

Abnormal Psychology: An Overview

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Abnormal psychology is concerned with understanding the nature, causes, and treatment of mental disorders. The topics and problems within the field of abnormal psychology surround us every day. You have only to pick up a newspaper, flip through a magazine, surf the Internet, or sit through a movie to be exposed to some of the issues that clinicians and researchers deal with on a day-to-day basis. Almost weekly some celebrity is in the news because of a drug or alcohol problem, an eating disorder, or some other psychological difficulty. Bookstores are full of personal accounts of struggles with schizophrenia, depression, phobias, and panic attacks. Films such as *A Beautiful Mind* portray aspects of abnormal behavior with varying degrees of accuracy. And then there are the tragic news stories of mothers who kill their children, in which problems with depression, schizophrenia, or postpartum difficulties seem to be implicated.

Abnormal psychology can also be found much closer to home. Walk around any college campus, and you will see flyers about peer support groups for people with eating disorders, depression, and a variety of other disturbances. You may even know someone who has experienced a clinical problem. It may be a cousin with a cocaine habit, a roommate with bulimia, or a grandparent who is developing Alzheimer's disease. It may be a coworker of your mother's who is hospitalized for depression, a neighbor who is afraid to leave the house, or someone at your gym who works out intensely despite being worrisomely thin. It may even be the disheveled street person in the aluminum foil hat who shouts, "Leave me alone!" to voices only he can hear.

The issues of abnormal psychology capture our interest, demand our attention, and trigger our concern. They also compel us to ask questions. To illustrate further, let's consider two clinical cases.

case study Monique

Monique is a 24-year-old law student. She is attractive, neatly dressed, and clearly very bright. If you were to meet her, you would think that she had few problems in her life; but Monique has been drinking alcohol since she was 14, and she smokes marijuana every day. Although she describes herself as "just a social drinker," she drinks four or five glasses of wine when she goes out with friends and also drinks a couple of glasses of wine a night when she is alone in her apartment in the evening. She frequently misses early-morning classes because she feels too hung over to get out of bed. On several occasions her drinking has caused her to black out. Although she denies having any problems with alcohol, Monique admits that her friends and family have become very concerned about her and have suggested that she seek help. Monique, however, says, "I don't think I am an alcoholic because I never drink in the mornings." The previous week she decided to stop smoking marijuana entirely because she was concerned that she might have a drug problem. However, she found it impossible to stop and is now smoking regularly again.

case study John

John comes from a family with no history of mental illness. He had a normal birth and seemed to develop normally when he was a child. However, when he was 21 John began to hear voices and started to believe that there was a conspiracy against him. Since that time, he has been on various different antipsychotic medications. Although these have helped a little, he still has symptoms of psychosis. Now aged 46, John has been unable to work since he became ill. He has also been hospitalized many times. John lives in sheltered accommodation, although he maintains contact with his parents and his older brother.

Perhaps you found yourself asking questions as you read about Monique and John. For example, because Monique doesn't drink in the mornings, you might have wondered whether she could really have a serious alcohol problem. She does. This is a question that concerns the criteria that must be met before someone receives a particular diagnosis. Or perhaps you wondered whether other people in Monique's family likewise have drinking problems. They do. This is a question about what we call **family aggregation**—that is, whether a disorder runs in families.

You may also have been curious about what is wrong with John and why he is hearing voices. Questions about the age of onset of his symptoms as well as predisposing factors may also have occurred to you. John has schizophrenia, a disorder that often strikes in late adolescence or early adulthood. Also, as John's case illustrates, it is not unusual for someone who develops schizophrenia to develop perfectly normally before suddenly becoming ill. You can read more about John's case and treatment in Valmaggia and colleagues (2008).

These cases, which describe real people, give some indication of just how profoundly lives can be derailed because of mental disorders. It is hard to read about difficulties such as these without feeling compassion for the people who are struggling. Still, in addition to compassion, clinicians and researchers who want to help people like Monique and John must have other attributes and skills. If we are to understand mental disorders, we must learn to ask the kinds of questions that will enable us to help the patients and families who have mental disorders. These questions are at the very heart of a research-based approach that looks



Fergie has spoken about her past struggles with substance abuse, specifically crystal meth.

to use scientific inquiry and careful observation to understand abnormal psychology.

Asking questions is an important aspect of being a psychologist. Psychology is a fascinating field, and abnormal psychology is one of the most interesting areas of psychology (although we are undoubtedly biased). Psychologists are trained to ask questions and to conduct research. Though not all people who are trained in abnormal psychology (this field is sometimes called psychopathology) conduct research, they still rely heavily on their scientific skills and ability both to ask questions and to put information together in coherent and logical ways. For example, when a clinician first sees a new client or patient, he or she asks many questions to try and understand the issues or problems related to that person. The clinician will also rely on current research to choose the most effective treatment. The best treatments of 20, 10, or even 5 years ago are not invariably the best treatments of today. Knowledge accumulates and advances are made. And research is the engine that drives all of these developments.

In this chapter, we will outline the field of abnormal psychology and the varied training and activities of the people who work within its demands. First we describe the ways in which abnormal behavior is defined and classified so that researchers and mental health professionals can communicate with each other about the people they see. Some of the issues here are probably more complex and controversial than you might expect. We also outline basic information about the extent of behavioral abnormalities in the population at large.

You will notice that a large section of this chapter is devoted to research. We make every effort to convey how abnormal behavior is studied. Research is at the heart of progress and knowledge in abnormal psychology. The more you know and understand about how research is conducted, the more educated and aware you will be about what research findings do and do not mean.

What Do We Mean by Abnormality?

It may come as a surprise to you that there is still no universal agreement about what is meant by *abnormality* or *disorder*. This is not to say we do not have definitions; we do. However, a truly satisfactory definition will probably always remain elusive (Lilienfeld & Landfield, 2008; Stein et al., 2010) even though there is a great deal of general agreement about which conditions are disorders and which are not (Spitzer, 1999).

Why does the definition of a mental disorder present so many challenges? A major problem is that there is no one behavior that makes someone abnormal. However, there are

some clear elements or indicators of abnormality (Lilienfeld & Marino, 1999; Stein et al., 2010). No single indicator is sufficient in and of itself to define or determine abnormality. Nonetheless, the more that someone has difficulties in the following areas, the more likely he or she is to have some form of mental disorder.

1. Suffering: If people suffer or experience psychological pain we are inclined to consider this as indicative of abnormality. Depressed people clearly suffer, as do people with anxiety disorders. But what of the patient who is manic and whose mood is one of elation? He or she may not be suffering. In fact, many such patients dislike taking medications because they do not want to lose their manic “highs.” You may have a test tomorrow and be suffering with worry. But we would hardly label your suffering abnormal. Although suffering is an element of abnormality in many cases, it is neither a sufficient condition (all that is needed) nor even a necessary condition (a feature that all cases of abnormality must show) for us to consider something as abnormal.

2. Maladaptiveness: Maladaptive behavior is often an indicator of abnormality. The person with anorexia may restrict her intake of food to the point where she becomes so emaciated that she needs to be hospitalized. The person with depression may withdraw from friends and family and may be unable to work for weeks or months. Maladaptive behavior interferes with our well-being and with our ability to enjoy our work and our relationships. However, not all disorders involve maladaptive behavior. Consider the con artist and the contract killer, both of whom have antisocial personality disorder. The first may be able glibly to talk people out of their life savings, the second to take someone’s life in return for payment. Is this behavior maladaptive? Not for them, because it is the way in which they make their respective livings. We consider them abnormal, however, because their behavior is maladaptive for and toward society.

3. Statistical Deviancy: The word *abnormal* literally means “away from the normal.” But simply considering statistically rare behavior to be abnormal does not provide us with a solution to our problem of defining abnormality. Genius is statistically rare, as is perfect pitch. However, we do not consider people with such uncommon talents to be abnormal in any way. Also, just because something is statistically common doesn’t make it normal. The common cold is certainly very common, but it is regarded as an illness nonetheless.

On the other hand, mental retardation (which is statistically rare and represents a deviation from normal) is considered to reflect abnormality. This tells us that in defining abnormality we make value judgments. If something is statistically rare and undesirable (as is severely diminished intellectual functioning), we are more likely to



As with most accomplished athletes, Venus and Serena Williams’ physical ability is abnormal in a literal and statistical sense. Their behavior, however, would not be labeled as being abnormal by psychologists. Why not?

consider it abnormal than something that is statistically rare and highly desirable (such as genius) or something that is undesirable but statistically common (such as rudeness).

4. Violation of the Standards of Society: All cultures have rules. Some of these are formalized as laws. Others form the norms and moral standards that we are taught to follow. Although many social rules are arbitrary to some extent, when people fail to follow the conventional social and moral rules of their cultural group we may consider their behavior abnormal. For example, driving a car or watching television would be considered highly abnormal for the Amish of Pennsylvania. However, both of these activities reflect normal everyday behavior for most other Pennsylvania residents.

Of course, much depends on the magnitude of the violation and on how commonly the rule is violated by others. As illustrated in the example above, a behavior is most likely to be viewed as abnormal when it violates the standards of society and is statistically deviant or rare. In contrast, most of us have parked illegally at some point. This failure to follow the rules is so statistically common that we tend not to think of it as abnormal. Yet when a mother drowns her children there is instant recognition that this is abnormal behavior.

5. Social Discomfort: When someone violates a social rule, those around him or her may experience a sense of discomfort or unease. Imagine that you are sitting in an almost empty movie theater. There are rows and rows of unoccupied seats. Then someone comes in and sits down right next to you. How do you feel? In a similar vein, how do you feel when someone you met only 4 minutes ago begins to chat about her suicide attempt? Unless you are a therapist working in a crisis intervention center, you would probably consider this an example of abnormal behavior.

6. Irrationality and Unpredictability: As we have already noted, we expect people to behave in certain ways. Although a little unconventionality may add some spice to life, there is a point at which we are likely to consider a given unorthodox behavior abnormal. If a person sitting next to you suddenly began to scream and yell obscenities at nothing, you would probably regard that behavior as abnormal. It would be unpredictable, and it would make no sense to you. The disordered speech and the disorganized behavior of patients with schizophrenia are often irrational. Such behaviors are also a hallmark of the manic phases of bipolar disorder. Perhaps the most important factor, however, is our evaluation of whether the person can control his or her behavior. Few of us would consider a roommate who began to recite speeches from *King Lear* to be abnormal if we knew that he was playing *Lear* in the next campus Shakespeare production—or even if he was a dramatic person given to extravagant outbursts. On the other hand, if we discovered our roommate lying on the floor, flailing wildly, and reciting Shakespeare, we might consider calling for assistance if this was entirely out of character and we knew of no reason why he should be behaving in such a manner.

7. Dangerousness: It seems quite reasonable to think that someone who is a danger to him- or herself or to another person must be psychologically abnormal. Indeed, therapists are required to hospitalize suicidal clients or contact the police (as well as the person who is the target of the threat) if they have a client who makes an explicit threat to harm another person. But, as with all of the other elements of abnormality, if we rely only on dangerousness as our sole feature of abnormality, we will run into problems. Is a soldier in combat mentally ill? What about someone who is an extremely bad driver? Both of these people may be a danger to others. Yet we would not consider them to be mentally ill. Why not? And why is someone who engages in extreme sports or who has a dangerous hobby (such as free diving, race car driving or keeping poisonous snakes as pets) not immediately regarded as mentally ill? Just because we may be a danger to ourselves or to others does not mean we are mentally ill. Conversely, we cannot assume that someone diagnosed with a mental disorder must be dangerous. Although mentally ill people do commit serious crimes, serious crimes are also committed every day by people who have no signs of mental disorder. Indeed, research suggests that in people with mental illness, dangerousness is more the exception than it is the rule (Corrigan & Watson, 2005).



How important is dangerousness to the definition of mental illness? If we are a risk to ourselves or to others, does this mean we are mentally ill?

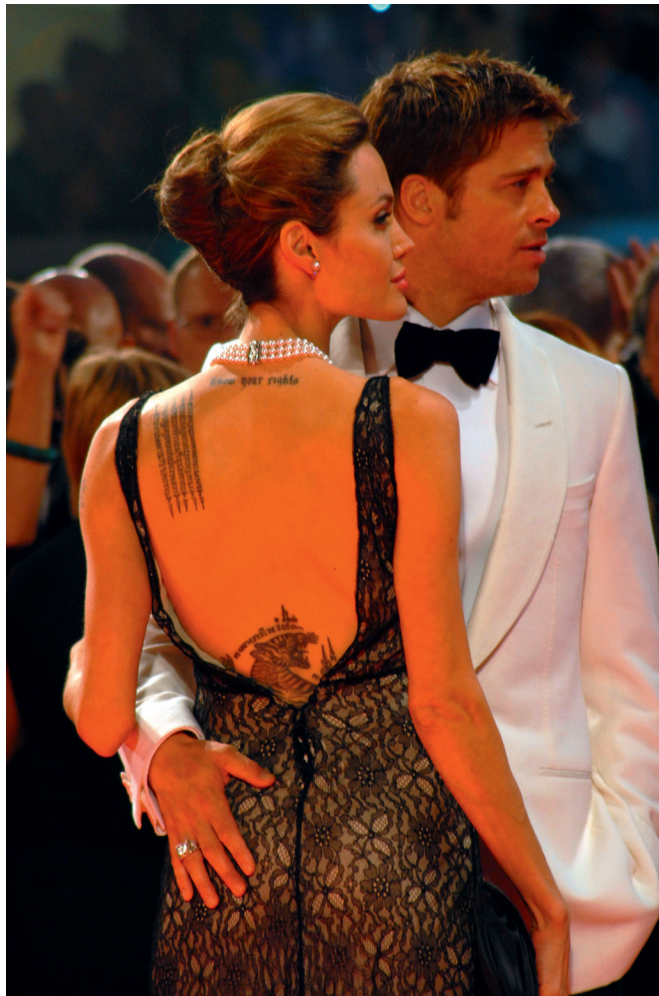
One final point bears repeating. Decisions about abnormal behavior always involve social judgments and are based on the values and expectations of society at large. This means that culture plays a role in determining what is and is not abnormal. For example, in the United States, people do not believe that it is acceptable to murder a woman who has a premarital or an extramarital relationship. However, *karo-kari* (a form of honor killing where a woman is murdered by a male relative because she is considered to have brought disgrace onto her family) is considered justifiable by many people in Pakistan (Patel & Gadit, 2008).

