively exposed to the feared object or situation. Clients with fear of flying, for example, can peer out a virtual window of a simulated airplane, feel vibrations, and hear the engine roar as the plane taxis down the runway and takes off. VRET has been successfully applied to treat specific and social phobias and is showing promise in reducing symptoms of PTSD among combat veterans.*

Images © Bob Mahoney/The Image Works.
In terms of **biomedical therapy**, **antianxiety drugs** help reduce symptoms of anxiety and stress. The most widely prescribed antianxiety drugs are benzodiazepines (e.g., Valium, Xanax), a type of tranquilizer that produces rapid effects by increasing the level of GABA. While highly effective in reducing acute anxiety symptoms, benzodiazepines have side effects that include drowsiness and impaired motor coordination. In addition, they are associated with the development of tolerance (i.e., are potentially addictive) and are dangerous and even lethal if mixed with alcohol. **Antidepressants** (medications that help lift mood) are increasingly being used to successfully treat anxiety disorders. (Think for a moment—how could it be that drugs to treat depression also work for reducing anxiety?)

A common criticism for drugs used to treat psychopathologies is that they reduce surface symptoms without resolving the underlying problem—etiology. You may wonder, then, if combining psychotherapy and drug treatment is the best approach. One RCT compared CBT, an antidepressant Tofranil, and the combination of these treatments (CBT plus Tofranil) with a placebo (an inert pill) for the treatment of panic disorder. Take a look at the graph (Figure 10.6). Based on these findings, if your father had recurrent panic attacks, what type of help would you recommend that he seek? Why?

![Figure 10.6 Effectiveness of CBT and drug treatment for panic disorder](image)

After 12 weeks of treatment, the effects of CBT, Tofranil, and treatment that combined CBT and Tofranil were not significantly different, although all three were superior to the placebo.


## 10.4. MOOD DISORDERS

### 10.4.1 When Does Normal Mood Become A Disorder?

Take a moment and think about your mood during the past six months. What brought you joy and excitement? Was there a time when you felt miserable and discouraged? If so, what led to such feelings?
All of us experience periods of depressed mood, and these periods can usually be traced back to specific events. Experiences of loss, such as bereavement, losing a job, diagnosis of a serious illness, and end of a romance, are likely to trigger periods of sadness and lethargy. Failures—doing poorly in an exam or being rejected at an audition, for example—may also bring periods of dejection, rumination, and self-doubt. Usually, we can shake off these feelings within a few days or weeks and get on with our lives. At other times, however, symptoms of depression may linger on and permeate all aspects of our lives—emotional, cognitive, behavioral, and physical (Figure 10.7).

Figure 10.7 Symptoms of major depression

<table>
<thead>
<tr>
<th>Emotional symptoms</th>
<th>Behavioral symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Feelings of sadness, hopelessness, guilt, emptiness, or worthlessness</td>
<td></td>
</tr>
<tr>
<td>- Feeling emotionally disconnected from others</td>
<td></td>
</tr>
<tr>
<td>- Turning away from other people</td>
<td></td>
</tr>
<tr>
<td>- Dejected facial expression</td>
<td></td>
</tr>
<tr>
<td>- Makes less eye contact; eyes downcast</td>
<td></td>
</tr>
<tr>
<td>- Smiles less often</td>
<td></td>
</tr>
<tr>
<td>- Slowed movements, speech, and gestures</td>
<td></td>
</tr>
<tr>
<td>- Tearfulness or spontaneous episodes of crying</td>
<td></td>
</tr>
<tr>
<td>- Loss of interest or pleasure in usual activities, including sex</td>
<td></td>
</tr>
<tr>
<td>- Withdrawal from social activities</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical symptoms</th>
<th>Cognitive symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Changes in appetite resulting in significant weight loss or gain</td>
<td></td>
</tr>
<tr>
<td>- Insomnia, early morning awakening, or oversleeping</td>
<td></td>
</tr>
<tr>
<td>- Vague but chronic aches and pains</td>
<td></td>
</tr>
<tr>
<td>- Diminished sexual interest</td>
<td></td>
</tr>
<tr>
<td>- Loss of physical and mental energy</td>
<td></td>
</tr>
<tr>
<td>- Global feelings of anxiety</td>
<td></td>
</tr>
<tr>
<td>- Restlessness, fidgety activity</td>
<td></td>
</tr>
<tr>
<td>- Difficulty thinking, concentrating, and remembering</td>
<td></td>
</tr>
<tr>
<td>- Global negativity and pessimism</td>
<td></td>
</tr>
<tr>
<td>- Suicidal thoughts or preoccupation with death</td>
<td></td>
</tr>
</tbody>
</table>

We all have our ups and downs. Recall though, that behaviors exist on a continuum from mild to severe, infrequent to frequent, controllable to uncontrollable, short duration to long duration, adaptive to pathological. By now you must have a good idea about the difference between normal mood fluctuations and disordered mood. If mood is viewed as a continuum reflecting emotion, criteria for mood disorders are met when a person experiences a pattern of moods that lie at either extreme, causing significant distress or impairments in everyday functioning. In most severe forms, mood disorders may be accompanied by psychotic symptoms (these will be covered in detail in the discussion of schizophrenia) or life-threatening actions.

**Depressive Disorders**

In major depression, symptoms of depressed mood persist for at least two weeks. In his widely acclaimed memoir, *Darkness Visible* (1990), the late William Styron, a Pulitzer Prize-winning novelist, described his wrenching struggle with major depression:

……all sense of hope had vanished, along with the idea of a futurity; my brain, in thrall to its outlaw hormones, had become less an organ of thought than an instrument registering, minute by
minute, varying degrees of its own suffering. The mornings themselves were becoming bad now as I wandered about lethargic, following my synthetic sleep, but afternoons were still the worst, beginning at about three o’clock, when I’d feel the horror, like some poisonous fog bank roll in upon my mind, forcing me into bed. There I would lie for as long as six hours, stuporous and virtually paralyzed, gazing at the ceiling and waiting for that moment of evening when, mysteriously, the crucifixion would ease up just enough to allow me to force down some food, and then, like an automaton, seek an hour or so of sleep again.

