

people like us live by their memories. If they no longer have those there's nothing left. I am afraid he is in the process of forgetting his whole life. And to live alone with those memories while he sits there beside me . . . empty."

(Bernlef, 1988, pp. 80–81)

In addition to the profound loneliness and sadness that caregivers endure, they must also learn to cope with more tangible stressors, such as the patient's incontinence, functional deficits, and disruptive behavior. Relationships among other family members and the psychological adjustment of the principal caregiver are more disturbed by caring for a demented person than by caring for someone who is physically disabled. Guilt, frustration, and depression are common reactions among the family members of patients (Kneebone & Martin, 2003).

Some treatment programs provide support groups, as well as informal counseling and ad hoc consultation services, for spouses caring for patients with Alzheimer's disease. The New York University Aging and Dementia Research Center has evaluated the effects of this approach, which attempts to help the caregiver survive the spouse's illness and to postpone the need to place the patient in a nursing home (Mittelman et al., 1997). Compared to caregivers in a control group, those who participated in the special support program were able to delay for a longer time placing the Alzheimer's patient in a nursing home. They were also less likely to become depressed and more likely to express satisfaction with the social support that they received from their families.

**What are the most difficult problems faced by people caring for a person with dementia?**

## Getting Help

Many resources are available to help people cope with problems associated with dementia. One particularly useful book, *What You Need to Know About Alzheimer's*, by John Medina, describes the symptoms of the disorder and their progression. It also explains current knowledge of the ways in which brain cells are destroyed by this disease.

When a person learns that he or she has Alzheimer's disease or some other form of dementia, a number of important challenges must be faced. Family members must be informed so that they can help make plans for the future. Decisions must be made about eventual changes in

living arrangements and work (if the person is still employed). Perhaps most important, the person must prepare to cope with changes in daily life, as things that were once easy—such as communicating with other people and getting around in the community—become more difficult. The Alzheimer's Association ([www.alz.org](http://www.alz.org)) maintains a comprehensive Web page that includes advice on all of these topics.

Family members and friends who provide care for patients with dementia face a very challenging situation. The Alzheimer's Association Web page provides information regarding strategies that can help caregivers

prepare for these responsibilities. These include ways to adapt to inevitable changes in the caregivers' relationship with the patient, as well as advice about how to respond to challenging or unexpected behaviors on the part of the patient. The person with Alzheimer's disease will eventually become unable to perform daily tasks, and the caregiver will inevitably be faced with additional responsibility. As the burden mounts, he or she must locate additional sources of support and find ways to take care of his or her own health while also caring for the patient. Support groups and social services are often available locally.

## SUMMARY

- Dementia, delirium, and amnesic disorders are listed as Cognitive Disorders in DSM-IV-TR. Disruptions of memory and other cognitive functions are the most obvious symptoms of these disorders.
- **Dementia** is defined as a gradually worsening loss of memory and related cognitive functions, including the use of language as well as reasoning and decision making. **Aphasia** and **apraxia** are among the most obvious problems in verbal communication. Perceptual difficulties, such as **agnosia**, are also common.
- In amnesic disorder, the memory impairment is more circumscribed. The person may experience severe **anterograde amnesia**, but other higher-level cognitive abilities remain unimpaired.