In addition, because society is constantly shifting and becoming more or less tolerant of certain behaviors, what is considered abnormal or deviant in one decade may not be considered abnormal or deviant a decade or two later. At one time, homosexuality was classified as a mental disorder. But this is no longer the case. A generation ago, pierced noses and navels were regarded as highly deviant and prompted questions about a person's mental health. Now, however, such adornments are quite commonplace, are considered fashionable by many, and generally attract little attention. What other behaviors can you think of that are now considered normal but were regarded as deviant in the past?

As you think about these issues, consider the person described in Box 1.1 on page 6. Is he a courageous man of profound moral commitment? Or is his behavior abnormal and indicative of a mental disorder? Do others share your view about him?

The DSM-5 and the Definition of Mental Disorder

In the United States, the accepted standard for defining various types of mental disorders is the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental*



Tattoos, which were once regarded as highly deviant, are now quite commonplace and considered fashionable by many. Angelina Jolie has several.

Disorders. This manual is currently in its fourth edition and so is commonly referred to as the *DSM-IV*. However, a revision of the *DSM* is now underway, and *DSM-5* is expected in May 2013. Arabic numerals are being used instead of Roman numerals (5 versus V) to facilitate updating (e.g., *DSM-5.1*, *DSM-5.2*, etc.) in the future.

The pending revision of the *DSM* is already a subject of much debate and controversy. Many quite radical changes are being proposed, although nothing is finalized yet. We cannot therefore be certain about what changes will eventually find their way into *DSM-5*. To give you a sense of what changes might be on the horizon, however, we are including a new feature called *Anticipating DSM-5*. These brief highlights are designed to help you stay informed and to give you some sneak previews about what may be coming. Look for these highlights throughout the book.

In our first *Anticipating DSM-5* highlight, we feature the proposed new *DSM-5* definition of mental illness. This definition is based on input from various *DSM-5* workgroups as well as other sources (Broome & Bortolotti, 2010; First & Wakefield, 2010; Stein et al., 2010). Although this definition will still not satisfy everyone, it brings us ever closer to a good working description. Always remember that any definition of abnormality or mental disorder must be somewhat arbitrary. Rather than thinking of the *DSM* as a finished product, it should always be regarded as a work in progress.

Within *DSM-5*, mental disorders will likely be defined as a behavioral or psychological syndrome (or pattern) that is present in an individual and that reflects some kind of underlying psychobiological dysfunction. Importantly, this behavioral syndrome should result in clinically significant distress, disability, or impairment in key areas of functioning. Predictable responses to common stressors or losses (such as death of a loved one) are excluded. It is also important that this dysfunctional pattern of behavior not stem from social deviance or conflicts that the person has with society as a whole.

1.1 THE WORLD AROUND US

Extreme Generosity or Pathological Behavior?

Zell Kravinsky was a brilliant student who grew up in a working-class neighborhood in Philadelphia. He won numerous prizes in school. At the age of 12, he began investing in the stock market. Despite his abilities, his Russian immigrant parents were, in the words of a family friend, “steadfast in denying him any praise.” Kravinsky eventually completed two Ph.D. degrees and indulged his growing interest in real estate. By the time he was 45 years old, he was married with children. His assets amounted to almost \$45 million.

Although Kravinsky had a talent for making money, he found it difficult to spend it. He drove an old car, did not give his children pocket money, and lived with his family in a modest home. As his fortune grew, however, he began to talk to his friends about his plans to give all of his assets to charity. His philanthropy began in earnest when he and his wife gave two gifts, totaling \$6.2 million, to the Centers for Disease Control Foundation. They also donated an apartment building to a school for the disabled in Philadelphia. The following year the Kravinskys gave real estate gifts worth approximately \$30 million to Ohio State University.

Kravinsky’s motivation for his donations was to help others. According to one of his friends, “He gave away the money because he had it and there were people who needed it. But it changed his way of looking at himself. He decided the purpose of his life was to give away things.” After he had put some money aside in trust for his wife and his



Is Zell Kravinsky’s behavior abnormal, or is he a man with profound moral conviction and courage?

children, Kravinsky’s personal assets were reduced to a house (on which he had a substantial mortgage), two minivans, and around \$80,000 in stocks and cash. He had essentially given away his entire fortune.

Kravinsky’s donations did not end when his financial assets became depleted. He began to be preoccupied with the idea of nondirected organ donations, in which an altruistic person gives an organ to a total stranger. When he learned that he could live quite normally with only one kidney, Kravinsky decided that the personal costs of giving away one of his kidneys were minimal compared to the benefits received by the kidney recipient. His wife, however, did not share his view. Although she had consented to bequeathing substantial sums of money to worthwhile charities, when it came to her husband offering his kidney, she could not support him.

For Kravinsky, however, the burden of refusing to help alleviate the suffering of someone in need was almost unbearable, even if it meant sacrificing his very own organs. He called the Albert Einstein Medical Center and spoke to a transplant coordinator. He met with a surgeon and then with a psychiatrist. Kravinsky told the psychiatrist that his wife did not support his desire to donate one of his kidneys. When the psychiatrist told him that he was doing something he did not have to do, Kravinsky’s response was that he did need to make this sacrifice: “You’re missing the whole point. It’s as much a necessity as food, water, and air.”

Three months later, Kravinsky left his home in the early hours of the morning, drove to the hospital, and donated his right kidney. He informed his wife after the surgery was over. In spite of the turmoil that his kidney donation created within his family, Kravinsky’s mind turned back to philanthropy almost immediately. “I lay there in the hospital, and I thought about all my other good organs. When I do something good, I feel that I can do more. I burn to do more. It’s a heady feeling.” By the time he was discharged, he was wondering about giving away his one remaining kidney.

After the operation, Kravinsky experienced a loss of direction. He had come to view his life as a continuing donation. However, now that his financial assets and his kidney were gone, what could he provide to the less fortunate? Sometimes he imagines offering his entire body for donation. “My organs could save several people if I gave my whole body away.” He acknowledges that he feels unable to hurt his family through the sacrifice of his life.

Several years after the kidney donation, Kravinsky still remains committed to giving away as much as possible. However, his actions have caused a tremendous strain in his marriage. In an effort to maintain a harmonious relationship with his wife, he is now involved in real estate and has recently bought his family a larger home. (Taken from Parker, 2004.)

Why Do We Need to Classify Mental Disorders?

If defining abnormality is so contentious and so difficult, why do we try to do it? One simple reason is that most sciences rely on classification (e.g., the periodic table in chemistry and the classification of living organisms into kingdoms, phyla, classes, and so on in biology). At the most fundamental level, classification systems provide us with a **nomenclature** (a naming system) and enable us to *structure information* in a more helpful manner.

Organizing information within a classification system also allows us to study the different disorders that we classify and therefore to learn more not only about what causes them but also how they might best be treated. For example, thinking back to the cases you read about, Monique has alcohol and drug dependence, and John has schizophrenia. Knowing what disorder each of them has is clearly very helpful, as John's treatment would likely not work for Monique.

A final effect of classification system usage is somewhat more mundane. As others have pointed out, the classification of mental disorders has social and political implications (see Blashfield & Livesley, 1999; Kirk & Kutchins, 1992). Simply put, defining the domain of what is considered to be pathological establishes the range of problems that the mental health profession can address. As a consequence, on a purely pragmatic level, it furthermore delineates which types of psychological difficulties warrant insurance reimbursement and the extent of such reimbursement.

What Are the Disadvantages of Classification?

Of course, there are a number of disadvantages in the usage of a discrete classification system. Classification, by its very nature, provides information in a shorthand form. However, using any form of shorthand inevitably leads to a *loss of information*. If we know the specific history, personality traits, idiosyncrasies, and familial relations of a person with a particular type of disorder (e.g., from reading a case summary) we naturally have much more information than if we were simply told the individual's diagnosis (e.g., schizophrenia). In other words, as we simplify through classification, we inevitably lose an array of personal details about the actual person who has the disorder.

Moreover, although things are improving, there can still be some **stigma** (or disgrace) associated with having a psychiatric diagnosis. Even today, people are generally far more comfortable disclosing that they have a physical illness such as diabetes than they are in admitting to any

mental disorder. This is in part due to the fear (real or imagined) that speaking candidly about having a psychological disorder will result in unwanted social or occupational consequences or frank discrimination. Be honest. Have you ever described someone as “nuts,” “crazy,” or “a psycho”? Now think of the hurt that people with mental disorders experience when they hear such words. In a recent study, 96 percent of patients with schizophrenia reported that stigma was a routine part of their lives (Jenkins & Carpenter-Song, 2008). In spite of the large amount of information that is now available about mental health issues, the level of knowledge about mental illness (sometimes referred to as mental health literacy) is often very poor (Thornicroft et al., 2007). Sometimes even family members avoid patients, as in the following example:

case study Ignored by His Siblings

A 42-year-old man who was living alone described how his family shunned him for being unemployed and did not seem to acknowledge his illness. After he found a job his parents became more understanding and accepting, although this was not the case for his siblings.

“My folks are very understanding and supportive, especially now. But my brothers and sisters don't stay in touch. They don't write. They don't call. They don't visit. And I have been in the hospital 19 times, and not once did they come to visit me, you know. And it really blows a lot of people away when I tell them about that. That my family really doesn't care. They expect me to function as though I don't have schizophrenia. They never want to talk about it.” (From Jenkins & Carpenter-Song, 2008, p. 524.)

Related to stigma is the problem of **stereotyping**. Stereotypes are automatic beliefs concerning other people that are based on minimal (often trivial) information (e.g., people who wear glasses are more intelligent; New Yorkers are rude; everyone in the South has a gun). Because we may have heard about certain behaviors that can accompany mental disorders, we may automatically and incorrectly infer that these behaviors will also be present in any person we meet who has a psychiatric diagnosis. This is reflected in the comment, “People like you don't go back to work,” in the case example of James McNulty on page 8.

Take a moment to consider honestly your own attitudes toward people with mental disorders. What assumptions do you tend to make? Do you view people with mental illness as less competent, more irresponsible, more dangerous,

case study James McNulty

I have lived with bipolar disorder for more than 35 years—all of my adult life. The first 15 years were relatively conventional, at least on the surface. I graduated from an Ivy League university, started my own business, and began a career in local politics. I was married, the father of two sons. I experienced mood swings during these years, and as I got older the swings worsened. Eventually, I became so ill that I was unable to work, my marriage ended, I lost my business, and I became homeless.

At this point I had my most powerful experience with stigma. I was 38 years old. I had recently been discharged after a psychiatric hospitalization for a suicide attempt, I had no place to live, my savings were exhausted, and my only possession was a 4-year-old car. I contacted the mental health authorities in the state where I then lived and asked for assistance in dealing with my mental illness. I was told that to qualify for assistance I would need to sell my car and spend down the proceeds. I asked how I was supposed to get to work when I recovered enough to find a job. I was told, “Don’t worry about going back to work. People like you don’t go back to work” (McNulty, 2004).

and more unpredictable? Research has shown that such attitudes are not uncommon (see A. C. Watson et al., 2004). Can you recall movies, novels, or advertisements that maintain such stereotypes? What are some ways in which you can challenge the false assumptions that are so common in the media? Do you think reality TV shows such as *Hoarders*, *Obsessed*, or *My Strange Addiction* have a helpful or harmful impact on societal attitudes?

Finally, stigma can be perpetuated by the problem of **labeling**. A person’s self-concept may be directly affected by being given a diagnosis of schizophrenia, depression, or some other form of mental illness. How might you react if you were told something like this? Furthermore, once a group of symptoms is given a name and identified by means of a diagnosis, this “diagnostic label” can be hard to shake even if the person later makes a full recovery.

It is important to keep in mind, however, that diagnostic classification systems do not classify people. Rather, they classify *the disorders that*

people have. When we note that someone has an illness, we should take care not to define him or her by that illness. Respectful and appropriate language should instead be used. At one time, it was quite common for mental health professionals to describe a given patient as “a schizophrenic” or “a manic-depressive.” Now, however, it is widely acknowledged that it is more accurate (not to mention more considerate) to say, “a person with schizophrenia,” or “a person with manic depression.” Simply put, the person is not the diagnosis.

How Can We Reduce Prejudicial Attitudes Toward the Mentally Ill?