Major depression typically lasts several months and tends to be a recurrent disorder: without treatment, about 80% of individuals will experience another episode. Intense depression associated with bereavement is considered a normal reaction if it does not linger too long. While a “normal” length of mourning varies from person to person and culture to culture, as a general rule, if a person’s everyday functioning following the death of a loved one is still seriously impaired after two months, major depression is suspected.

Dysthymia is characterized by chronic, low-grade depression. It shares many of the characteristics of major depression, albeit in milder forms. People with dysthymia can function adequately, but are distressed by the “blues” that persists for years. When a person with dysthymia experiences an episode of major depression, it is referred to as double depression.

Depression is the leading cause of disability worldwide, is the number-one reason people seek mental health services, and frequently occurs with other psychopathologies. In the U.S., major depression is the most common of all psychological disorders (except for nicotine dependence), affecting one in four women and one in eight men during their lifetime. Lifetime prevalence of dysthymia is 4% for women and 2% for men. Women’s risk of depressive disorders, therefore, is double that of men’s, and this gender difference is consistent cross-culturally. Research also shows that prevalence of depression in industrialized nations has increased steadily since the mid-20th century, and at the same time the age of onset has decreased; in North America, young adults today are three times more likely than their grandparents to suffer from depressive disorders. What are possible explanations for this phenomenon?
English novelist and critic Virginia Woolf (1882–1941) suffered lifelong “breakdowns” characterized by extreme mood swings. At one extreme were her episodes of severe depression—sullen, paralyzed, and her creativity at a halt, she was sometimes bedridden for months at a time. These periods alternated with mania, when, as her husband recounted, “she talked almost without stopping for 2 or 3 days, paying no attention to anyone in the room or anything said to her.” Her speech “became completely incoherent, a mere jumble or dissociated words.” At the height of her spells, birds spoke to her in Greek, her dead mother reappeared and scolded her, and voices commanded her to “do wild things.” She refused to eat, wrote pages of nonsense, and launched tirades of abuse at her husband and her companions. Between these phases, Woolf somehow managed a brilliant literary life. Before drowning herself in the river, she had written to her husband: “Dearest, I feel certain I am going mad again…. And I shan’t recover this time. I begin to hear voices, and I can’t concentrate. So I am doing what seems the best thing to do.”


DSM-IV-TR defines two main types of bipolar disorder. The more severe type is bipolar I disorder, where individuals alternate between episodes of major depression and mania. If depression is slow motion, mania is fast forward. People in a manic episode, which may last from several days to several months, typically need little sleep, have racing thoughts, and are unrealistically happy (though easily irritated if crossed), overactive, and distractible. They often exhibit an exaggerated belief in their own abilities and have grandiose plans. Their impulsivity may lead to poor judgment and reckless behaviors (e.g., extravagant spending sprees, unsafe sex). Another common symptom is nonstop talking (pressured speech), even when others try to break in or no one is listening. Their speech may show flight of ideas in which they quickly shift from one unfinished topic to another. In bipolar II disorder, episodes of major depression alternate with periods of hypomania (mild mania). Often, a manic or hypomanic episode immediately precedes or immediately follows a major depressive episode.

The lifetime prevalence of bipolar disorder is about 2%, affecting men and women equally. The onset is usually in young adulthood. Most individuals with bipolar disorder go through several episodes during the course of their lives, and about 10% experience rapid cycling, a severe condition characterized by four or more episodes of mania or major depression every year.

Virginia Woolf’s lifelong affliction with bipolar disorder ended in suicide, but her prolific writing was fueled by the manic phases of her illness. Individuals with bipolar disorder can be highly productive during their periods of mild to moderate mania. Indeed, there is an enduring theory that artistic creativity is associated with bipolar disorder (and even “madness”). The question to ask is, “what comes first, creativity or psychological disturbance?” Of course, psychopathology is not a prerequisite for creative achievement, and vice versa. Still, the list of accomplished artists, writers, composers, and performers who have experienced bipolar disorder is quite impressive (check out http://www.mental-health-today.com/bp/famous_people.htm), and it is worth considering how symptoms of mania may contribute to creativity.
10.4.2 What Causes Mood Disorders?

Research demonstrates that biopsychosocial factors and stress interact to produce mood disorders. **Biological diatheses** are illustrated in research on families, twins, and adopted children. These studies suggest a strong genetic diathesis, with **heritability** of major depression estimated to be around 40%. If one identical twin has bipolar disorder, the other has a 70% chance of also developing the disorder (identical twins share 100% of their genetic makeup.) Another biomedical diathesis for mood disorders may involve **abnormal brain activity** (Figure 10.8). For example, depression is linked to dysfunction in a number of brain areas such as prefrontal cortex, hippocampus, and amygdala. In the 1950s, researchers noticed that drugs that increased levels of neurotransmitters norepinephrine and serotonin could sometimes alleviate symptoms of depression, leading to a hypothesis that their **neurochemical deficiencies** play a major role in the etiology of depression—and to surging sales in antidepressants. Antidepressants affect neurotransmission quickly (within hours); then, why is it that they typically take at least four weeks to lift symptoms of depression? Mania has been linked to imbalance in multiple neurotransmitters including norepinephrine, serotonin, dopamine, and GABA; however, this does not explain why commonly prescribed **lithium**, which is unrelated to these neurotransmitters, can provide relief from both mania and major depression in bipolar disorder. Thus, the biochemical model does not provide a full account of mood disorders.

**Figure 10.8 Brain activities in bipolar disorder**

The ups and downs of bipolar disorder. PET scans show that brain energy consumption rises and falls with the patient’s emotional switches. Red areas are where the brain rapidly consumes glucose. Photo courtesy of Lewis Baxter and Michael E. Phelps, UCLA School of Medicine.