- **Delirium** is a confusional state that develops over a short period of time and is often associated with agitation and hyperactivity.
- **Dementia** can be associated with many different kinds of neuropathology. The most common form of dementia is associated with **Alzheimer's disease**, which accounts for approximately half of all diagnosed cases of dementia. **Dementia with Lewy bodies** and vascular dementia each account for 15 to 20 percent of cases. Less common forms of dementia include frontotemporal dementia, as well as dementia associated with **Huntington's disease**, and Parkinson's disease.
- A definitive diagnosis of Alzheimer's disease requires the observation of two specific types of brain lesions: **neurofibrillary tangles** and **amyloid plaques**, which are found throughout the cerebral cortex. Neurofibrillary tangles are also found in the hippocampus, an area of the brain that is crucial for memory.
- The incidence and prevalence of dementia increase dramatically with age. The annual incidence of dementia is 1.4 percent in people over the age of 65 and 3.4 percent for people over the age of 75. Almost 40 percent of people over 90 years of age exhibit symptoms of moderate or severe dementia.
- The causes of dementia include many different factors. Some types of dementia are produced by viral infections and dysfunction of the immune system. Environmental toxins also may contribute to the onset of cognitive impairment.
- Considerable research efforts have been devoted to the identification of genes involved in Alzheimer's disease. Within some families, a gene for Alzheimer's disease is located on chromosome 21. Experts now assume that there are several forms of Alzheimer's disease, and each may be associated with a different gene or set of genes.
- Delirium can often be resolved successfully by treating the medical condition. The intellectual deficits in primary forms of dementia are progressive and irreversible. Treatment goals in these disorders are more limited and focus on maintaining the person's level of functioning for as long as possible while minimizing the level of distress experienced by the patient and the family. Medication can produce modest cognitive benefits for some patients with dementia, but not all patients respond to such treatment, and the clinical significance of these changes is extremely limited.
- Behavioral and environmental management are important aspects of any treatment program for demented patients. They allow patients to reside in the least restrictive and safest possible settings. Respite programs provide much-needed support to caregivers, usually spouses and other family.

## The Big Picture

### CRITICAL THINKING REVIEW

- **What is the difference between cognitive problems in anxiety and those seen in dementia?**  
In anxiety disorders and depression, subtle cognitive factors might play a role in causing the disorder. In dementia, the cognitive problems are the defining features of the disorder . . . (see p. 362)
- **In what ways is delirium different from dementia?**  
The two conditions differ both in terms of their characteristic symptoms and the pattern that the symptoms follow over time . . . (see p. 365)
- **How could a clinician distinguish between aphasia and agnosia?**  
A person suffering from aphasia might be unable to remember the name of an object but still be able to indicate how it is used. In agnosia, the person would be unable to recognize what it is or how it is used . . . (see p. 368)
- **Is memory impairment the only indication that a person is developing dementia?**  
No, decline in executive functioning is also closely linked to subsequent development of Alzheimer's disease . . . (see p. 373)
- **Why is depression in an elderly person sometimes confused with dementia?**  
Depressed people can exhibit cognitive symptoms that resemble some aspects of dementia, including lack of interest, trouble concentrating, and poverty of speech . . . (see pp. 377–378)
- **How could education help to reduce a person's risk for dementia?**  
Higher levels of challenging cognitive activity may increase the density of synaptic connections in the person's cortex and make it less vulnerable to the impact of neuronal degeneration . . . (see pp. 382–383)
- **What are the most difficult problems faced by people caring for a person with dementia?**  
Caregivers face prolonged emotional challenges, including loneliness, frustration, and guilt, as well as the overwhelming financial and physical demands of being responsible for a person who becomes increasingly unable to care for himself or herself . . . (see pp. 384–385)

## KEY TERMS

agnosia  
Alzheimer's disease  
amnesic disorder  
amyloid plaques  
anterograde amnesia

aphasia  
apraxia  
delirium  
dementia

dementia with  
Lewy bodies (DLB)  
dyskinesia  
genetic linkage  
Huntington's disease

neurofibrillary tangles  
neurologists  
neuropsychological  
assessment  
neuropsychologists

retrograde amnesia  
vascular dementia

# Intellectual Disabilities and Autistic Spectrum Disorders



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◀ *Rain Man* tells the story of two brothers, one of whom suffers from autism, as portrayed realistically by Dustin Hoffman.

In many ways, intellectual disabilities and autistic spectrum disorders are very different from one another. *Intellectual disabilities* (ID), which DSM-IV-TR calls mental retardation, impair academic aptitude. *Autistic spectrum disorders* (ASD), called pervasive developmental disorders in DSM-IV-TR, disrupt relationships, behavior, and communication. Yet the two disorders share

important similarities. Both are either present at birth or begin early in life. Both typically lead to difficulties in a wide range of life functioning. And initially at least, both disorders are a shock to parents who must learn to accept their child's developmental disability, embrace their child's positive qualities, and learn how best to raise a child who is undoubtedly different.