For a long time, it was thought that educating people that mental illnesses were “real” brain disorders might be the solution. Sadly, however, this does not seem to be the case. Although there have been impressive increases in the proportion of people who now understand that mental disorders have neurobiological causes, this increased awareness has not resulted in decreases in stigma. In a recent study Pescosolido and colleagues (2010) asked people in the community to read a vignette (brief description) about a person

who showed symptoms of mental illness. Some people read a vignette about a person who had schizophrenia. Others read a vignette about someone with clinical depression or alcohol dependence. Importantly, no diagnostic labels were used to describe these people. The vignettes simply provided descriptive information. Nonetheless, the majority of the people who were surveyed in this study expressed an unwillingness to work with the person described in the vignette. They also did not want to have to socialize with them and did not want them to marry into their family. Moreover, the level of rejection that was shown was just as high as it was in a similar survey that was done 10 years earlier. Over that same 10-year period, however, many more people embraced a neurobiological understanding about the causes of mental illness. So what this study tells us is that just because people understand that mental illness is caused by problems in the brain doesn’t mean that they are any less prejudiced toward those with mental illness. This is a disappointing conclusion for everyone who hoped that more scientific research into the biology of mental illness would lead to the elimination of stigma.



In the movie *Fatal Attraction*, Glenn Close plays Alex Forrest, an emotionally disturbed and self-destructive woman. In the original film ending Alex committed suicide. But that did not test well with audiences who wanted to see Alex punished. So the ending was changed. In the famous bathroom scene, a knife-wielding Alex was blown away by the wife, who shot her in self-defense. What does this say about our attitudes to the mentally ill? Does this ending give a misleading message about mental illness?

Stigma does seem to be reduced by having more contact with people in the stigmatized group (Couture & Penn, 2003). However, there may be barriers to this. Simply imagining interacting with a person who has a mental disorder can lead to distress and also to unpleasant physical reactions. In an interesting study, Graves and colleagues (2005) asked college students enrolled in a psychology course to imagine interacting with a person whose image was shown to them on a slide. As the slide was being presented, subjects were given some scripted biographical information that described the person. In some scripts, the target person was described as having been diagnosed with schizophrenia, although it was also mentioned that he or she was “doing much better now.” In other trials, the biographical description made no mention of any mental illness when the person on the slide was being described. Students who took part in the study reported more distress and had more muscle tension in their brows when they imagined interacting with a person with schizophrenia than when they imagined interacting with a person who did not have schizophrenia. Heart rate changes also suggested they were experiencing the imagined interactions with the patients as being more unpleasant than the interactions with the nonpatients. Finally, research participants who had more psychophysiological reactivity to the slides of the patients reported higher levels of stigma toward these patients. These findings suggest that people may tend to avoid those with mental illness because the psychophysiological arousal these encounters create is experienced as unpleasant.



There is no word for “depressed” in the languages of certain Native American tribes. Members of these communities tend to describe their symptoms of depression in physical rather than emotional terms.

Similarly, there is frequently no bed numbered 13 in hospital wards.

The Japanese, in contrast, are not worried about the number 13. Rather, they attempt to avoid the number 4. This is because in Japanese the sound of the word for “four” is similar to the sound of the word for “death” (see Tseng, 2001, pp. 105–6).

There is also considerable variation in the way different cultures describe psychological distress. For example, there is no word for “depressed” in the languages of certain Native Americans, Alaska Natives, and Southeast Asian cultures (Manson, 1995). Of course, this does not mean that members from such cultural groups do not experience clinically significant depression. As the accompanying case illustrates, however, the way some disorders present themselves may depend on culturally sanctioned ways of articulating distress.

case study Depression in a Native American Elder

JGH is a 71-year-old member of a Southwestern tribe who has been brought to a local Indian Health Service hospital by one of his granddaughters and is seen in the general medical outpatient clinic for multiple complaints. Most of Mr. GH’s complaints involve nonlocalized pain. When asked to point to where he hurts, Mr. GH indicates his chest, then his abdomen, his knees, and finally moves his hands “all over.” Barely whispering, he mentions a phrase in his native language that translates as “whole body sickness.” His granddaughter notes that he “has not been himself” recently. Specifically, Mr. GH, during the past 3 or 4 months, has stopped attending or participating in many events previously important to him and central to his role in a large extended family and clan. He is reluctant to discuss this change in behavior as well as his feelings. When questioned more directly, Mr. GH acknowledges that he has had difficulty falling asleep, sleeps intermittently through the night, and almost always awakens at dawn’s first light. He admits that he has not felt like eating in recent months but denies weight loss, although his clothes hang loosely in many folds. Trouble concentrating and remembering are eventually disclosed as well. Asked why he has not participated in family and clan events in the last several months, Mr. GH describes himself as “too tired and full of pain” and “afraid of disappointing people.” Further pressing by the clinician is met with silence. Suddenly the patient states, “You know, my sheep haven’t been doing well lately. Their coats are ragged; they’re thinner. They just wander aimlessly; even the ewes don’t seem to care about the little ones.” Physical examination and laboratory tests are normal. Mr. GH continues to take two tablets of acetaminophen daily for mild arthritic pain. Although he describes himself as a “recovering alcoholic,” Mr. GH reports not having consumed alcohol during the last 23 years. He denies any prior episodes of depression or other psychiatric problems (Manson, 1995, p. 488).

How Does Culture Affect What Is Considered Abnormal?

Just as we must consider changing societal values and expectations in defining abnormality, so too must we consider differences across cultures. In fact, this is explicitly acknowledged in the *DSM* definition of *disorder*. Within a given culture, there exist many shared beliefs and behaviors that are widely accepted and that may constitute one or more customary practices. For instance, many people in Christian countries believe that the number 13 is unlucky. The origins of this may be linked to the Last Supper, at which 13 people were present. Many of us try to be especially cautious on Friday the 13th. Some hotels and apartment buildings avoid having a 13th floor altogether.

As is apparent in the case of JGH, culture can shape the clinical presentation of disorders like depression, which are present across cultures around the world (see Draguns & Tanaka-Matsumi, 2003). In China, for instance, individuals with depression frequently focus on physical concerns (fatigue, dizziness, headaches) rather than verbalizing their feelings of melancholy or hopelessness (Kleinman, 1986; Parker et al., 2001). This focus on physical pain rather than emotional pain is also noteworthy in Mr. GH's case.

Despite progressively increasing cultural awareness, we still know relatively little concerning cultural interpretation and expression of abnormal psychology (Arrindell, 2003). The vast majority of the psychiatric literature originates from Euro-American countries—that is, Western Europe, North America, and Australia/New Zealand (Patel & Sumathipala, 2001; Patel & Kim, 2007). To exacerbate this underrepresentation, research published in languages other than English tends to be disregarded (Draguns, 2001).

Culture-Specific Disorders

Prejudice toward the mentally ill seems to be found worldwide (see Box 1.2 on page 11). However, some types of psychopathology appear to be highly specific to certain cultures: They are found only in certain areas of the world and seem to be highly linked to culturally bound concerns. A case in point is *taijin kyofusho*. This syndrome, which is an anxiety disorder, is quite prevalent in Japan. It involves a marked fear that one's body, body parts, or body functions may offend, embarrass, or otherwise make others feel uncomfortable. Often, people with this disorder are afraid of blushing or upsetting others by their gaze, facial expression, or body odor (Levine & Gaw, 1995).

Another culturally rooted expression of distress, found in Latino and Latina individuals, especially those from the Caribbean, is *ataque de nervios* (Lizardi et al., 2009; Lopez & Guarnaccia, 2005). This is a clinical syndrome that does not seem to correspond to any specific diagnosis within the *DSM*. The symptoms of an *ataque de nervios*, which is often triggered by a stressful event such as divorce or bereavement, include crying, trembling, uncontrollable screaming, and a general feeling of loss of control. Sometimes the person



Some African tribe members inflict painful and permanent scars (a process called scarification) on their faces and torsos in an effort to beautify themselves. Such a practice might be viewed as abnormal by Western European cultures, yet it is quite common among African tribes.

may become physically or verbally aggressive. Alternately, the person may faint or experience a seizure-like fit. Once the *ataque* is over, the person may promptly resume his or her normal manner, with little or no memory of the incident.

As noted earlier, abnormal behavior is behavior that deviates from the norms of the society in which the person lives. Experiences such as hearing the voice of a dead relative might be regarded as normative in one culture (e.g., in many Native American tribes) yet abnormal in another cultural milieu. Nonetheless, certain unconventional actions and behaviors are almost universally considered to be the product of mental disorder.

Many years ago, the anthropologist Jane Murphy (1976) studied abnormal behavior by the Yoruba of Africa and the Yupik-speaking Eskimos living on an island in the Bering Sea. Both societies had words that were used to denote abnormality or “craziness.” In addition, the clusters of behaviors that were considered to reflect abnormality in these cultures

were behaviors that most of us would also regard as abnormal. These included hearing voices, laughing at nothing, defecating in public, drinking urine, and believing things that no one else believes. Why do you think these behaviors are universally considered to be abnormal?



Some disorders are highly culture specific. For example, *taijin kyofusho* is a disorder that is prevalent in Japan. It is characterized by the fear that one may upset others by one's gaze, facial expression, or body odor.

1.2 THE WORLD AROUND US

Mad, Sick, Head Nuh Good: Mental Illness and Stigma in Jamaica

Evidence suggests that negative reactions to the mentally ill may be a fairly widespread phenomenon. Using focus groups, Arthur and colleagues (2010) asked community residents in Jamaica about the concept of stigma. Some participants came from rural communities, others from more urban areas. Regardless of their gender, level of education, or where they lived, most participants described highly prejudicial attitudes toward the mentally ill. One middle-class male participant said, "We treat them as in a sense second class citizens, we stay far away from them, ostracize them, we just treat them bad" (see Arthur et al., 2010, p. 263). Fear of the mentally ill was also commonly expressed. A rural-dwelling middle-class man described a specific situation in the following way, "There is a mad lady on the road named [...]. Even the police are afraid of her because she throws stones at them. She is very, very terrible" (p. 261). Moreover, even when more kindly attitudes were expressed, fear was still a common response. One person put it simply, "You are fearful even though you may be sympathetic" (p. 262).

The Jamaicans in this study also made a distinction between mental illness (a term used to denote less severe conditions) and madness, which was used to describe more severe problems. Madness was invariably regarded as being a permanent condition ("once yuh mad yuh mad" or "once yuh gone yuh gone"). Moreover, homelessness was almost always taken to indicate madness. In short, the results of this study suggest that stereotyping, labeling, and stigma toward the mentally ill are not restricted to industrialized countries. Although we might wish that it were otherwise, prejudicial attitudes

are common. This highlights the need for antistigma campaigns in Jamaica, as well as everywhere else in the world.



Are attitudes toward the mentally ill in Jamaica more benign than they are in more industrialized countries?

In Review

- Why is abnormality so difficult to define? What characteristics help us recognize abnormality?
- What is stigma? How common is it? What are the challenges in reducing stigma toward the mentally ill?
- In what ways can culture shape the clinical presentation of mental disorders?

How Common Are Mental Disorders?

How many and what sort of people have diagnosable psychological disorders today? This is a significant question for a number of reasons. First, such information is essential when

planning and establishing mental health services. Mental health planners require a precise understanding of the nature and extent of the psychological difficulties within a given area, state, or country because they are responsible for determining how resources such as funding of research projects or services provided by community mental health centers may be most effectively allocated. It would obviously be imprudent to have a treatment center filled with clinicians skilled in the treatment of anorexia nervosa (a very severe but rare clinical problem) if there were few clinicians skilled in treating anxiety or depression, which are much more prevalent disorders.

Second, estimates of the frequency of mental disorders in different groups of people may provide valuable clues as to the causes of these disorders. For example, data from the United Kingdom have shown that schizophrenia is about three times more likely to develop in ethnic minorities than in the white population (Kirkbridge et al., 2006). Rates of schizophrenia in southeast London are also high relative to other parts of the country. This is prompting researchers to explore why this

might be. Possible factors may be social class, neighborhood deprivation, as well as diet or exposure to infections or environmental contaminants.

Prevalence and Incidence

Before we can further discuss the impact of mental disorders upon society, we must clarify the way in which psychological problems are counted. **Epidemiology** is the study of the distribution of diseases, disorders, or health-related behaviors in a given population. Mental health epidemiology is the study of the distribution of mental disorders. A key component of an epidemiological survey is determining the frequencies of mental disorders. There are several ways of doing this. The term **prevalence** refers to the number of active cases in a population during any given period of time. Prevalence figures are typically expressed as percentages (i.e., the percentage of the population that has the disorder). Furthermore, there are several different types of prevalence estimates that can be made.

Point prevalence refers to the estimated proportion of actual, active cases of the disorder in a given population at a given point in time. For example, if we were to conduct a study and count the number of people who have major depressive disorder (that is, clinical depression) on January 1st of next year, this would provide us with a point prevalence estimate of active cases of depression. A person who experienced depression during the months of November and December but who managed to recover by January 1st would not be included in our point prevalence calculation. The same is true of someone whose depression did not begin until January 2nd.

If, on the other hand, we wanted to calculate a **1-year prevalence** figure, we would count everyone who experienced depression at any point in time throughout the entire year. As you might imagine, this prevalence figure would be higher than the point prevalence figure because it would cover a much longer time. It would moreover include those people who had recovered before the point prevalence assessment as well as those whose disorders did not begin until after the point prevalence estimate was made.