**Psychological diatheses** provide a powerful explanatory mechanism of the onset and maintenance of depression. The cognitive perspective assumes that depression results when individuals develop a cognitive schema that biases them toward negative views of the self, the world, and the future (**negative triad**). The negative triad is a **cognitive distortion** that leads to a number of systematic cognitive biases (e.g., personalization, overgeneralization, all-or-nothing thinking). It further influences the way people explain their behavior and the events that happen to them (**attributional style**); the attributional style of people with depression is often **internal** (i.e., it’s entirely my own fault) rather than external, **stable** (i.e., I am unlikely to change) rather than temporary, and **global** (i.e., affecting everything I do) rather than specific. Imagine this: if you had an internal, stable, and global attributional style, how would you explain events such as failing a math exam or a breakup with a romantic partner? And how would such thoughts make you feel?

Figure 10.9 shows how the negative schema feeds a vicious cycle in which depression becomes a self-fulfilling prophecy. Research shows that there is a two-way relationship between depression and negative thinking; that is, negative thinking makes people susceptible to depression, and depression makes people think negatively. Further, behavior and attitudes displayed by individuals with depression may elicit negative responses in others, which in turn can reinforce their negative schema and exacerbate their symptoms.
We must also consider sociocultural factors (diatheses and stressors) that may play a role in the etiology and course of depression. As previously noted, there are gender differences in the prevalence of depression, with women twice as vulnerable to depressive disorders as men. (Recall a similar trend in the prevalence of anxiety disorders.) We now know that women's biological makeup (genetic, biochemical or hormonal factors associated with two X chromosomes) does not account for the large sex difference in depression, as once believed. One contemporary theory points to women's tendency to ruminate on their negative emotions as the culprit. When things go wrong, women tend to dwell on the whys and consequences and turn inward, while men tend to engage in self-distraction (e.g., work, drinking alcohol, watching TV) to cope with negative emotions. Research confirms that women are significantly more likely than men to use ruminative coping when depressed. Ruminative coping tends to fuel the negative schema, intensifying hopelessness and helplessness. Compared with men, women are also more likely to acknowledge and disclose their negative emotions.

Yet another explanation is that women tend to experience more stress in the form of sexism and discrimination, violence and abuse, too much workload, and less satisfying work and family lives. The large gender gap in depression first appears in adolescence; societal emphasis on physical appearance may take a greater psychological toll in women. Low socioeconomic status is also a risk factor for depressive disorders, and women are more likely to experience poverty. These experiences are likely to interact with women's tendency to ruminate, thus increasing their vulnerability to depression and anxiety.

10.4.3 How Are Mood Disorders Best Treated?

Psychotherapy for depression is influenced by assumptions about the causes of depression. While lifting of mood and restoration of functioning are common treatment goals, the specific therapeutic techniques and activities will differ according to the focus of treatment. As you have seen, biased
cognitions appear to play an important part in the development and maintenance of depression. In cognitive restructuring, clients are often asked to monitor their automatic negative thoughts using a form that allows them to connect their automatic thoughts with their depressive symptoms, to examine the evidence for and against their automatic thoughts, and to come up with alternative, more balanced thoughts (Table 10.5). According to Cognitive Behavior Therapy (CBT), thoughts, feelings, and behaviors are interrelated. Therefore, cognitive-behavioral therapists engage clients to not only think differently, but also do things, such as get out of bed in the morning, go for a walk, and call a friend. Clients may be assigned activities so that they can have successful experiences and feel better about themselves. Studies have also demonstrated the effectiveness of CBT in helping people with bipolar disorder in the areas of medication compliance, anticipating stressors, and interpersonal functioning.

**Table 10.5 Record form for automatic negative thoughts**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Who?</td>
<td>What did you feel? Rate each mood (0–100%).</td>
<td>What was going through your mind just before you started to feel this way? Any other thoughts? Images?</td>
<td></td>
<td></td>
<td></td>
<td>Re-rate moods listed in column 2 as well as any new moods (0–100%).</td>
</tr>
</tbody>
</table>

**[Example]**

9 a.m. Tuesday: Saw Professor Smith at the campus bookstore. I said “Hi,” but he passed by without acknowledging me.

- Confused-50%
- Hurt-90%
- Depressed-80%

Professor Smith has a poor opinion of me. I’m such a failure. Nobody likes me.

I’ve seen Professor Smith being friendly with other students. I only got 70% on the 1st quiz in his course. I studied harder and think I did better on the 2nd quiz last week. I have been hurt before and have got through it.


Another type of psychotherapy that has been shown to be effective in treating major depression is interpersonal therapy. A variant of short-term psychodynamic therapy, interpersonal therapy aims to help clients to identify and better understand their current interpersonal problems and to develop more adaptive ways of relating others. Interpersonal therapy is highly structured and focuses on the following interpersonal problem areas: (1) role transitions (a major life change such as going away to college, becoming a parent, and getting married or divorced), (2) unresolved grief (coming to terms with the death of a significant other), (3) interpersonal dispute (conflict with a significant other), and (4) interpersonal deficits (limited social skills to develop and maintain healthy relationships).

**Biomedical treatment,** particularly prescription medicines are an essential part of the medical management of severe mood disorders. Bipolar disorder is treated with mood stabilizers such as lithium and Depakote (a drug originally used for epilepsy), although we do not fully understand why they
work. A simple salt, lithium can provide relief from symptoms of both the extreme highs and lows of bipolar disorder. A major disadvantage is that lithium is a toxic substance and has a precise dosage range in which it is effective for each client; therefore, the blood level of lithium requires close monitoring. Depakote effectively controls mania. Although it has side effects such as nausea, tremors, and weight gain, Depakote does not require careful blood monitoring and is commonly prescribed for bipolar disorder today.