## The Big Picture

- How are IQ scores like “grading on the curve”?
- Did the United States really support eugenics?
- How can intellectual disabilities be prevented?
- Is there an “epidemic of autism”?
- Are children exceptionally intelligent underneath their autism?
- Why are psychological theories of autism wrong?

## OVERVIEW

*Autism* is the most familiar ASD. This is one reason why most professionals now refer to these conditions as autistic spectrum disorders (Witwer & Lecavalier, 2008), a term that surely will be adopted in future versions of the DSM. Dustin Hoffman played a man with autism in the popular movie *Rain Man*, a largely accurate portrayal—and a reminder that children with autism grow up and often continue to have the same problems. Autistic spectrum disorders are distinguished by dramatic, often severe, and unusual symptoms. Socially, the child lives in a world apart. At best, social awkwardness is pronounced; at worst, people are objects, terrifying objects. Severely disturbed children with ASD cannot communicate. Others speak oddly, preferring unusually focused topics of conversation (for example, how mechanical objects work), speaking with subtle oddities in tone and emphasis, or both. In addition, people with ASD are preoccupied with unusual repetitive behavior. In severe cases, they endlessly perform the same action, for example, flapping their hands for hours on end. Even the highest functioning people with ASD struggle to understand emotions and abstractions. And as we will see, there are more and more people with high functioning ASD, because professionals have recently begun to define the disorder more broadly.

In this chapter, we discuss intellectual disabilities before ASD for a simple and important reason: Contrary to some views, most people with autism also have intellectual disabilities. In order to appreciate both the wide-range of intellectual disabilities—and ASD—you need to understand what an intellectual disability really is.

## Intellectual Disabilities

Too often, people with intellectual disabilities are defined in terms of what they cannot do. Today, the emphasis is on what the person with an intellectual disability *can* do. People with intellectual disabilities are people first. We emphasize this with the convention of putting the “person first” in our writing. We refer to the “person with an intellectual disability,” not to the “intellectually disabled person.”

A real-life triumph of ability over disability is Chris Burke, a television and recording star who also has Down syndrome, one of the most common causes of intellectual disability. Burke’s parents were told to institutionalize him when he was born, but they raised him at home and encouraged his interests and talents. Burke loved performing, and he eventually won starring television roles as Corky Thatcher in *Life Goes On* and Taylor in *Touched by an Angel*. He currently plays in a folk band—with two of his former music counselors. Despite his Down syndrome, many people



Christopher Burke, who has Down syndrome, has starred in two television series, *Life Goes On* and *Touched by an Angel*.

would not consider someone like Chris Burke to have an intellectual disability—apparently including Chris Burke. He wrote this:

My name is Chris Burke and I live an exciting and happy life. That’s because I am living my dreams. I love entertaining people and being an actor, and I like to help my fellow handi-capables. Many people recognize me from my role as Corky Thatcher on *Life Goes On*, an ABC-TV series for many years. Corky has Down syndrome and so do I. Only I call it Up syndrome, because having Down syndrome has never made me feel down. I’m always up. One reason it is uplifting is because of the tremendous support I have received from my family and all the people in my life. My teachers, my friends, and the people I have worked with are very important to me, just like I am important to them. (Burke, 1995, p. ix)

Academics typically are the focus of interventions with intellectual disabilities, but as the following case illustrates, the disorder also can challenge emotions and life roles.



Karen Cross was a 41-year-old woman with three children when child protective services referred her and her husband, Mark, for a family evaluation. Two months earlier, the Crosses' 16-year-old daughter, Lucy, had called the police following a family fight. Lucy and her mother were arguing about Lucy's excessive use of the telephone. Mr. Cross entered the dispute, and he cuffed Lucy across her mouth in anger. Lucy was not seriously hurt, and the social workers who visited with the Cross family found no history of physical abuse. They were concerned about the adequacy of the Crosses' parenting, however, and the agency strongly recommended an evaluation for the family.