Finally, we may also wish to obtain an estimate of the number of people who have had a particular disorder at any time in their lives (even if they are now recovered). This would provide us with a **lifetime prevalence** estimate. Because they extend over an entire lifetime and include both currently ill and recovered individuals, lifetime prevalence estimates tend to be higher than other kinds of prevalence estimates.

An additional term with which you should be familiar is **incidence**. This refers to the number of new cases that occur over a given period of time (typically 1 year). Incidence figures tend to be lower than prevalence figures because they exclude preexisting cases. In other words, if we were assessing the 1-year incidence of schizophrenia, we would not count people whose schizophrenia began before our given starting date (even if they were still ill) because they are not “new”

cases of schizophrenia. On the other hand, someone who was quite well previously but then developed schizophrenia during our 1-year window would be included in our incidence estimate.

Prevalence Estimates for Mental Disorders

Now that you have an understanding of some basic terms, let's turn to the 1-year prevalence rates for several important disorders. Three major national mental health epidemiology studies, with direct and formal diagnostic assessment of participants, have been carried out in the United States. One, the Epidemiologic Catchment Area (ECA) study, focused on sampling citizens of five communities: Baltimore, New Haven, St. Louis, Durham (NC), and Los Angeles (Myers et al., 1984; Regier et al., 1988; Regier et al., 1993).

The second, the National Comorbidity Survey (NCS), was more extensive. It sampled the entire American population using a number of sophisticated methodological improvements (Kessler et al., 1994). A replication of the NCS (the NCS-R) was completed about a decade later (Kessler et al., 2004; Kessler, Berglund, Borges, et al., 2005a; Kessler & Merikangas, 2004). The most current 1-year and lifetime prevalence estimates of the *DSM-IV* mental disorders assessed from the NCS-R study are shown in Table 1.1.

The lifetime prevalence of having any *DSM-IV* disorder is 46.4 percent. This means that almost half of the Americans who were questioned had been affected by mental illness at some point in their lives (Kessler, Berglund, Demler, et al., 2005b). Although this figure may seem high, it may actually be an underestimate, as the NCS study did not assess for eating disorders, schizophrenia, or autism, for example. Neither did it include measures of most personality disorders. As you can see from Table 1.1, the most prevalent category of psychological disorders is anxiety disorders. The most common individual disorders are major depressive disorder, alcohol abuse, and specific phobias (e.g., fear of small animals, insects, flying, heights, etc.). Social phobias (e.g., fear of public speaking) are similarly very common (see Table 1.2).

Although lifetime rates of mental disorders appear to be quite high, it is important to remember that, in some cases, the duration of the disorder may be relatively brief (e.g., depression that lasts for a few weeks after the breakup of a romantic relationship). Furthermore, many people who meet criteria for a given disorder will not be seriously affected by it. For instance, in the NCS-R study, almost half (48 percent) of the people diagnosed with a specific phobia had disorders that were rated as mild in severity, and only 22 percent of phobias were regarded as severe (Kessler, Chiu, et al., 2005c). Meeting diagnostic criteria for a particular disorder and being seriously impaired by that disorder are not necessarily synonymous.

table 1.1 Prevalence of DSM-IV Disorders in Adults in the United States

	1-Year (%)	Lifetime (%)
Any anxiety disorder	18.1	28.8
Any mood disorder	9.5	20.8
Any substance-abuse disorder	3.8	14.6
Any disorder	26.2	46.4

Sources: Kessler, et al. (2005a); Kessler, et al. (2005c).

table 1.2 Most Common Individual DSM-IV Disorders in the United States

Disorder	1-Year Prevalence (%)	Lifetime Prevalence (%)
Major depressive disorder	6.7	16.6
Alcohol abuse	3.1	13.2
Specific phobia	8.7	12.5
Social phobia	6.8	12.1
Conduct disorder	1.0	9.5

Sources: Kessler, et al. (2005a); Kessler, et al. (2005c).

A final finding from the NCS-R study was the widespread occurrence of comorbidity among diagnosed disorders (Kessler, Chiu, et al., 2005c). **Comorbidity** is the term used to describe the presence of two or more disorders in the same person. Comorbidity is especially high in people who have severe forms of mental disorders. In the NCS-R study, half of the individuals with a disorder rated as serious on a scale of severity (mild, moderate, serious) had two or more additional disorders. An illustration of this would be a person who drinks excessively and who is simultaneously depressed and suffering from an anxiety disorder. In contrast, only 7 percent of the people who had a mild form of a disorder also had two or more other diagnosable conditions. What this indicates is that comorbidity is much more likely to occur in people who have the most serious forms of mental disorders. When the condition is mild, comorbidity is the exception rather than the rule.



Disorders do not always occur in isolation. A person who abuses alcohol may also be depressed or pathologically anxious.

Treatment

Many treatments for psychological disorders are now available. These include medications as well as different forms of psychotherapy. Treatment is such an important topic that we discuss it throughout the book in the various chapters on specific disorders. In addition, in Chapter 16 we discuss different approaches to treatment more broadly and describe different types of therapy in detail. However, it is important to emphasize that not all people with psychological disorders receive treatment. In some cases, people deny or minimize their suffering. Others try to cope on their own and may manage to recover without ever seeking aid from a mental health professional. Even when they recognize that they have a problem, it is typical for individuals to wait a long time before deciding to seek help. Half of individuals with depression delay seeking treatment for more than 6 to 8 years. For anxiety disorders, the delay ranges from 9 to 23 years (Wang, Berglund, et al., 2005)!

When people with mental disorders do seek help, they are often treated by their family physician rather than by a mental health specialist (Wang, et al., 2005). It is also the case that the vast majority of mental health treatment is now administered on an outpatient (as opposed to an inpatient) basis (Narrow et al., 1993; O'Donnell et al., 2000). Outpatient treatment requires that a patient visit a mental health facility practitioner; however, the patient does not have to be admitted to the hospital or stay there overnight. A patient may attend a community mental health center, see a private therapist, or receive treatment through the outpatient department of a hospital.

Hospitalization and inpatient care are the preferred options for people who need more intensive treatment than can be provided on an outpatient basis. Various surveys indicate that admission to mental hospitals has decreased substantially over the past 45 years. The development of medications that control the symptoms of the most severe disorders is one reason for this change. Budget cuts have also forced many large state or county facilities to close. The limitations that insurance companies place on hospital admissions is another relevant factor here. If a hospital stay is not authorized by the insurance company, patients must seek treatment elsewhere.

Patients who need inpatient care are usually admitted to the psychiatric units of general hospitals (Narrow et al., 1993) or to private psychiatric hospitals specializing in particular mental disorders (Kiesler & Simpkins, 1993). Stays in inpatient facilities tend to be much shorter than they were in the past (see Case et al., 2007; Lay et al., 2007). Patients receive additional treatment on an outpatient basis. This trend away from

the use of traditional hospitalization began several decades ago. It is referred to as deinstitutionalization and is discussed further in Chapter 2.

Mental Health Professionals

When patients receive inpatient treatment, several different mental health professionals often work as a team to provide the necessary care. A psychiatrist may prescribe medications and monitor the patient for side effects. A clinical psychologist may provide individual therapy, meeting with the patient several times a week. A clinical social worker may help the patient resolve family problems, and a psychiatric nurse may check in with the patient on a daily basis to provide support and help the patient cope better in the hospital environment. The intensity of treatment that is typical in a hospital setting is designed to help the patient get better as rapidly as possible.

Patients treated in outpatient settings may also work with a team of professionals. However, the number of mental health specialists involved is typically much smaller. In some cases a patient will receive all treatment from a psychiatrist, who will prescribe medication and also provide psychotherapy. Other patients will receive medications from a psychiatrist and see a psychologist or a clinical social worker for regular therapy sessions. In other cases, depending on the type and severity of the problem, a patient (*client* is the preferred term in some settings) may see a counseling psychologist, a psychoanalyst, or a counselor specialized in the treatment of drug and alcohol problems. Details about some of these professional roles and the training required for each of them are provided in Box 1.3.

1.3

THE WORLD AROUND US

Mental Health Professionals

Clinical Psychologist

Ph.D. in psychology (with both research and clinical skill specialization) and a one-year internship in a psychiatric facility or mental health center; or Psy.D. in psychology (a professional degree with a focus on clinical work rather than research) plus 1-year internship. Some states permit clinical psychologists (with additional training) to prescribe medications to patients as psychiatrists do.

Counseling Psychologist

Ph.D. in psychology plus internship in a marital- or student-counseling setting. Normally, a counseling psychologist deals with adjustment problems rather than severe mental disorders.

School Psychologist

Ideally, a person with doctoral training in child clinical psychology, with additional training and experience in academic and learning problems. Many school systems lack the resources to maintain an adequate school psychology program.

Psychiatrist

Trained as physicians, psychiatrists are M.D.s who have completed residency training (usually 3 years) in a psychiatric setting. Psychiatrists are able to prescribe medications.

Psychoanalyst

Typically an M.D. or Ph.D. who has received intensive and extended training in the theory and practice of psychoanalysis.

In Review

- What is epidemiology?
- What is the difference between prevalence and incidence?
- What are the most common mental disorders?
- How is illness severity associated with comorbidity?
- In what ways does the training of a psychiatrist differ from the training of a clinical psychologist?

Research Approaches in Abnormal Psychology

As is apparent from the NCS-R study, the lives of large numbers of people are affected by mental disorders. To learn all that we can about these conditions, we need to conduct research. In this way, we can study the characteristics or nature of disorders. Through research we can learn about the symptoms of the disorder, its prevalence, whether it tends to be either **acute** (short in duration) or **chronic** (long in duration), and the problems and deficits that often accompany it.

Research allows us to further understand the **etiology** (or causes) of disorders. Finally, we need research to provide the best care for the patients who are seeking assistance with their difficulties. All of the authors of this book are practicing clinicians. As such, we turn to the research literature to help us provide the most effective and up-to-date care for the patients whom we see.

Students new to the field of abnormal psychology often assume that all answers may be revealed through scrutinizing past case studies. However, when we study individual cases and derive inferences from them, we are as likely to develop errors in our thinking as we are to obtain knowledge. One such error is that we often attend only to data that confirm our view of how things are. For example, Dr. Smart might believe that drinking milk causes schizophrenia. When we ask Dr. Smart why he holds this view, he might say it is because every patient he has ever treated who has schizophrenia has drunk milk at some time in his or her life. Given that Dr. Smart has treated a lot of patients with schizophrenia and clearly has a great deal of experience with the disorder, we might be persuaded that he is right. Then along comes Dr. Notsfast. Dr. Notsfast decides to conduct a research study. He studies two groups of people: One group has schizophrenia; the other group does not have schizophrenia. Dr. Notsfast asks all of them about their milk-drinking habits. He finds that everyone has drunk milk at some point in his or her life and that there are no differences between the two groups with respect to their milk-drinking histories. As this simple example illustrates, research prevents us from being misled by natural errors in thinking. In short, research protects investigators from their own biases in perception and inference (Raulin & Lilienfeld, 2009).

Abnormal psychology research can take place in clinics, hospitals, schools, prisons, and even highly unstructured contexts such as naturalistic observations of the homeless on the street. It is not the setting that determines whether a given research project may be undertaken. As Kazdin aptly points out (1998b, p. x), “methodology is not merely a compilation of practices and procedures. Rather it is an approach toward problem solving, thinking, and acquiring knowledge.” As such, research methodology (that is, the scientific processes and procedures we use to conduct research) is constantly evolving.

Clinical Social Worker

M.S.W. or Ph.D. in social work with specialized clinical training in mental health settings.

Psychiatric Nurse

R.N. certification plus specialized training in the care and treatment of psychiatric clients. Nurses can attain M.A. and Ph.D. in psychiatric nursing.

Occupational Therapist

B.S. in occupational therapy plus internship training with physically or psychologically handicapped individuals, with the aim of helping them make the most of their resources.

Pastoral Counselor

Ministerial background plus training in psychology and an internship in a mental health facility as a chaplain.

Community Mental Health Worker

Person with limited professional training who works under professional direction; usually involved in crisis intervention.

Alcohol- or Drug-Abuse Counselor

Limited professional training but educated in the evaluation and management of alcohol- and drug-abuse problems.



Abnormal psychology research can be conducted in a variety of settings outside the research laboratory, including clinics, hospitals, schools, or prisons.

As new techniques become available (brain-imaging techniques and new statistical procedures, to name a few), methodology in turn evolves. In the sections that follow, we introduce some fundamental research concepts so that you may begin to think critically like a clinical scientist. For further help, in some chapters we use a Research Close-Up to draw your attention to some key terms that are central to the comprehension of psychological research.

Sources of Information

Case Studies

As humans, we often direct our attention to the people around us. If you were asked to describe your best friend, your father, or even the professor teaching your abnormal psychology class, you would undoubtedly have plenty to say. As is the case in virtually all other sciences, the foundation of psychological knowledge stems from observation. Indeed, a large amount of early knowledge was distilled from case studies in which specific individuals were described in great detail.

Astute clinicians such as the German psychiatrist Emil Kraepelin (1856–1926) and the Swiss psychiatrist Eugen Bleuler (1857–1939) provided us with detailed accounts of patients whom a modern-day reader would easily recognize as suffering from disorders such as schizophrenia and manic depression. Alois Alzheimer (1864–1915) depicted a patient with an unusual clinical picture that subsequently became known as Alzheimer’s disease. Sigmund Freud (1856–1939), the founder of psychoanalysis, published multiple clinical cases describing what we now recognize as phobia (the case of “Little Hans”) and obsessive-compulsive disorder (“the Rat Man”). Such portrayals make for fascinating reading, even today.