People with depressive disorders are treated with antidepressants. (The label is sort of a misnomer now that these drugs are increasingly being used to treat anxiety and eating disorders.) Antidepressants block the breakdown or reabsorption of serotonin and/or norepinephrine to enhance synaptic transmission. Tricyclics (e.g., Tofranil, Elavil) increase the amount of both neurotransmitters. Common side effects include dry mouth, constipation, fatigue, and sexual dysfunction. Among the most widely used antidepressants today are selective serotonin reuptake inhibitors (SSRIs) such as Prozac, Paxil, and Zoloft (Figure 10.10). Side effects of SSRIs include stomach upset, dizziness, and sleeping difficulties. In the past several years, a number of new antidepressants such as Wellbutrin and Effexor have been introduced, and they appear to have fewer side effects than tricyclics and SSRIs. In the U.S., over 164 million antidepressant prescriptions were given out in 2008, generating $9.8 billion for pharmaceutical companies; 11% of women and 5% of men are now taking antidepressants.

In a landmark study by the National Institute of Mental Health, patients with major depression were randomly assigned to one of the following four treatments: (1) CBT, (2) interpersonal therapy (IPT), (3) Tofranil plus clinical management, or (4) pill placebo plus clinical management. All treatments lasted for 16 weeks. Severity of depression was assessed pre-treatment, post-treatment, and at 18-month follow-up. Figure 10.11 shows the recovery rates post-treatment and at 18-month follow-up. What can you conclude from these results?
Figure 10.11  Effectiveness of drug treatment, CBT, and IPT for major depression

Clinical management (CM) included support and encouragement and advice if necessary. After 16 weeks of treatment, there were no significant differences in the recovery rate between CBT, IPT, and Tofranil plus CM. At the 18-month follow-up, the recovery rate was similar among the four treatments. Among participants who had recovered, relapse rates were 36% for CBT, 33% for IPT, 50% for Tofranil plus CM, and 33% for placebo plus CM.


Recall the concept of publication bias. According to the latest reviews of randomized controlled trials of antidepressants, which evaluated both published and unpublished study data, antidepressants are, at best, only slightly more effective than placebo when it comes to mild to moderate depression. The placebo effect is less for those with severe depression, which makes the added benefit of the drug somewhat greater for them (remember also that people with more severe depression receive a higher dosage of the drug.) So, the bottom line is that if you have severe depression that interferes with your everyday functioning, antidepressants can be helpful. Again, antidepressants usually take at least four weeks before actually starting to relieve symptoms, so it is important to not discontinue the drug prematurely out of frustration and despair. If your depression is mild to moderate, psychotherapy, exercise (which is shown to increase serotonin levels), or self-help strategies would work just as well or better—minus the side effects.

What is your immediate reaction to the term electroshock treatment? Does it project an image of a barbaric procedure (as depicted in the film “One Flew over the Cuckoo’s Nest” starring Jack Nicholson)? Each year in the U.S., about 100,000 individuals with major depression who have not responded well to other forms of treatment undergo electroconvulsive therapy (ECT), also known as electroshock treatment. In ECT, electric currents are passed through the brain, producing a brief seizure. In early days, high doses of electricity were administered without anesthesia, leading to fractured bones, memory loss, and other serious side effects, resulting in an enduring stigma attached to ECT. Today, however, the patient is given a short-acting anesthetic and muscle relaxants before the current is applied, and the shocks are painless. Although why ECT works remains
unknown, about 80% of those receiving it improve markedly. ECT can be a lifesaving procedure for extremely suicidal or severely depressed persons. Watch: http://www.mayoclinic.com/health/electroconvulsive-therapy/MM00606.

10.4.4 What Do We Know About Suicide?

Box 10.11

U.S. Suicide Statistics

- More than 34,500 people commit suicide each year.
- There is one suicide every 16 minutes and 89 suicides per day.
- For every two people who die from homicides, three people die of suicide.
- Suicide is the:
  - 11th leading cause of death overall (7th and 15th leading cause for men and women, respectively);
  - 3rd leading cause of death for persons aged 10–24 years; and
  - 2nd leading cause of death among college students.
- Each year, 8 million people consider suicide and 1.1 million people attempt.
- Four times more women attempt suicide than men, whereas four times more men actually commit suicide because men typically use more lethal methods than do women (e.g., guns vs. pills).
- Elderly white men have the highest suicide rate.
- Male veterans have double the suicide rate of civilians.
- Suicide attempts requiring hospitalization cost the U.S. $3.54 billion each year in medical and work-loss costs.
- Annually, suicides cost the U.S. $13 billion in lost earnings.


The tragic effects of suicide extend beyond the loss of life; the grief among people who have lost a loved one to suicide is compounded by lasting and profound emotional repercussions such as confusion, guilt, shame, futility, and abandonment. As you see in Box 10.11, suicide is a major public health problem that affects people from all walks of life.

Most people who commit suicide have a diagnosable psychological disorder at the time of their death. The risk of suicide among those with major depression is about 20 times that of the general population. People seldom act on their suicidal thoughts while in the depths of depression—they do not have the energy or initiative to do so. It is when their mood begins to rebound that the suicide risk increases. In relation to this phenomenon, the question of whether drug therapy plays a causative role in suicide became a subject of a vigorous controversy in the early 2000s. However, recent large-scale studies concur that people treated with antidepressants do not have an elevated suicide rate, and that they attempt fewer suicides in the long run.
How can you tell if someone is at risk for suicide? Unfortunately, suicide is notoriously difficult to predict. While we have data about groups of people, (e.g., men are more likely to complete suicide and women are more likely to attempt suicide), it is extremely difficult to predict any single individual’s behavior. Misconceptions and myths about suicide—e.g., “People who threaten suicide are just seeking attention,” “Suicides occur without warning,” “Talking about suicide will encourage suicide attempts in people who are depressed”—may interfere with recognizing and providing help to someone at risk. The bottom line is that anyone who indicates suicidal thoughts must always be taken seriously. Research shows that most individuals who are suicidal communicate their intentions to friends or family members. Talking about suicide openly and objectively often lowers the person’s anxiety level and serves as a safeguard until she/he receives professional help. Here are other warning signs associated with an increased suicide risk:

- Previous suicide attempt(s).
- Substance abuse—alcohol and/or drug use is associated with as many as 50% of all suicides and is especially common among adolescent suicides.
- A severe, stressful event (e.g., bereavement, end of a romance, highly shameful experience).
- Expression of hopelessness and helplessness.
- Family history of suicide.
- Withdrawal from friends, family, and regular activities.
- Sudden, unexplained decline in academic or workplace performance.
- Reckless and risky behavior that is out of character.
- Giving away prized possessions.