At the time of the referral, Mr. Cross was employed as a custodian at an elementary school where he had been working for 15 years. Testing indicated that he had an IQ of 88, and no serious psychopathology based on a diagnostic interview. Both Mr. Cross and his wife admitted that he had frequent, angry outbursts, but they both denied any history of violence toward the children or Mrs. Cross.

Mrs. Cross was a homemaker who cared for Lucy and a 12-year-old daughter, Sue. The Crosses' 19-year-old son was serving in the Army. Mrs. Cross had a tested IQ of 67. She reported attending

special education classes throughout her schooling. She married at the age of 19 and lived a normal life with her husband and children, but their low income barely kept the family out of poverty. Although Mrs. Cross demonstrated many adaptive skills in caring for her family, her coping currently was impaired by a severe depression. Mrs. Cross's speech and body movements were slowed, and she reported feeling constantly tired. She felt unhappy and unable to cope with her children. She was not sure what had caused her troubles, but Mr. Cross traced her problems to her mother's death a year earlier.

Mrs. Cross cried when recalling the loss of her mother. She described her mother as her best friend. They had lived in the same trailer park, and mother and daughter spent most of their days together. Her mother supported Mrs. Cross in many ways, especially in raising the children. Now the children ignored their mother's directions, and Mr. Cross was of little help. Mrs. Cross felt that her husband was too harsh, and she often contradicted him when he tried to punish the girls.

A family interview confirmed the impressions offered by the parents. Lucy

looked distracted and bored. Sue frequently looked toward and imitated her older sister. The girls paid more attention briefly when their father got angry, but this ended when Mr. and Mrs. Cross started arguing.

School records indicated that the girls had mostly C grades. Standardized test scores showed that the girls' academic abilities were in the normal range, but below average. Telephone calls to each of their homeroom teachers indicated that Sue was

***Her mother supported Mrs. Cross in many ways, especially in raising the children. Now the children ignored their mother's directions . . .***

not much of a problem in school, but Lucy had lately become very disruptive.

Based on the data obtained from multiple sources, the psychologists made several recommendations. They suggested antidepressant medication for Mrs. Cross, a referral to the school counselor for Lucy, and family therapy to help the parents agree on a set of rules and enforce discipline with a clear system of rewards and punishments. Therapy also would be an opportunity to monitor Mr. Cross's anger and Mrs. Cross's depression. Finally, they made a referral to a community service agency that could offer Mrs. Cross some parenting support.

The case of Karen Cross raises several issues. A basic one is whether she suffers from an intellectual disability. Her IQ is below the cutoff we discuss shortly, but she functioned well in her family life with her mother's support. Because of her adaptive skills, many professionals would not consider her to have an intellectual disability. Others might argue that she does because she now needs additional supports as a result of her low IQ, depression, or both. Karen Cross's depression also is important to note. Emotional difficulties often are overlooked among people with intellectual disabilities.

Other issues concern her children. How can we support families like Karen's to function better? When and why should children be removed from troubled family environments? You may have seen the movie *I Am Sam*, starring Sean Penn, which raised similar concerns. Penn played a loving father with an intellectual disability who fought to get his daughter back after social workers judged him to be an unfit parent. Like Karen Cross's real life experience, *I Am Sam* portrayed the tensions between supporting parents with disabilities versus protecting children from seriously troubled families. We consider these difficult issues in this chapter (and in Chapter 18 on mental illness and the law), but first we more closely examine the definition of intellectual disability.

## SYMPTOMS OF INTELLECTUAL DISABILITIES

The American Association on Intellectual and Developmental Disabilities (AAIDD), which dropped "mental retardation" in favor of "intellectual and developmental disabilities" in 2006, is the leading organization for professionals concerned with intellectual and developmental disabilities. The AAIDD develops influential definitions that differ somewhat from the DSM, including, at present, what to call this problem. The DSM-IV-TR still uses "mental retardation," but surely will change to be consistent with AAIDD. Terminology aside, the two groups agree on the three major criteria for defining **intellectual disability** or **mental retardation**<sup>1</sup>: (1) significantly subaverage IQ, (2) deficits in adaptive behavior, and (3) onset before the age of 18 (see Table 15.1).