Much can be learned when skilled clinicians use the **case study** method. Still, the information presented in them is subject to **bias** because the writer of the case study selects what information to include and what information to omit. Another concern is that the material in a case study is often relevant only to the individual being described. This means that the conclusions of a case study have low **generalizability**—that is, they cannot be used to draw conclusions about other cases even when those cases involve people with a seemingly similar abnormality. When there is only one observer and one subject, and when the observations are made in a relatively uncontrolled context and are anecdotal and impressionistic in nature, the conclusions we can draw are very narrow and may be mistaken. Nonetheless, case studies are an excellent way to illustrate clinical material. They can also provide some limited support for a particular theory or provide some negative evidence that can challenge a prevailing idea or assumption. Importantly, case studies can be a valuable source of new ideas and serve as a stimulus for research, and they may provide insight into unusual clinical conditions that are too rare to be studied in a more systematic way.

Self-Report Data

If we wish to study behavior in a more rigorous manner, how do we go about doing so? One approach is to collect **self-report data** from the people we wish to learn more about. This might involve having our research participants complete questionnaires of various types. Another way of collecting self-report data is from interviews. The researcher asks a series of questions and then records what the person says.

Asking people to report on their subjective experiences might appear to be an excellent way to collect information. However, as a research approach it has some limitations. Self-report data can sometimes be misleading. One problem is that people may not be very good reporters of their own subjective states or experiences. For example, when asked in an interview, one child may report that he has 20 “best friends.” Yet, when we observe him, he may always be playing alone. Because people will occasionally lie, misinterpret the question, or desire to present themselves in a particularly favorable (or unfavorable) light, self-report data cannot always be regarded as highly accurate and truthful. This is something that anyone who has ever tried online dating knows only too well! And if you still need convincing, ask three people to tell you their weight. Then ask them to step on a scale. How likely is it that the weight they self-report will be the weight that appears when they step on the scale? What reasons do you think might explain the discrepancy?

Observational Approaches

When we collect information in a way that does not involve asking people directly (self-report), we are using some form of observational approach. Exactly how we go about this

depends on what it is we seek to understand. For example, if we are studying aggressive children, we may wish to have trained observers record the number of times children who are classified as being aggressive hit, bite, push, punch, or kick their playmates. This would involve **direct observation** of the children's behavior.

We may also collect information about biological variables (such as heart rate) in our sample of aggressive children. Alternatively, we could collect information about stress hormones, such as cortisol, by asking the observed children to spit into a plastic container (because cortisol is found in saliva). We would then send the saliva samples to the lab for analysis. This, too, is a form of observational data; it tells us something that we want to know using a variable that is relevant to our interests.

Technology has advanced, and we are now developing methods to study behaviors, moods, and cognitions that have long been considered inaccessible. As illustrated in Figure 1.1, we can now use brain-imaging techniques such as functional magnetic resonance imaging (fMRI) to study the working brain. We can study blood flow to various parts of the brain during memory tasks. We can even look at which brain areas influence imagination.

With other techniques such as transcranial magnetic stimulation (TMS; see Figure 1.2), which generates a magnetic field on

the surface of the head, we can stimulate underlying brain tissue (for an overview, see Fitzgerald et al., 2002). This can be done painlessly and noninvasively while the person receiving the TMS sits in an armchair. Using TMS, we can even take a particular area of the brain “off-line” for a few seconds and measure the behavioral consequences. In short, we can now collect observational data that would have been impossible to obtain a decade ago.

In practice, much clinical research involves a mix of self-report and observational methods. Also, keep in mind that when we refer to observing behavior we mean much more than simply watching people. Observing behavior, in this context, refers to careful scrutiny of the conduct and manner of specific individuals (e.g., healthy people, people with depression, people with anxiety, people with schizophrenia). We may study social behavior in a sample of patients with depression by enlisting trained observers to record the frequency with which the patients smile or make eye contact. We may also ask the patients themselves to fill out self-report questionnaires that assess social skills. If we think that sociability in patients with depression may be related to (or correlated with) their severity of depression, we may further ask patients to complete self-report measures designed to assess that severity. We may

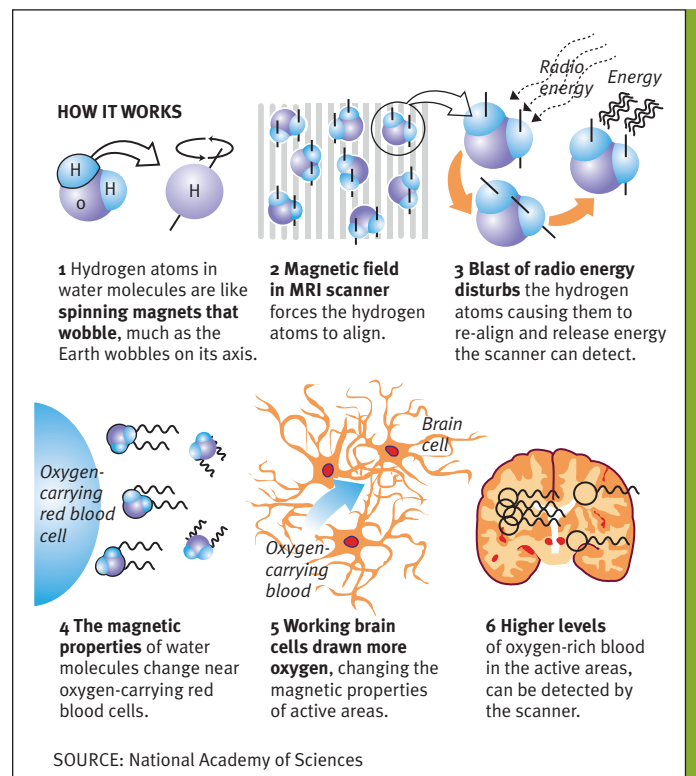


FIGURE 1.1

Images of the Working Brain

Functional magnetic resonance imaging, or fMRI, can pinpoint areas of the brain involved in recognizing faces, spatial reasoning, and other tasks by “reading” the millions of molecules in your brain.

Source: National Academy of Science; Globe Staff Graphic/Sean McNaughton, from *Boston Globe*, Feb. 10, 2004. Copyright 2004, Globe Newspaper Company. Republished with permission.

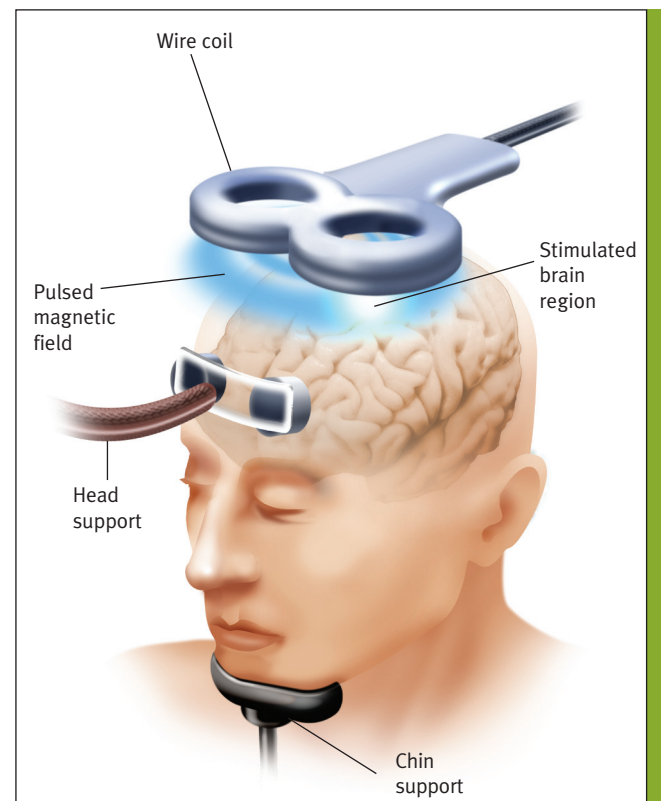


FIGURE 1.2

Researchers use technology, such as transcranial magnetic stimulation (TMS), to study how the brain works. This TMS technique generates a magnetic field on the surface of the head through which underlying brain tissue is stimulated. Researchers can evaluate and measure behavioral consequences of this noninvasive and painless brain stimulation.

even measure levels of certain substances in patients' blood, urine, or cerebrospinal fluid (the clear fluid that bathes the brain and that can be obtained by performing a lumbar puncture). Finally, we could possibly study the depressed patients' brains directly via brain-imaging approaches. These diverse sources of information would provide us with potentially valuable data, the basis of scientific inquiry.

In Review

- What are the strengths and limitations of case studies?
- Why is it desirable not to rely solely on self-report data as a source of information?
- What is the difference between self-report and observational data? What range of measures could be considered to reflect observational data?

Forming and Testing Hypotheses

Research is all about asking questions. To make sense of behavior, researchers generate hypotheses. A **hypothesis** is an effort to explain, predict, or explore something. What distinguishes scientific hypotheses from the vague speculation that we all routinely engage in is that scientists attempt to test their hypotheses. In other words, they try to design research studies that will help them approach a fuller understanding of how and why things happen.

Anecdotal accounts such as case studies can be very valuable in helping us develop hypotheses, although case studies are not well suited for testing the hypotheses that they may have inspired. Other sources of hypotheses are unusual or unexpected research findings. One example is the higher-than-expected rate of suicide in women who have had cosmetic breast augmentation (Sarwer et al., 2007). Consider for a moment why this association might exist. Possible explanations might include higher rates of psychopathology in women who seek breast augmentation, unrealistic expectations about the positive effects that the surgery would have on their lives, postoperative complications that could lead to depressed mood, as well as other factors such as preoperative body image dissatisfaction.

Another observation in search of an explanation is the finding that, although men generally have lower rates of depression than women, this is not true of Jewish men. Why should Jewish men be more at risk for depression than non-Jewish men? One hypothesis is that there may be an interesting (and inverse) relationship between depression and alcohol use (Levav et al., 1997). Jewish men have lower rates of alcohol abuse and alcohol dependence than do non-Jewish men. Consistent with this idea, a study of members of Orthodox synagogues in London found no alcoholism and similar rates of depression in



Although men generally have lower rates of depression than women, the rate of depression for Jewish men and women is equal. Why would this be? A correlation between higher rates of depression and lower rates of alcohol abuse in Jewish men provides interesting ground for further study.

females and males (i.e., a 1:1 gender ratio instead of the typical 2:1 ratio; Loewenthal et al., 1995). Although much more remains to be uncovered, the hypothesis that higher rates of depression in Jewish men may be related to their lower rates of alcohol abuse appears to merit further study (see Loewenthal et al., 2003).

Hypotheses are vital because they frequently determine the therapeutic approaches used to treat a particular clinical problem. The ideas we have about what might be causing a client's difficulties will naturally shape the form of intervention we use when we provide treatment. For instance, suppose we are confronted with someone who washes his or her hands 60 to 100 times a day, causing serious injury to the skin and underlying tissues (this is an example of obsessive-compulsive disorder). If we believe that this behavior is a result of subtle problems in certain neural circuits, we may try to identify which circuits are dysfunctional in the hope of ultimately finding a means of correcting them (perhaps with medication).

On the other hand, if we view the excessive hand washing as reflecting a symbolic cleansing of sinful and unacceptable thoughts, we may try to unearth and address the sources of the person's excessive guilt and concern with morality. Finally, if we regard the hand washing as merely the product of unfortunate conditioning or learning, we may devise a means to extinguish the problematic behavior. In other words, our working hypotheses regarding the causes of different disorders very much shape the approaches we use when we study and treat the disorders.

Sampling and Generalization

We can occasionally glean instructive leads from careful scrutiny of a single case. However, this strategy rarely yields enough information to allow us to reach firm conclusions. Research in abnormal psychology is concerned with gaining enhanced understanding and, where possible, control of abnormal behavior (that is, the ability to alter it in predictable ways). Edward, for instance, may accost women in supermarkets and try to lick their feet because his mother always gave him attention when, as a child, he

tried on her shoes. In contrast, George may engage in the same behavior for an entirely different reason. We need to study a larger group of individuals with the same problem in order to discover which of our observations or hypotheses possess scientific credibility. The more people we study, the more confident we can be about our findings.

Whom should we include in our research study? In general, we want to study groups of individuals who have similar abnormalities of behavior. If we wanted to study people with panic disorder, a first step would be to determine criteria such as those provided in the current *DSM* for identifying people affected with this clinical disorder. We would then need to find people who fit our criteria. Ideally, we would study everyone in the world who met our criteria because these people constitute our population of interest. This, of course, is impossible to do, so instead we would try to get a representative sample of people who are drawn from this underlying population. To do this, we would use a technique called **sampling**. What this means is that we would try to select people who are representative of the much larger group of individuals with panic disorder (in the same way that jury selection involves having a representative sample of eligible voters).

Ideally, we would like our smaller sample (our study group) to mirror the larger group (the underlying population) in all important ways (e.g., in severity and duration of disorder and in demographics such as age, gender, and marital status). If we could do everything perfectly, our research sample would be randomly selected from the larger population of people with panic disorder, which is tantamount to ensuring that every person in that population would have an equal chance of being included in our study. Such a procedure would automatically adjust for potential biases in sample selection. In practice, however, this does not happen, and researchers must simply do the best they can given real-world constraints (including the fact that some people don't wish to participate in a research study!).