Box 10.12

How to Help a Loved One

When a family member or a friend is depressed and shows any of the warning signs of suicide, you can help by listening, expressing your compassion, understanding, and support, and referring her/him to a professional for help:

- U.S. National Suicide Prevention Lifeline: 1-800-273-TALK (8255)
- Indianapolis Crisis & Suicide Hotline: (317) 251-7575
- IUPUI Counseling and Psychological Services (CAPS): (317) 274-2548
10.5 SCHIZOPHRENIA

10.5.1 What Is Schizophrenia?

Box 10.13

“All of a sudden things weren’t going so well. I began to lose control of my life and, most of all, myself. I couldn’t concentrate on my schoolwork, I couldn’t sleep, and when I did sleep, I had dreams about dying. I was afraid to go to class, imagined that people were talking about me, and on top of that I heard voices. I called my mother in Pittsburgh and asked for her advice. She told me to move off campus into an apartment with my sister.

After I moved in with my sister, things got worse. 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.’ My sister forced me to go to school. I would go out of the house until I knew she had gone to work; then I would return home. 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.’ Things worsened—I couldn’t remember a thing. I had a notebook full of reminders telling me what to do on that particular day. I couldn’t remember my schoolwork, and I would study from 6:00 p.m. until 4:00 a.m., but never had the courage to go to class on the following day. I tried to tell my sister about it, but she didn’t understand. She suggested that I see a psychiatrist, but I was afraid to go out of the house to see him.

One day I decided that I couldn’t take this trauma anymore, so I took an overdose of 35 Darvon pills. At the same moment, a voice inside me said, ‘What did you do that for? Now you won’t go to heaven.’ At that instant I realized that I really didn’t want to die, I wanted to live, and I was afraid. I got on the phone and called the psychiatrist whom my sister had recommended.”


People who experience anxiety or depression usually recognize their symptoms and remain in touch with reality. But those experiencing psychosis lose their grip on reality and exhibit severe disturbances in thought, language, sensory perception, emotion regulation, and behavior. There are a number of possible causes of psychosis, including brain tumors, dementia, epilepsy, and use of alcohol or certain drugs. Psychotic symptoms in schizophrenia (and in severe mood disorders), however, are not due to a medical condition or direct physiological effects of a substance. Given its debilitating symptoms and profound impact on the individual, the family, and society, schizophrenia is the most severe of all psychopathologies.

According to DSM-IV-TR, schizophrenia is diagnosed (i.e., criteria for schizophrenia have been met) when two or more of the following five central features are present for at least one month, with signs of the disorder persisting for at least six months: (1) delusions, (2) hallucinations, (3) disorganized speech, (4) grossly disorganized or catatonic behavior, and (5) negative symptoms (e.g., flat affect, apathy, poverty of speech). The first four are known as positive symptoms because they reflect an excess or distortion of normal functions, whereas negative symptoms reflect diminution or absence of normal functions. Let’s first examine each symptom in detail.
Positive Symptoms

Delusions are false beliefs that are firmly held. All of us get deluded or overly suspicious now and then. How many of us have heard people of normal weight say, “I’m too fat”? Have you noticed that cognitive biases associated with depression and anxiety have a touch of delusional quality? Heightened paranoia may serve to protect you in certain situations, e.g., travelling alone in an unfamiliar place. But delusions in schizophrenia are so bizarre and farfetched, and persist despite compelling evidence that contradicts them. For example, a person with schizophrenia may believe that her/his entire internal organs have been taken out and replaced by those of someone else as part of a government conspiracy (delusion of persecution), she/he is Jesus Christ or some other famous person (delusion of grandeur), or billboards and TV ads contain cryptic messages directed at her/him (delusion of reference). People with schizophrenia often have little or no awareness of their disordered thought and perceptual processes. How do you think their poor insight, combined with delusions, may impact their interpersonal relationships—and therapy?

Hallucinations are false perceptions, e.g., seeing or hearing things that are not there. Research demonstrates that hallucinations are not always associated with psychopathology. For example, people grieving the loss of a loved one often report feeling the deceased person’s presence or hearing her/his voice. Hallucinations may sometimes be experienced by healthy people in the state between waking and sleeping. As vividly described in Box 10.14, however, hallucinations in schizophrenia are intrusive and can leave a person feeling extremely confused and frightened. While they can occur in any sensory modality, the most common hallucination are auditory, reported by 70% of individuals with schizophrenia. The content of hallucinations is often tied to the person’s delusions; for instance, a person harbors delusions of persecution may hear accusatory, sadistic, or threatening voices.

Box 10.14

“The voices are predominantly destructive, either rambling in alien tongues or screaming orders to carry out violent acts. They also persecute me by way of unwavering commentary and ridicule to deceive, derange, and force me into a world of crippling paranoia. Their commands are abrasive and all-encompassing and have resulted in periods of suicidal behavior and self-mutilation….The visions are extremely vivid, provoking fear and consternation. For example, during periods of acute bombardment, paving stones transform into demonic faces, shattering in front of my petrified eyes. When I am in contact with people, they can become grotesquely deformed, their skin peeling away to reveal decomposing inner muscles and organs. Buildings and rooms spin and weave and their walls close in as I look on, paralyzed by fear. Inanimate objects take on a life of their own, pulsating and gyrating as linear beams of light cross my visual path….There can seem little hope for respite or likelihood of relief. The mind and body become fatigued, which often leads to long periods when I am cut off from the world at large.”