**Measuring Intelligence** The AAIDD and DSM-IV-TR both define subaverage intellectual functioning in terms of a score on an individualized *intelligence test*, a standardized measure for

<sup>1</sup>Most laws still use the term "mental retardation" so you should be familiar with this synonym for intellectual disability.

**TABLE 15.1 DSM-IV-TR Diagnostic Criteria for Mental Retardation**

- A. Significantly subaverage intellectual functioning: an IQ of approximately 70 or below on an individually administered IQ test (for infants, a clinical judgment of significantly subaverage intellectual functioning).**
- B. Concurrent deficits or impairments in present adaptive functioning (i.e., the person's effectiveness in meeting the standards expected for his or her age by his or her cultural group) in at least two of the following areas: communication, self-care, home living, social/interpersonal skills, use of community resources, self-direction, functional academic skills, work, leisure, health and safety.**
- C. Onset is before age 18 years.**

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assessing intellectual ability. Commonly used intelligence tests include the Wechsler Intelligence Scale for Children, Fourth Edition (WISC-IV), and the Wechsler Adult Intelligence Scale, Fourth Edition (WAIS-IV). Intelligence tests yield a score called the **intelligence quotient**, or **IQ**, the test's rating of an individual's intellectual ability. An IQ score of approximately 70 or below is the cutoff for an intellectual disability. The number is "approximate" because testing can be somewhat imprecise and because IQ is measured on a continuum. The difference between an IQ score of 69 and 71 is trivial.

Defining *intelligence* can be controversial, and definitions and measures of intellectual ability have changed over the years. Early intelligence tests derived an IQ by dividing the individual's "mental age" by his or her chronological age. Mental age was determined by comparing an individual's test results with the average obtained for various age groups. For example, someone who answered the same number of items correctly as the average 10-year-old would be given a mental age of 10. After mental age was divided by chronological age, the ratio was multiplied by 100 to yield an IQ score. According to this system, an 8-year-old with a mental age of 10 would have an IQ of 125, calculated as  $10/8 \times 100$ .

Contemporary intelligence tests instead calculate a "deviation IQ." According to this system, intellectual ability follows the **normal distribution**, the familiar bell-shaped frequency distribution illustrated in Figure 15.1. The deviation IQ "grades on the curve." Most people score near the average in intelligence; a few people are exceptionally low or exceptionally high. An individual's

IQ is determined based on comparisons with his or her age group. Narrow age ranges are used for children, because cognitive abilities and knowledge acquisition change rapidly with age. In contrast, all adults are treated as a part of the same age group.

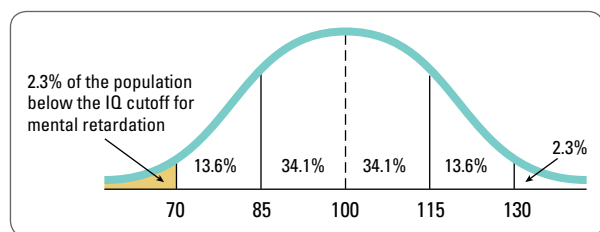
Intelligence tests are scored to have a *mean* IQ score of 100 and a *standard deviation* of 15 (see Research Methods). About two-thirds of the population has an IQ within one standard deviation of the mean—between 85 and 115. The cutoff score for intellectual disability is approximately two standard deviations below the average. About 2 percent of the population falls below this cutoff (see Figure 15.1).

*How is the deviation IQ like "grading on the curve"?*

One potential problem with the deviation IQ is that IQ scores are *rising* across generations, a phenomenon known as the *Flynn effect* (named for James Flynn, who first noted the trend). The Flynn effect can have substantial implications for people near the two standard deviation cutoff, because IQ averages are constantly updated. This means that, even if their intellectual abilities remain unchanged in an *absolute* sense, older people's IQ scores fall *relative* to the rising mean.<sup>2</sup> One calculation puts the drop at over 5 IQ points, a difference that could influence the identification of an intellectual disability for those close to the 70 cutoff (Kanaya, Scullin, & Ceci, 2003).