Because finding research participants is not always easy, researchers sometimes use “samples of convenience” in their studies. This means that they study groups of people who are easily accessible to them and who are readily available. Have



Why is so much research conducted using college students? What are the advantages and disadvantages of this?

you noticed how much research is conducted using college students? Is this because college students are intrinsically fascinating people to study? Or are other factors in play here?

Internal and External Validity

From a research perspective, the more representative our sample is, the better able we are to generalize (or extend the findings from our study) to the larger group. The extent to which we can generalize our findings beyond the study itself is called **external validity**. A research study that involves both males and females from all age groups, income levels, and education levels is more representative of the underlying population (and will have greater external validity) than research using only female college students, for example. In addition, when we study a group of people who all share a defining characteristic (e.g., a specific disorder), we may then be able to infer that additional commonalities that they share (such as a family history of depression or low levels of certain neurotransmitters) may be related to the disorder itself. Of course, this is based on the assumption that the characteristic in question is not widely shared by people who do not have the disorder.

Unlike external validity, which concerns the degree that research findings from a specific study can be generalized to other samples, contexts, or times, **internal validity** reflects how confident we can be in the results of a particular given study. In other words, internal validity is the extent to which a study is methodologically sound, free of confounds, or other sources of error, and able to be used to draw valid conclusions. For example, suppose that a researcher is interested in how heart rate changes when participants are told that they are about to be given an electric shock. Imagine also how much faith you might have in the results of the research if participants who have just completed the study are allowed to chat in the waiting area with people who are just about to participate. What if the latter learn that, in reality, no shocks are given at all? How might this information change how subjects respond? Failure to control the exchange of information in this way clearly jeopardizes the integrity of the study and is a threat to its internal validity. Some subjects (those who have not been given prior information) will expect to receive real shocks; others will not because, unbeknownst to the experimenter, information has been leaked to them beforehand.

Criterion and Comparison Groups

To test their hypotheses, researchers use a **comparison group** (sometimes called a **control group**). This may be defined as a group of people who do not exhibit the disorder being studied but who are comparable in all other major respects to the **criterion group** (i.e., the people with the disorder). By “comparable” we might mean that the two groups are similar in age, number of males and females in each group, education level, and similar demographic variables. Typically, the comparison group is psychologically healthy, or “normal,” according to certain specified criteria. We can then compare the two groups on the variables of interest.

To further illustrate the idea of criterion and control groups, let us return to our example about schizophrenia and milk. Dr. Smart's hypothesis was that drinking milk causes schizophrenia. However, when a group of patients with schizophrenia (the criterion group, or group of interest) was compared with a group of patients who did not have schizophrenia (the control group), it was clear that there were no differences in milk drinking between the two groups.

Using the controlled research approaches we have just described, researchers have learned much about many different psychological disorders. We can also use extensions of this approach not only to compare one cohort of patients with healthy controls but also to compare groups of patients with different disorders.

For example, Cutting and Murphy (1990) studied how well (1) patients with schizophrenia, (2) patients with depression or mania, and (3) healthy controls performed on a questionnaire testing social knowledge. This involved a series of multiple-choice questions that presented a social problem (e.g., "How would you tell a friend politely that he had stayed too long?"). Possible answer choices included responses such as, "There's no more coffee left" and "You'd better go. I'm fed up with you staying too long." (In case you are wondering, both of these are incorrect choices; the preferred answer for this example was, "Excuse me. I've got an appointment with a friend.")

Consistent with the literature showing that social deficits are associated with schizophrenia, the patients with schizophrenia did worse on this test relative to both the healthy controls and the depressed or manic patients. The finding that the patients with schizophrenia did more poorly than the depressed or manic patients allowed the researchers to rule out the possibility that simply being a psychiatric patient is linked to poor social knowledge.

In Review

- Explain what the term *representative sample* means.
- What is a sample of convenience?
- What is the difference between internal and external validity? How can external validity be maximized?
- Why are comparison or control groups so important?

Research Designs

Studying the World as It Is: Correlational Research Designs

A major goal of researchers in abnormal psychology is to learn about the causes of different disorders. For ethical and practical reasons, however, we often cannot do this directly. Perhaps

we want to learn about factors that result in depression. We may hypothesize that stress or losing a parent early in life may be important in this regard. Needless to say, we cannot create such situations and then see what unfolds!

Instead, the researcher uses what is known as a **correlational research** design. Unlike a true experimental research design (described in the next section.), correlational research does not involve any manipulation of variables. Rather, the researcher selects certain groups of interest (for example, people who have recently been exposed to a great deal of stress, or people who lost a parent when they were growing up). She would then compare the groups on a variety of different measures (including, in this example, levels of depression).

Any time we study differences between individuals who have a particular disorder and those who do not, we are utilizing this type of correlational research design. Essentially, we are capitalizing on the fact that the world works in ways that create natural groupings of people (people with specific disorders, people who have had traumatic experiences, people who win lotteries, etc.) whom we can then study. Using these types of research designs, we are able to identify factors that appear to be associated with depression, alcoholism, binge eating, or alternate psychological states of distress (for a more comprehensive description of this kind of research approach, see Kazdin, 1998b).

Measuring Correlation

Correlational research takes things as they are and determines associations among observed phenomena. Do measures vary together in a direct, corresponding manner (known as a **positive correlation**—see Figure 1.3 on page 21.) such as in the example we mentioned earlier showing that breast augmentation surgery was correlated with increased risk of suicide? Or conversely, is there an inverse correlation, or **negative correlation**, between the variables of interest (such as high socioeconomic status and decreased risk of psychopathology)? Or finally, are the variables in question entirely independent of one another, or *uncorrelated*, such that a given state or level of one variable fails to predict reliably the degree of the other variable, as was the case with our example about milk and schizophrenia?

The strength of a **correlation** is measured by a **correlation coefficient**, which is denoted by the symbol r . A correlation runs from 0 to 1, with a number closer to 1 representing a stronger association between the two variables. The + sign or – sign indicates the direction of the association between the variables. For example, a positive correlation means that higher scores on one variable are associated with higher scores on the other variable, as might be the case for hours spent studying and grade point average. A negative correlation means that, as scores on one variable go up, scores on the other variable tend to go down. An example here might be the association between hours spent partying and grade point average.

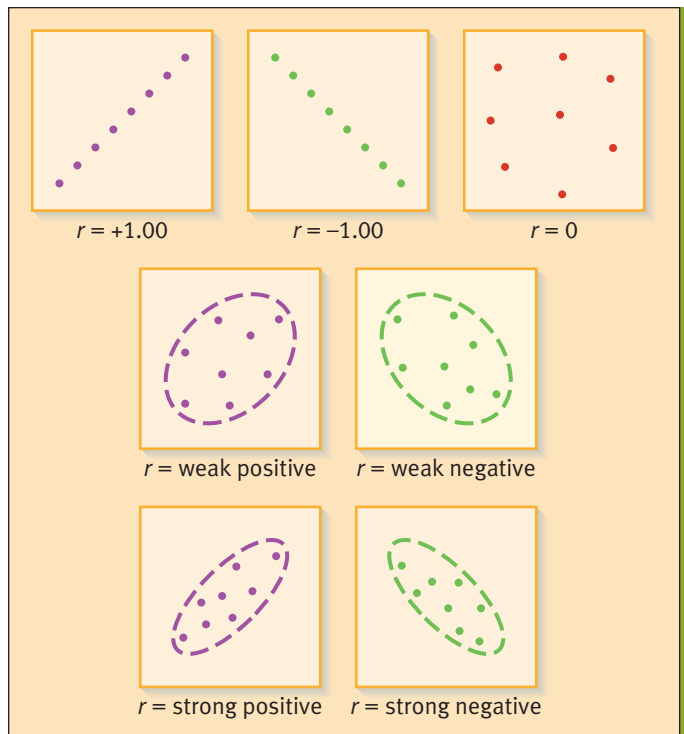


FIGURE 1.3

Scatterplots of data illustrating positive, negative, and no correlation between two variables. Dots indicate a given person's score on the two variables of interest. A strong positive correlation ($r = +1.0$) means that high scores on one variable are associated with high scores on the second variable, creating a forward-sloping straight line. For example, we would expect there to be a positive correlation between weight and the number of calories eaten per day. When there is a strong negative correlation ($r = -1.0$), high scores on the first variable are associated with low scores on the second variable, creating a backward-sloping straight line. A relevant example here would be the association between weight and time spent exercising per day. When there is no correlation ($r = 0$), scores on the independent variable tell us nothing about scores on the dependent variable. An example here might involve weight and astrological sign.

Statistical Significance

If you read a research article, you are likely to see correlations reported in the text. Next to the correlation you will almost certainly see a notation that reads $p < .05$. This is the level of **statistical significance**. But what does this mean? Simply put, it means that the probability that the correlation would occur purely by chance is less than 5 out of 100. Researchers adopt this conventional level of significance and consider correlations that have a $p < .05$ to be statistically significant and worthy of attention. Of course, this does not mean that the result in question could not have occurred by chance; it simply means that it is not very likely.

Statistical significance is influenced not only by the magnitude or size of the correlation between the two variables but also by the sample size. A correlation of .30 will not be significant if the sample size is 20 people but will be significant if the

sample size is 50 people. Correlations based on very large samples (e.g., 1,000 people) can be very small and yet still reach statistical significance. Conversely, correlations drawn from small samples need to be very large to reach statistical significance.

Effect Size

The fact that statistical significance is influenced by sample size creates a problem when we want to compare findings across studies. Suppose that Dr. Green reports a significant association between two variables in her study. But, in a second study, Dr. Blue reports no significant correlation between these same two variables. This is not an uncommon occurrence in the scientific literature, and it often creates a lot of confusion about whose results are “correct.” But if Dr. Green has a larger sample size than Dr. Blue, the same-size correlation will be significant in Dr. Green's study but not reach statistical significance in Dr. Blue's study. To avoid the problems inherent in just focusing on statistical significance, and to facilitate comparison of results across different studies (which invariably have different sample sizes), researchers often report a statistic called the **effect size**. The effect size reflects the size of the association between two variables independent of the sample size. An effect size of zero means there is no association between the variables. Because it is independent of sample size, the effect size can be used as a common metric and is very valuable when we want to compare the strength of findings across different studies. If the effect size is about the same in the studies of both Dr. Green and Dr. Blue we can conclude that they really had similar findings, regardless of the fact that the results were significant in one study but not in the other.

Meta-Analysis

When researchers want to summarize research findings in a specific area they often do a literature search and write a review. In drawing their conclusions they will rely on significance levels, noting whether more studies than not found a significant association between two variables, such as smoking and health. A far better approach, however, is to conduct a **meta-analysis**. A meta-analysis is a statistical approach that calculates and then combines the effect sizes from all of the studies. Within a meta-analysis, each separate study can be thought of as being equivalent to an individual participant in a conventional research design. Because it uses effect sizes, a meta-analysis provides a better way to summarize research findings than is possible with a literature review.

Correlations and Causality

When it comes to correlations, one thing is very important to remember: Correlation does not mean causation. Just because two variables are correlated does not tell us anything about why they are correlated. This is true regardless of the size of the correlation. Many research investigations in abnormal

psychology reveal that two (or more) things regularly occur together, such as poverty and diminished intellectual development, or depression and reported prior stressors. This in no way affirms that one factor is the cause of the other.

Consider, for example, the positive correlation that exists between ice cream consumption and drowning. Does this mean that eating ice cream compromises swimming ability and so leads to drowning? Or that people who are about to drown themselves like to have one final ice cream cone before they enter the water? Both of these alternatives are clearly absurd. Much more likely is that some unknown third variable might be causing both events to happen. This is known as the **third variable problem**. What might the third variable be in this example? After a moment's reflection, you might realize that a very plausible third variable is hot summer weather. Ice cream consumption increases in the summer months. So, too, does the number of people who drown because more people swim during the summer than at any other time. The correlation between ice cream consumption and drowning is a spurious one, caused by the fact that both variables are correlated with the weather.

To use an example from abnormal psychology, even as late as the 1940s it was thought that masturbation caused insanity. This hypothesis no doubt arose from the fact that, historically, patients in mental asylums could often be seen masturbating in full view of others. Of course, we now know that masturbation and insanity were correlated not because masturbation caused insanity but because sane people are much more likely to masturbate in private than in public. In other words, the key factor linking the insanity and masturbation (and the unmeasured third variable) was that of impaired social awareness.

Even though correlational studies may not be able to pinpoint causal relationships, they can be a powerful and rich source of inference. They often suggest causal hypotheses (increased height may cause increased weight; increased weight is unlikely to cause increased height), generate questions for further research, and occasionally provide crucial data that may confirm or refute specific hypotheses. Much of what we know about mental disorders is derived from correlational studies. The fact that we cannot manipulate many of the variables we study does not mean that we cannot learn a great deal from such approaches.

Retrospective Versus Prospective Strategies

Correlational research designs can be used to study different groups of patients as they are at the time of the study (that is, concurrently). For example, if we used brain imaging to look at the size of certain brain structures in patients with schizophrenia and in healthy controls, we would be using this type of approach. But if we wanted to learn what our patients were like before they developed a specific disorder, we might adopt a **retrospective research** strategy. This involves looking back in time. In other words, we would try to collect information about how the patients behaved early in their lives with the goal of identifying factors that

might have been associated with what went wrong later. In some cases, our source material might be limited to a patient's recollections, the recollections of family members, material from diaries, or other records. A challenge with this technique is the potential for memories to be both faulty and selective.