Disorganized speech reflects difficulties in organizing thoughts and focusing attention. During a conversation, people with schizophrenia often display loose associations (rapidly shifting from topic to topic, with no connection between one thought and the next), word salad (a random jumble of words), neologisms (made-up words that only have meaning to the individual), and clanging (meaningless use of rhyming words), seeming completely incoherent and nonsensical to a listener.
Psychotic speech can be grammatically correct and very detailed in terms of number of words and ideas, yet it usually conveys very little. Check out Box 10.15 and imagine what it would be like to interview someone with such speech patterns.

**Box 10.15**

**Examples of Disorganized Speech in Schizophrenia**

**Word salad**

“Everything is going around in slow motion. The boxes are clanging and chattering to be let out. Behind my forehead the past is surfacing mixing a bottle of acid solution. A stake jams a door that leads to a mirage of broken appearances. Inside a box, pounding fists try to pull down my imagination. The ground work is split into hundreds of pieces; each fragment is separate as if it had some kind of individual purpose. The truth is locked up in a unit.”

**Loose association**

Responding to the question “What color is your dress?”

“Red…Santa Claus…flying through the sky…God.”

**Neologisms**

SPECTROAUTOROTATION: “Circling in everywhere, as with checkers or a bat in baseball.”

SNIGGERATION: “A giggle or sniggering. I do it sometimes.”

RELAUDATION: “Praising over and over.”

CIRCLINGOLOGY: “Study of a rolling circle; a fruit can in the form of a cylinder rolling.”

**Clanging**

Transcript between a therapist (T) and a client (C):

T: What color is your dress?
C: Red…like a bed.
T: Why is it like a bed?
C: Because it’s dead.
T: Why is a bed like being dead?
C: I dunno…maybe it’s a med.
T: What’s a med?
C: A bled.


Many people have quirks that may seem odd to others. But individuals with schizophrenia may engage in **grossly disorganized** and **bizarre behavior**. They may exhibit childlike silliness, wear heavy, thick clothing in hot weather, loudly shout or swear out of the blue, collect garbage, engage in inappropriate sexual behavior (e.g., masturbating in public), or laugh recounting a sad memory. Some show *catatonia*—motor disturbances characterized by muscle rigidity or a marked decrease in all movement, or excessive stereotyped movements (e.g., rubbing, agitation pacing backwards and forwards, repetitive smacking of parts of the body). These individuals may actively resist movement when others try to move them, or become completely unresponsive and unaware of their surroundings.
Negative Symptoms

Present in two-thirds of people with schizophrenia, flat affect is a lack of emotional expression, often manifesting in a vacant stare, lack of eye contact, and monotonous voice tone. (Importantly, flat affect only refers to the outward showing of emotions and not to the person’s inner experience, which may not be impoverished at all.) Apathy represents passivity and an inability to carry out normal day-to-day goal-oriented activities. The person may become inattentive to personal hygiene, show little interest in routine social or work activities, and spend much of their time sitting around doing nothing. Poverty of speech refers to brief, empty replies to questions. Negative symptoms also include anhedonia (an inability to experience pleasure) and social withdrawal. Family members often find negative symptoms to be the most distressing aspect of schizophrenia and more disabling and burdensome than positive symptoms.

Schizophrenia is a complex and heterogeneous disorder, and the various symptoms described above do not all occur in every afflicted person. Based on the predominant symptoms, the following subtypes of schizophrenia have been identified: the most common, paranoid type is characterized by prominent delusions (usually of persecution or grandeur) and/or auditory hallucinations; catatonic type is characterized by immobility and stupor or agitated, purposeless motor activity; and the most severe, disorganized type features disorganized speech and behavior as well as flat or inappropriate affect.

10.5.2 What Causes Schizophrenia?

Schizophrenia has spawned more research than any other psychopathology, and studies indicate that not one in particular, but multiple biological diatheses are likely to contribute to its etiology. First, genetics play an important role. If both of your parents had schizophrenia or if you had an identical twin with the disorder, your chance of developing schizophrenia would be close to 50%. (If schizophrenia were purely a matter of genetics, then what risk rate would you expect for identical twins?)

Frequently referred to as a “disorder of the brain,” schizophrenia has also been linked to a number of brain abnormalities. On the biochemical side, the dopamine hypothesis—the theory that symptoms of schizophrenia result from excessive dopamine activities—arose based on some important observations. First, traditional antipsychotics (drugs that reduce symptoms of psychosis and schizophrenia) were found to act by blocking dopamine receptors. (One of the side effects of these antipsychotics was muscle tremors similar to those experienced by people with Parkinson’s disease, and it was already known that Parkinson’s disease was caused by low dopamine levels.) Second, researchers discovered that amphetamines and cocaine, which increase dopamine activity, could produce psychotic behavior in normal adults and exacerbate symptoms in people who have schizophrenia.
Although the dopamine hypothesis has been around for decades, there are inconsistencies. For example, not all with schizophrenia experience symptom reduction in response to traditional antipsychotics; for those who do, symptom improvement is partial and usually does not occur for weeks, although the drugs are known to start blocking dopamine receptors within hours of administration. Further, many newer antipsychotics are effective despite having only a minimal effect on dopamine levels in the brain, and recent studies point to the role of other neurotransmitters (e.g., serotonin, glutamate) in schizophrenia. Therefore, the biochemistry of schizophrenia appears to be a complex one involving interactions among multiple neurotransmitters.

Modern neuroimaging techniques reveal some functional and structural brain abnormalities associated with schizophrenia. These include diminished activity in the frontal lobes (which are critical for reasoning, planning, and problem solving), enlarged ventricles (cavities filled with cerebrospinal fluid and located deep within the brain), and shrinkage of the cerebral cortex (see Box 10.16). But these findings do not prove that schizophrenia is caused solely by abnormal brain structures or activities. First, the evidence is correlational: it is not clear if these abnormalities are the cause, or the consequence, of the disorder. Second, many people with the disorder do not show these abnormalities. Third, the kinds of brain abnormalities observed in schizophrenia are also seen in other psychopathologies.