IQ tests are widely used, and they predict performance in school quite well. Measures of intelligence for very young children are unstable, but IQ scores of children 4 years old and older are good predictors of IQ scores many years later. For those with intellectual disabilities, IQ scores are stable even when accurately assessed among infants and toddlers (Baroff & Olley, 1999; Mash & Wolfe, 2005). An infant with a significantly subaverage IQ is likely to remain below the cutoff for an intellectual disability.

**Controversies About Intelligence Tests** Despite their value, IQ tests can be controversial. One key question is whether intelligence tests are "culture-fair." *Culture-fair tests* contain material that is equally familiar to people who differ in



**FIGURE 15.1**

Contemporary IQ tests have a mean of 100 and a standard deviation of 15. The IQ cutoff for an intellectual disability (70) is two standard deviations below the mean.

<sup>2</sup>A similar effect occurs when you move from high school to college. You are just as smart as always, but your performance in college is judged against peers who are likely to score higher, on average, than your high school classmates.

# RESEARCH METHODS

## CENTRAL TENDENCY AND VARIABILITY: WHAT DO IQ SCORES MEAN?

We can explain IQ scores more fully by describing a few basic statistics. A *frequency distribution* simply is a way of arranging data according to the frequencies of different scores. For example, we might obtain the following frequency distribution of ages in a group of 10 college students:

| Age | Frequency |
|-----|-----------|
| 17  | 1         |
| 18  | 4         |
| 19  | 1         |
| 20  | 2         |
| 21  | 2         |

The **mean** is the arithmetic average of a distribution of scores, as defined by the formula

$$M = \frac{\text{sum of scores}}{N}$$

where  $M$  is the mean and  $N$  is the number of scores. Thus, the mean of the frequency distribution of ages listed above is

$$M = \frac{17 + 18 + 18 + 18 + 18 + 19 + 20 + 20 + 21 + 21}{10} = 19$$

The mean is the most commonly used of various *measures of central tendency*, which are single scores that summarize and describe a frequency distribution.

Other important and commonly used measures of central tendency are the median and the mode. The **median** is the midpoint of a frequency distribution—the score that half of all scores fall above and half of all scores fall below. In the above example, 19 is the median age. The **mode** is the most frequent score in a distribution. In our example, the mode is 18.

Measures of variability also provide useful summary information about a

frequency distribution. The *range* is a simple measure that lists the lowest and highest scores. In our example, the range of ages is 17 to 21. As a more complex measure of variability, we may wish to compute the average distance of each individual score from the overall mean (21–19, 17–19, etc.). However, when we subtract each score in a frequency distribution from the mean of the distribution, the positive and negative numbers always add up to zero. (Try this in our example.) As a way of compensating for this inevitability, statisticians created a statistic called the **variance** in which the differences from the mean are squared (to eliminate negative numbers) before they are added together and divided by their total number. The variance is defined by the following formula:

$$V = \frac{\text{sum of } (\text{scores} - M)^2}{N}$$

where  $V$  is the variance,  $M$  is the mean, and  $N$  is the number of scores. The variance in our example is 1.8. Calculate this statistic yourself to aid your understanding.

The variance is an extremely useful measure, but the variance is expressed as a different unit of measurement from the mean because the scores have been squared. This problem is easily solved by taking the square root of the variance, which results in a statistic called the **standard deviation** or the *standard deviation from the mean*. The standard deviation is defined by the formula:

$$SD = \sqrt{V}$$

where  $SD$  is the standard deviation and  $V$  is the variance. In our example, the standard deviation is 1.34, or the square root of 1.8 (the variance).

**Standard scores** are created by subtracting each score in a frequency distribution from the mean and dividing the difference by the standard deviation. Standard scores, or *z-scores*, as they are often called, are computed according to the following formula:

$$z = \frac{\text{score} - M}{SD}$$

where  $z$  is the standard score,  $M$  is the mean, and  $SD$  is the standard deviation. Because of the nature of the statistic,

### How are IQ scores computed?

$z$ -scores always have a mean of zero and a standard deviation of 1. This is a very useful feature of  $z$ -scores, because it allows us to readily compare or combine scores from different frequency distributions.