There are certain difficulties in attempting to reconstruct the pasts of people already experiencing a disorder. Apart from the fact that a person who currently has a mental disorder may not be the most accurate or objective source of information, such a strategy invites investigators to discover what they already presume they will discover concerning background factors theoretically linked to a disorder. It invites biased procedure, unconscious or otherwise.

For instance, reports of a link between early sexual abuse and various forms of psychopathology began to emerge in the 1980s. After these reports came out, many therapists proceeded to suggest to their patients with such conditions that perhaps they too had been abused. For certain overzealous therapists, the fact that many patients had no memories of any abuse was taken as evidence that the painful memories had simply been "repressed." In other cases, a patient's simply having such common problems as difficulty sleeping or being easily startled was taken as evidence of past abuse. Over time, many patients became as convinced as their therapists that they must have been abused and that this accounted for their current difficulties. But for many patients, it simply was not the case that they had been abused. This underscores the pitfalls inherent in trying to reinterpret a person's past (or past behavior) in light of his or her present problems. Adherence to fundamental scientific principles is as crucial in the clinical domain as it is in the research laboratory.

Another approach is to use a **prospective research** strategy, which involves looking ahead in time. Here the idea is to identify individuals who have a higher-than-average likelihood of becoming psychologically disordered and to focus research attention on them before any disorder manifests. We can have much more confidence in our hypotheses about the causes of a disorder if we have been tracking influences and measuring them prior to the development of the illness in question. When our hypotheses correctly predict the behavioral problems that a group of individuals will later develop, we are much closer to establishing a causal relationship. A study that follows people over time and that tries to identify factors that predate the onset of a disorder employs a **longitudinal design**. A prototypical illustration might be a study that follows, from infancy to adulthood, the children of mothers with schizophrenia. By collecting data on the children at regular intervals, researchers can compare those who later develop schizophrenia with those who do not, with the goal of identifying important differentiating factors. In another example of a longitudinal design, researchers have shown that adolescents who report suicidal thoughts at age 15 are much more likely to have psychological problems and to have attempted suicide by age 30 than people who do not have suicidal ideas in their teens (Reinherz et al., 2006).

Manipulating Variables: The Experimental Method in Abnormal Psychology

As you have already learned, even when we find strong positive or negative associations between variables, correlational research does not allow us to draw any conclusions about directionality (i.e., does variable A cause B, or does B cause A?). This is known as the **direction of effect problem**. To draw conclusions about causality and resolve questions of directionality, an **experimental research** approach must be used. In such cases, scientists control all factors except one—the factor that could have an effect on a variable or outcome of interest. They then actively manipulate (or influence) that one factor. The factor that is manipulated is referred to as the **independent variable**. If the outcome of interest,

called the **dependent variable**, is observed to change as the manipulated factor is changed, then that independent variable can be regarded as a cause of the outcome (see Figure 1.4).

In Romania, children who are abandoned by their parents are traditionally raised in orphanages rather than in foster care. To study the cognitive effects of institutional versus other forms of care, researchers randomly assigned 136 children who had been institutionalized as babies to either remain in these institutions or be raised by foster families (see Nelson et al., 2007). These foster parents had been recruited for the study by the researchers. Another sample of children who lived with their birth families was also studied for comparison purposes. All the children received cognitive testing when they were 30, 42, and 54 months old. In this study, the independent variable is the living situation of the child (orphanage or foster care). The dependent variable is intellectual functioning.

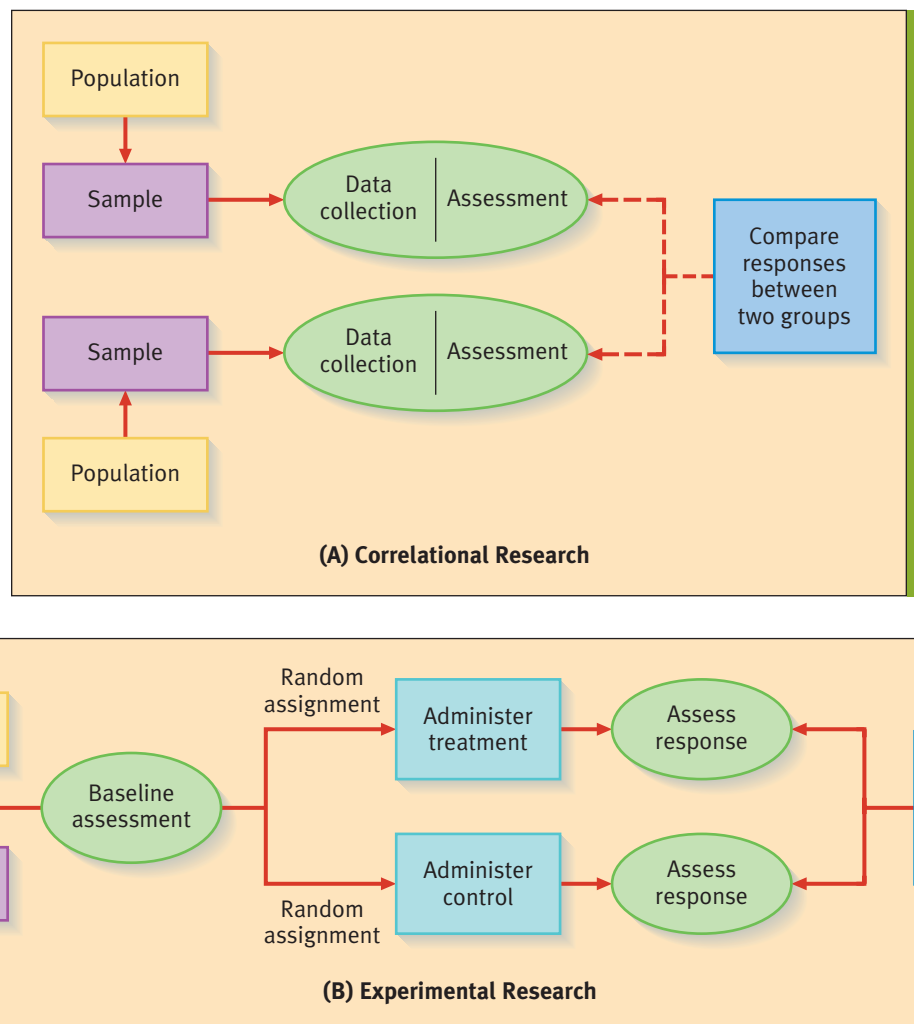


FIGURE 1.4

Correlational and Experimental Research Designs

(A) In correlational research, data are collected from two different samples or groups and are then compared. (B) In experimental research, participants are assessed at baseline and then randomly assigned to different groups (e.g., a treatment and a control condition). After the experiment or treatment is completed, data collected from the two different groups are then compared. (Adapted from Petrie & Sabin, 2000. *Medical Statistics at a Glance*. Oxford, UK: Blackwell Science Ltd.)

Did the children assigned to foster care fare better than the children who remained in institutions? The answer is yes. At both the 42-month and the 54-month assessments, the children in foster families had significantly higher scores on the measure of cognitive functioning than the children who remained institutionalized. We can therefore conclude that there was something about being raised in a foster family that was responsible for the increased intellectual development of these children. Sadly, however, the cognitive development of both groups of children was much lower than the intellectual functioning of children who were raised in typical families. The results of this unique study therefore tell us that, although foster care helps abandoned children, these children remain at a disadvantage relative to children who are raised by their biological families. However, based at least partially on the findings

from this remarkable study, Romania no longer allows children without severe disabilities to be placed in institutional care.

Studying the Efficacy of Therapy

Researchers in abnormal psychology are often interested in learning which treatments work for specific disorders. Used in the context of treatment research, the experimental method has proved to be indispensable. It is a relatively straightforward process to establish: A proposed treatment is given to a designated group of patients and withheld from a similar group of patients. Should the treated group show significantly more improvement than the untreated group, we can have confidence in the treatment's efficacy. We may

1.4 DEVELOPMENTS IN RESEARCH

Do Magnets Help with Repetitive-Stress Injury?

Magnets are often marketed to people who have chronic hand or wrist pain. This type of problem is known as repetitive-stress injury (RSI) and can be caused by extensive computer use. But do magnets really relieve the chronic pain that is associated with repetitive-stress injury? Testimonials notwithstanding, the only way to answer this question is by controlled research.

Pope and McNally (2002) randomly assigned college students with RSI to one of three groups. One group was asked to wear wristbands containing magnets for a 30-minute period (magnet group). A second group was also given seemingly identical bracelets to wear. In this case, however, and unknown both to the participants and to the assistant running the study, the magnets had been removed from the wristbands (sham group). A third group of subjects did not receive any magnets (no-treatment group).

You should note here that this study is an example of what we call a **double-blind study**. In other words, neither the subjects nor the experimenter who was working with the subjects knew who got the genuine magnets. The use of the wristbands with the magnets removed is called a **placebo treatment** condition (the word *placebo* comes from the Latin meaning "I shall please"). Placebo treatment conditions enable experimenters to control for the possibility that simply believing one is getting an effective type of treatment produces a therapeutic benefit. Finally, the no-treatment control group enables the experimenters to see what happens when they do not provide any treatment (or expectation of treatment) at all.

At the start of the study, all of the student participants completed a 4-minute typing test. This provided a measure of how many words they could type in this time period. Then, 30 minutes after wearing the magnets or fake wristbands (or, for the no-treatment subjects, after waiting 30 minutes), all participants completed another 4-minute typing test. In addition, those who had been assigned to

either the genuine or the placebo magnet group were asked to rate their degree of pain relief (from no improvement to complete relief) using an 8-point scale.

What were the results? As might be expected, those people who had been assigned to the no-treatment group did not report that their level of pain changed in any appreciable way. This is hardly surprising because nothing had been done to them at all. They typed an average of about four more words on the second test (the posttest) than on the first (the pretest).

Did the people who wore the magnets do better than this? The answer is yes. Those who wore the genuine magnets reported that their pain was diminished. They also typed an average of 19 more words on the second typing test than they had on the first! In other words, with respect to both their self-report data (their pain improvement ratings) and their behavioral data (how rapidly they could type), they clearly did better than the no-treatment group.

Before you rush out to buy magnetic bracelets, however, let us look at the performance of the people who received the fake bracelets. Like the subjects who wore the genuine magnets, these participants also reported that their pain had improved. And, in fact, on the behavioral typing test, subjects in the placebo treatment group typed even more words on the second test (an average of 26 more words) than subjects who wore the real magnets did. With respect to their self-reports and their behavioral data, therefore, the group who wore the fake bracelets improved just as much as the group who wore the real magnets! On the basis of this study, then, we must conclude that magnet therapy works via the placebo effect, not because there is any genuine clinical benefit that comes from the magnets themselves. If you believe that the magnet will help your RSI, you do not actually need a magnet to bring about any clinical improvement. And this, in a nutshell, is why we need controlled research trials.

not, however, know why the treatment works, although investigators are becoming increasingly sophisticated in fine-tuning their experiments to tease out the means by which therapeutic change is induced (e.g., Hollon et al., 1987; Jacobson et al., 1996; Kazdin & Nock, 2003). Box 1.4 provides a nice example of a treatment research study. The findings of this study also show just how powerful placebo effects can be.

In treatment research it is important that the two groups (treated and untreated) be as equivalent as possible except for the presence or absence of the proposed active treatment. To facilitate this, patients are typically randomly assigned to the treatment condition or the no-treatment condition. **Random assignment** means that every research participant has an equal chance of being placed in the treatment or the no-treatment condition. Once a treatment has been established as effective, it can then be provided for members of the original control (untreated) group, leading to improved functioning for all those involved.

Sometimes, however, this “waiting list” control group strategy is deemed inadvisable for ethical or other reasons. Withholding a treatment that has been established as beneficial just to evaluate a new form of treatment may deprive control subjects of valuable clinical help for longer than would be considered appropriate. For this reason, there need to be stringent safeguards regarding the potential costs versus benefits of conducting the particular research project.

In certain cases, an alternative research design may be called for in which two (or more) treatments are compared in differing yet comparable groups. This method is termed a *standard treatment comparison study*. Typically, the efficacy of the control condition has been previously established; thus, patients who are assigned to this condition are not disadvantaged. Instead, the question is whether patients who receive the new treatment improve to a greater extent than those receiving the control (established) treatment. Such comparative-outcome research has much to recommend it and is being increasingly employed (Kendall et al., 2004).

Single-Case Experimental Designs

Does experimental research always involve testing hypotheses by manipulating variables across groups? The simple answer is no. We have already noted the importance of case studies as a source of ideas and hypotheses. In addition, case studies can be used to develop and test therapy techniques within a scientific framework. Such approaches are called **single-case research designs** (Hayes, 1998; Kazdin, 1998a, 1998b). A central feature of such designs is that the same individual is studied over time. Behavior or performance at one point in time can then be compared to behavior or performance at a later time, after a specific intervention or treatment has been introduced. For example, using a single-case design, Wallenstein and Nock (2007) were able to show that exercise helped a 26-year-old female patient to significantly decrease the frequency of her nonsuicidal self-injuring behaviors, which included self-hitting and head-banging.