**Box 10.16**

**Brain Tissue Loss in Schizophrenia**

In a 5-year prospective study, Thompson and his colleagues (2001) used MRI scans to map brain structure change in normal adolescents and adolescents diagnosed with early-onset schizophrenia. Healthy brains (top) show a gradual, slight brain tissue loss due to the normal “pruning” of unused brain connections that takes place during adolescence. Early deficit scans (middle) show tissue loss in the parietal areas. Patients at this stage may experience hallucinations or bizarre thoughts. Scans 5 years later (bottom) reveal extensive tissue loss over much of the cortex. At this stage, patients are likely to exhibit delusions, disorganized speech and behavior, and negative symptoms.

An increased risk of developing schizophrenia has also been associated with **maternal exposure to influenza** virus during pregnancy, which may disrupt fetal brain development and lead to the kinds of brain abnormalities discussed above. Yet again, many people with a history of prenatal viral infection do not develop psychotic symptoms. One possibility is that if prenatal viral infection does cause brain abnormalities leading to symptoms of schizophrenia, this may only happen in individuals who already have a genetic diathesis for the disorder.

**Sociocultural factors** associated with schizophrenia include **poverty** and **unhealthy family environment**. People with the lowest social class have markedly greater risk for schizophrenia than those of the highest social class. A large-scale Finnish adoption study compared the risk of schizophrenia and related disorders in adopted children. Figure 10.12 shows the rate of schizophrenia-spectrum disorders among the adoptees at 21-year follow-up. What do these results say about the role of **nature** (genetics) and **nurture** (environment) in schizophrenia?

![Figure 10.12 When the nature and nurture interact](image)

The Finnish Adoptive Family Study followed two groups of adopted children—those with or without biological mothers who had schizophrenia—for over 20 years. As part of the study, the researchers assessed the psychological functioning of the adoptive families. Disturbed families were defined as those characterized by excessive conflict, poor communication, or chaotic relationships.


### 10.5.3 How Common Is Schizophrenia, And What Usually Happens To People With This Disorder?

The lifetime **prevalence** of schizophrenia is 1%, affecting men and women equally, and this rate seems to be similar across different cultures. Half of those diagnosed with schizophrenia have a comorbid substance use disorder. The first psychosis usually occurs during late adolescence to early adulthood, although on average, the onset is somewhat later for women than men. Why does the disorder strike at this rather specific point in a person’s lifespan? The course of psychosis is also
best understood in terms of the *diathesis-stress model*. That is, schizophrenia results when internal predisposition is coupled with environmental and psychosocial stressors. The transition from adolescence to adulthood is arguably one of the most stressful periods of a person’s life. What are the normal developmental tasks during this transition? And what would it mean to have these tasks disrupted by the symptoms of schizophrenia?

Not only the symptoms, but also the *development* and *prognosis* of the disorder vary greatly between individuals. For some, the onset of psychotic symptoms is sudden and dramatic. But for others, it represents a slow deterioration from normal functioning: some people who later develop schizophrenia exhibit signs of the disorder in childhood and adolescence (e.g., having few friends, inappropriate emotions, poor hygiene). Long-term studies suggest that about a quarter of individuals who experience an episode of schizophrenia recover completely without another episode, and another one-quarter experience recurrent episodes interspersed with normal or near-normal adjustment. The rest—about half—of those diagnosed with schizophrenia experience chronic and persistent symptoms and severe functional impairments, facing the prospect of repeated hospitalizations and extended treatment.

### 10.5.4 How Is Schizophrenia Best Treated?

As you might imagine, *biomedical treatments* are used to address the troubling symptoms of schizophrenia. *Traditional antipsychotic* drugs developed through the 1950s and 1960s (e.g., Thorazine, Haldol), which lower dopamine activity in the brain, are effective for reducing positive symptoms. However, they do not relieve negative symptoms well and have troubling *side effects*. For example, up to 20% of those treated with traditional antipsychotics for a long period of time develop a potentially irreversible motor disorder called *tardive dyskinesia*, characterized by stereotyped, involuntary movements of the face and mouth (e.g., facial tics and grimaces, lip-smacking, chin-wagging). Newer drugs introduced since the 1990s—*atypical antipsychotic drugs* such as Clozaril, Risperdal, and Zyprexa—target both dopamine and serotonin. Research shows that many people with schizophrenia who have not responded to traditional drugs benefit from atypical antipsychotics, and atypical antipsychotics work at least as well as traditional drugs for positive symptoms and are fairly effective for negative symptoms as well. While some atypical drugs have been associated with increased risk of obesity and diabetes, their side effect profile tends to be more favorable than those of traditional drugs. For these reasons, atypical antipsychotics are the first-line treatment for schizophrenia today.

It is widely accepted that drug therapy of severe mental illness works best in conjunction with practical psychosocial interventions.

As discussed earlier in this chapter, people exhibiting psychosis have been maltreated for much of recorded history. In the early institutional care (the first *asylum* in North America opened in 1773), the primary goal was to protect the society from those with mental illness, and patients often lived in unsanitary conditions, restrained and subjected to abuse and inhumane “treatments.” Conditions of institutional care gradually improved, but psychiatric hospitalization, which provided little more than custodial care (and often neglect) was standard practice well into the 20th century.

With the advent of antipsychotics in the 1950s, the treatment of schizophrenia was revolutionized. The widespread use of antipsychotics, combined with humanitarian, legal, and economic factors, led to *deinstitutionalization*—moving patients out of public hospitals into the community. As a number of public hospitals closed, a network of *community mental health centers (CMHCs)* was established to provide emergency care as needed, but primarily outpatient treatment and assistance in community living. Initially, most CMHCs were unprepared to serve the discharged population.
Many professionals had incorrectly assumed that antipsychotics by themselves would be sufficient to enable people with severe mental illness to live in the community and seek their services as necessary. In reality, many were too sick to be aware that they needed help or unable to find help. CMHCs were also under-resourced and failed to address a wide range of the patients’ needs—managing medications, housing, employment, socialization, etc. Despite its intent to empower patients to manage their illness in the “least restrictive” environment, deinstitutionalization left many of them homeless, poor, vulnerable, and sometimes dangerous; some ended up in jail or frequently revolved in and out of inpatient facilities, a problem that lingers today.

Box 10.17

The Magnitude of Deinstitutionalization in the U.S.

The number of state and county psychiatric hospital residents, which peaked at 559,000 (339 per 100,000 population) in 1955, declined to a little over 57,000 (21 per 100,000 population) by 1998.


Research in the past several decades substantially supports the view that people with schizophrenia and other severe mental illnesses can, with the right type of support, achieve successful adult roles in the community. CMHCs have gradually evolved to provide increasingly more comprehensive treatment and psychosocial rehabilitation services, and most recently, those supported by rigorous research. As experts of their own illness, clients with severe mental illness today are empowered to set their own recovery goals and make informed decisions in their treatment and rehabilitation, and services are tailored to their preferences.

One of the most well-defined and well-researched treatment models for people with severe mental illness, assertive community treatment (ACT) is an intensive team approach first developed in the 1970s. ACT is provided by a group of professionals representing various disciplines (e.g., psychiatry, nursing, social work, psychology, vocational rehabilitation). Services are highly individualized, with most contacts occurring in clients’ homes and neighborhoods rather than in agency offices. ACT teams keep in frequent contact with clients to provide practical psychosocial interventions (e.g., taking medications, keeping appointments, shopping, budgeting money, finding a place to live) and anticipate crises (e.g., monitoring the warning signs of a relapse). Services are available 24 hours a day, 7 days a week, and as long as they are needed. Can you see how different ACT is from traditional mental health treatment? Studies demonstrate ACT’s effectiveness in reducing hospitalizations and maintaining stable housing.

Box 10.18

For more information on ACT and other evidence-based treatment and rehabilitation for people with severe mental illness, visit the website of the ACT Center of Indiana located here on IUPUI campus: http://psych.iupui.edu/ACT/.
Medications that help people to live outside psychiatric hospitals have been refined and improved, and efforts to disseminate evidence-based treatment and rehabilitation are ongoing. But many challenges remain. People with severe mental illness continue to be overrepresented in homeless or incarcerated populations and have problems accessing effective services. Underfunding of mental health services is one major factor in this disparity between need and program capacity.

10.6 COLLEGE LIFE: PSYCHOLOGICAL PROBLEMS, PSYCHOLOGICAL WELLNESS

10.6.1 How Common Are Psychological Disorders In College Students?

College is both an exciting and trying time. While many students enjoy the opportunity for greater independence and freedom, learning new things, and making new friends, others find themselves struggling with the transition to college and the responsibilities that come with being in college. The intense work required to complete the degree prepares you for your future career, but can sometimes become overwhelming, especially if you carry multiple roles (e.g., a worker, a parent, a partner) or if you are a perfectionist. In addition to the academic pressure, many of you may be dealing with issues related to family, finances, health, intimacy, identity, or grief.

Box 10.19

In a recent survey of over 80,000 American college and university students, respondents reported experiencing the following on one or more occasions within the last school year:

- 93.6% – “Felt overwhelmed by all I had to do”
- 91.9% – “Felt exhausted (not from physical activity)”
- 78.7% – “Felt very sad”
- 62.1% – “Felt things were hopeless”
- 43.0% – “Felt so depressed it was difficult to function”
- 9.0% – “Seriously considered attempting suicide”

14.9% of students reported a lifetime diagnosis of depressive disorder. Of these, 32.0% reported having been diagnosed in the past school year, 24.5% reported being currently in therapy for depression, and 35.6% reported currently taking antidepressants.


Surveys among college and university counseling center directors indicate that the number of students with serious psychological problems has increased in recent years, representing a major concern for their centers. It may be that more students with a history of psychological disorder are enrolling in college today. As the prevalence data in Figure 10.13 show, psychological disorders are not rare, but a normative experience on college campuses; yet the majority of students with psychopathologies are not seeking help.
Figure 10.13 12-month prevalence of common DSM-IV disorders among college students aged 19–25 years

The most common disorders were alcohol use disorders (20.4%). Overall, fewer than 25% of individuals with a DSM-IV disorder sought treatment during the past year.


10.6.2 What Can I Do To Enhance My Psychological Wellness?

As you have seen throughout this chapter, a human being is an integrated biopsychosocial system, and psychopathologies result from interaction between internal predispositions and external stressors. Before we close the chapter, let’s focus briefly on the importance of self-care.

Traditionally we have trusted our bodies to physicians and our minds to mental health professionals. But body and mind are increasingly being regarded as a unit, mutually affecting each other—that is, wellness in one cannot be achieved without wellness in the other. Recent research on therapeutic lifestyle change demonstrates that maintaining (1) aerobic exercise, (2) diet rich in omega-3 fatty acid, (3) adequate sleep, (4) meaningful social engagement, (5) natural sunlight exposure, and (6) anti-rumination (reducing negative thoughts and enhancing positive thoughts) can effectively combat depression.

Students with a diathesis for psychopathology will benefit from being extra proactive in self-care and receiving support to minimize the impact of stress. If you feel distressed, or that your behavior, thoughts, and emotions are interfering with your functioning, seek help. Talk to someone—a close friend or family member, or contact your campus counseling center (IUPUI Counseling and Psychological Services CAPS: http://www.life.iupui.edu/caps, 317-274-2548). CAPS provides direct professional psychological services, including crisis response, psychotherapy, assessment, and referral for the general well-being of all IUPUI students.