One of the most basic experimental designs in single-case research is called the **ABAB design**. The different letters refer to different phases of the intervention. The first A phase serves as a baseline condition. Here we simply collect data on or from the participant. Then, in the first B phase, we introduce our treatment. Perhaps the person’s behavior changes in some way. Even if there is a change, however, we are not justified in concluding that it was due to the introduction of our treatment. Other factors might have coincided with its introduction, so any association between the treatment and the behavior change might be spurious. To establish whether it really was the treatment that was important, we therefore withdraw the treatment and see what happens. This is the reasoning behind the second A phase (i.e., at the ABA point). Finally, to demonstrate that the behavior observed during the B phase is attainable once again, we reinstate our treatment and see if the behavioral changes we saw in the first B phase become apparent again. To further clarify the logic behind the ABAB design, let’s consider the case of Kris (see Rapp et al., 2000).

case study Kris

Kris was a 19-year-old female with severe intellectual impairments. Since the age of 3 she had pulled her hair out. This disorder is called *trichotillomania* (pronounced tri-ko-til-lo-mania). Kris’s hair pulling was so severe that she had a bald area on her scalp that was approximately 2.5 inches in diameter.

The researchers used an ABAB experimental design (see Figure 1.5) to test a treatment for reducing Kris’s hair pulling. In each phase, they used a video camera to observe Kris while she was alone in her room watching television. During the baseline phase (phase A), observers measured the percentage of time that Kris

spent either touching or manipulating her hair (42.5 percent of the time) as well as pulling hair (7.6 percent of the time).

In the treatment phase (B), a 2.5-lb weight was put around Kris’s wrist when she settled down to watch television. When she was wearing the wrist weight, Kris’s hair manipulation and hair pulling was reduced to zero. This, of course, suggested that Kris’s behavior had changed because she was wearing a weight on her wrist. To verify this, the wrist weight was withdrawn in the second A phase (i.e., ABA). Kris immediately started to touch and manipulate her hair again (55.9 percent). She also showed an increase in hair pulling (4 percent of the time).

continued

case study Kris (*continued*)

When the wrist weight was reintroduced in the second B phase (ABAB), Kris's hair manipulation and pulling once again decreased, at least for a while. Although additional treatments were necessary (see Rapp et al., 2000), Kris's hair pulling was eventually

eliminated entirely. Most important for our discussion, the ABAB design allowed the researchers to systematically explore, using experimental techniques and methods, the treatment approaches that might be beneficial for patients with trichotillomania.

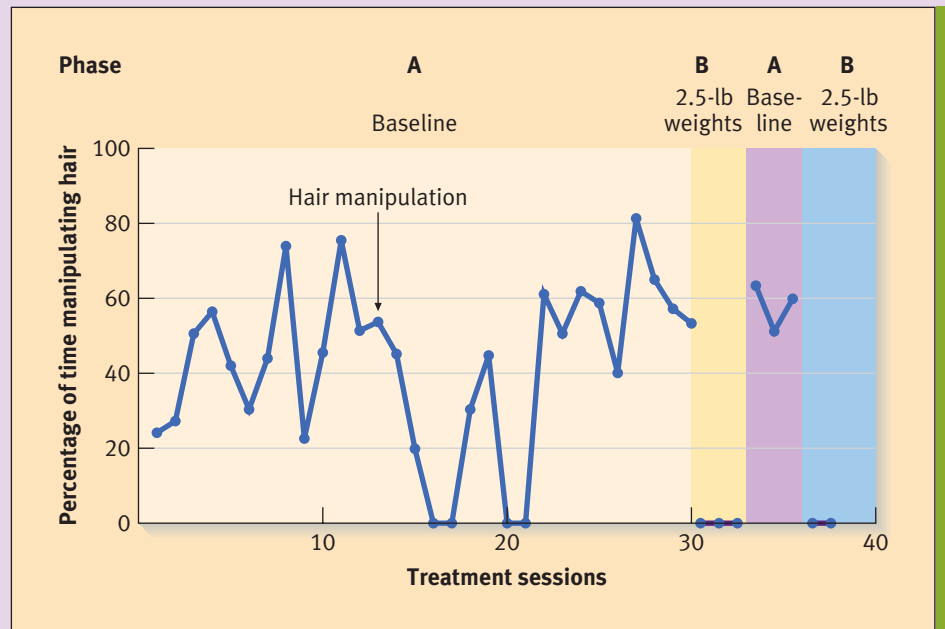


FIGURE 1.5

An ABAB Experimental Design: Kris's Treatment

In the A phase, baseline data are collected. In the B phase, a treatment is introduced. This treatment is then withdrawn (second A phase) and then reinstated (second B phase). In this example, hair manipulation declines with use of wrist weights, returns to pretreatment (baseline) levels when they are withdrawn, and declines again when they are reintroduced. (Data adapted from Rapp et al., 2000. Treatment of hair pulling and hair manipulation maintained by digital-tactile stimulation. *Behavior Therapy*, 31, pp. 381–93)

Animal Research

An additional way in which we can use the experimental method is by conducting research with animals. Although ethical considerations are still critical in animal research, we are able to perform studies using animal subjects that would not be possible to implement with humans (e.g., giving them experimental drugs, implanting electrodes to record brain activity, etc.).

Of course, one major assumption is that the findings from animal studies can be generalized to humans. Experiments of this kind are generally known as **analogue studies**, in which we study not the true item of interest but an approximation to it. Analogue studies may also involve humans (for example, when we try to study depression by studying healthy research participants whom we have made mildly and transiently sad).



Animal research allows behavioral scientists to manipulate and study behavior under controlled conditions that would not be possible to replicate using humans as subjects. However, results of this research may not hold up when extended to humans outside the laboratory in a real-world setting.

One current model of depression, called “hopelessness depression,” has its origins in early research conducted with animals (Seligman, 1975). Laboratory experiments with dogs had demonstrated that, when subjected to repeated experiences of painful, unpredictable, and inescapable electric shock, the dogs lost their ability to learn a simple escape response to avoid further shock in a different situation later on. They just sat and endured the pain. This observation led Seligman and his colleagues to argue that human depression (which he believed was analogous to the reaction of the helpless dogs) is a reaction to uncontrollable stressful events in which one’s behavior has no effect on one’s environment, leading to helplessness, passivity, and depression. In other words, the findings from these animal studies provided the impetus for what first became known as the “learned helplessness theory of depression” (Abramson et al., 1978; Seligman, 1975) and is now termed “the hopelessness theory of depression” (Abramson et al., 1989). These theories of depression are not without their difficulties. Nevertheless, it is useful to remain aware of the broader message: Even though problems may arise when we generalize too readily

from animal to human models of psychopathology, the learned helplessness analogy has generated much research and has allowed us to refine and develop our understanding of depression.

In Review

- How is experimental research different from correlational research?
- What is the difference between a positive and a negative correlation? If two variables are correlated, does this mean that one variable causes the other? If so, why? If not, why not?
- In experimental research, which variable (independent or dependent) is manipulated?
- What is a placebo?
- Explain the process of performing an ABAB design. Why are such designs helpful to clinicians and researchers?

Unresolved Issues

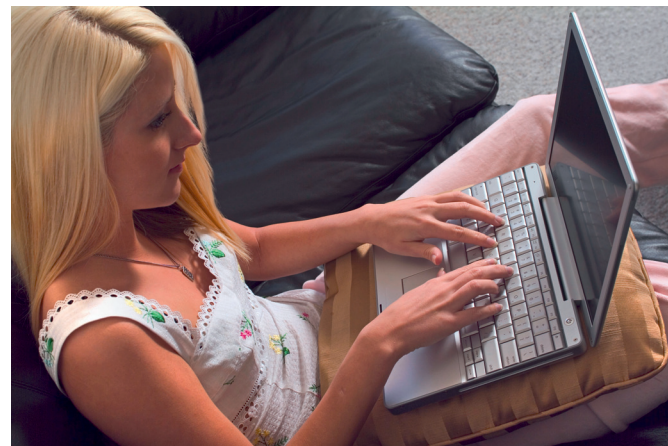
► *Are We All Becoming Mentally Ill? The Expanding Horizons of Mental Disorder*

The concept of mental disorder, as we have seen, suffers from the lack of a truly objective means of determining what is disordered and what is not. It is also in the financial interests of mental health professionals to be more and more inclusive concerning the kinds of problems that might be regarded as “mentally disordered.” Not surprisingly, there is often pressure to include in the *DSM* more and more kinds of socially undesirable behavior. For example, when *DSM-IV* was being developed a proposal was made to include “road rage” (anger at other drivers) as a newly discovered mental disorder (Sharkey, 1997). However, anger directed toward other drivers is so common that almost all of us would be at risk of being diagnosed with this new disorder if it had been added to the *DSM*.

There is considerable informal evidence that the committee responsible for the production of the *DSM-IV* worked hard to fend off a large number of such frivolous proposals. They largely succeeded in avoiding additional diagnoses by adopting stringent inclusion criteria. Nevertheless, this promises to be an uphill battle. Mental health professionals, like the members of other professions, tend to view the world through a lens that enhances the importance of phenomena related to their own expertise. Also, inclusion of a disorder in the *DSM* is a prerequisite for health insurers’ reimbursement of services rendered.

It is thus in the interests of the public at large to keep a close eye on proposed expansions of what is considered “mentally disordered.” Failure to do so could eventually lead to a situation in which much of human behavior—save for the most bland, conformist, and conventional

of conduct—would be declared a manifestation of a mental disorder. By that point, the concept of psychopathology would have become so indiscriminate as to lose most of its scientifically productive meaning. Currently proposed for addition to *DSM-5* are “apathy syndrome,” “parental alienation disorder,” and “Internet addiction.” Do you think these warrant inclusion as new disorders? What do you think their defining features should be?



Internet addiction has been proposed as a new diagnostic category for *DSM-5*.

Summary

- A precise definition of *abnormality* remains elusive. Elements that can be helpful in considering whether something is abnormal include suffering, maladaptiveness, statistical deviancy, dangerousness, violation of societal norms, irrationality, and unpredictability.
- The *DSM* employs a category type of classification similar to that used in medicine. Disorders are regarded as discrete clinical entities, though not all clinical disorders may be best considered in this way.
- Even though it is not without problems, the *DSM* provides us with working criteria that help clinicians and researchers identify and study specific difficulties that affect the lives of many people. It is far from a “finished product.” However, familiarity with the *DSM* is essential to significant study of the field.
- People with mental disorders experience a great deal of stigma. Even though it is now generally known that mental illnesses have biological causes, this does not seem to have reduced the stigma associated with being mentally ill. Negative attitudes toward the mentally ill can be found in all cultures.
- Culture shapes the presentation of clinical disorders in some cases. There are also certain disorders that appear to be highly culture specific.
- Classifying disorders provides a communication shorthand and allows us to structure information in an efficient manner. This facilitates research and treatment. However, when we classify, we lose personal information about the person with the disorder. Classification also facilitates stigma, stereotyping, and labeling.
- Epidemiology involves the study of the distribution and frequency of disorders. Just under 50 percent of people will experience some form of mental disorder over the course of their lifetimes. Mood disorders and anxiety disorders are particularly common.
- To avoid misconception and error, we must adopt a scientific approach to the study of abnormal behavior. This requires a focus on research and research methodology, including an appreciation of the distinction between what is observable and what is hypothetical or inferred.
- To produce valid results, research must be conducted on individuals who are truly representative of the diagnostic groups to which they purportedly belong.
- Research in abnormal psychology may be correlational or experimental. Correlational research examines factors as they currently are. Experimental research involves manipulating one variable (the independent variable) and observing the effect this manipulation produces with regard to another variable (the dependent variable).
- Just because two variables are correlated does not mean that there is a causal relationship between them. Always remember that correlation does not equal causation.
- Although most experiments involve the study of groups, single-case experimental designs (e.g., ABAB designs) may also be used to make causal inferences in individual instances.
- Analogue studies (e.g., animal research) are studies that provide an approximation to the human disorders of interest. Although generalizability presents an obstacle, animal research in particular has been very informative.

Key Terms

- | | | |
|--------------------------------------------|--------------------------------------|--------------------------------------------|
| ABAB design (p. 25) | effect size (p. 21) | nomenclature (p. 7) |
| abnormal psychology (p. 2) | epidemiology (p. 12) | 1-year prevalence (p. 12) |
| acute (p. 15) | etiology (p. 15) | placebo treatment (p. 24) |
| analogue studies (p. 26) | experimental research (p. 23) | point prevalence (p. 12) |
| bias (p. 16) | external validity (p. 19) | positive correlation (p. 20) |
| case study (p. 16) | family aggregation (p. 2) | prevalence (p. 12) |
| chronic (p. 15) | generalizability (p. 16) | prospective research (p. 22) |
| comorbidity (p. 13) | hypothesis (p. 18) | random assignment (p. 25) |
| comparison or control group (p. 19) | incidence (p. 12) | retrospective research (p. 22) |
| correlation (p. 20) | independent variable (p. 23) | sampling (p. 19) |
| correlational research (p. 20) | internal validity (p. 19) | self-report data (p. 16) |
| correlation coefficient (p. 20) | labeling (p. 8) | single-case research design (p. 25) |
| criterion group (p. 19) | lifetime prevalence (p. 12) | statistical significance (p. 21) |
| dependent variable (p. 23) | longitudinal design (p. 22) | stereotyping (p. 7) |
| direct observation (p. 17) | meta-analysis (p. 21) | stigma (p. 7) |
| direction of effect problem (p. 23) | negative correlation (p. 20) | third variable problem (p. 22) |
| double-blind study (p. 24) | | |