This brings us back to the deviation IQ, which is a standard score. IQ scores have a mean of 100 and a standard deviation of 15, simply because the  $z$ -scores are first multiplied by 15 and then a constant of 100 is added to the product. For example, a standard score of 1 translates into a deviation IQ score of 115 ( $[1 \times 15] + 100$ ) or a standard score of  $-2$  translates into a deviation IQ score of 70 ( $[-2 \times 15] + 100$ ).

The mean and the standard deviation are central to understanding numerous psychological concepts in addition to the deviation IQ. For example, you should now be better able to understand the discussion of standard deviation units in meta-analysis (see Chapter 3). If you are confused, we recommend that you reread this discussion and calculate the statistics yourself.

their ethnicity, native language, or immigrant status. Tests that are *culturally biased* contain language, examples, or other assumptions that favor one ethnic group over another.

In the United States, the average IQ scores of African Americans and of Latinos are lower than those of Caucasians and Asians. More members of these groups also are classified as having intellectual disabilities (Robinson, Zigler, & Gallagher,

2000). Some of these differences have been attributed to culture bias—some test items seem geared toward the language and the experience of majority groups. However, ethnic differences may have a simpler explanation. Lower IQ is associated with poverty, and a disproportionate number of blacks and Latinos in the United States are poor. Whatever the explanation, the disparity is shrinking (Mash & Wolfe, 2005).



Another controversy is how well intelligence is measured among people with intellectual disabilities. Many people with intellectual disabilities have sensory or physical disabilities that impede their performance on standard IQ tests; thus they must take tests that are not influenced by their particular disability. Despite the difficulties, evidence indicates that, if anything, the IQ test scores of people with intellectual disabilities are *more* reliable and valid than IQ scores in the normal range (Baroff & Olley, 1999).

The most basic concern about intelligence tests is the most important one: What is intelligence? Intelligence tests measure precisely what their original developer, Alfred Binet, intended them to measure: potential for school achievement. They correlate 0.4 to 0.7 with grades and other achievement measures (Baroff & Olley, 1999). However, performance in school is not the same as “intelligence.” Common sense, social sensitivity, and “street smarts” are also part of what most of us would consider intelligence, and they are not measured by IQ tests.

**Measuring Adaptive Skills** Both the AAIDD and DSM recognize that intelligence is more than an IQ score; thus, they include adaptive behavior as a part of their definitions of intellectual disability. The DSM-IV-TR lists 10 specific adaptive skills (see Table 15.1). The AAIDD (2002) suggests that adaptive behavior includes conceptual, social, and practical skills. *Conceptual skills* focus largely on community self-sufficiency and incorporate communication, functional academics, self-direction, and health and safety from DSM-IV-TR. *Social skills* focus on understanding how to conduct oneself in social situations and include social skills and leisure from the DSM-IV-TR list. Finally, *practical skills* focus on the tasks of daily living and include self-care, home living, community use, health and safety, and work from the DSM-IV-TR.

Adaptive skills are difficult to quantify. How would *you* measure “social intelligence”? The Vineland Adaptive Behavior Scales are one commonly used instrument (see Table 15.2). As with IQ, adaptive skills are judged by age. Among preschoolers, they include the acquisition of motor abilities, language, and self-control. Key skills during the school-age years include developing social relationships with peers. In adult life, adaptive



Lauren Potter, who has Down syndrome, is an actress who has appeared in the popular television program, *Glee*, and the film *Mr. Blue Sky*. Here she attends a briefing in Washington, DC, to highlight a report on bullying of children with special needs.

**TABLE 15.2 Sample Items from the Vineland Adaptive Behavior Scales**

**Daily Living Skills**

|         |                                       |
|---------|---------------------------------------|
| Age 1:  | Drinks from a cup.                    |
| Age 5:  | Bathes or showers without assistance. |
| Age 10: | Uses a stove for cooking.             |
| Age 15: | Looks after own health.               |

**Socialization**

|         |   |
|---------|---|
| Age 1:  | Imitates simple adult movements like clapping.      |
| Age 5:  | Has a group of friends.                             |
| Age 10: | Watches television about particular interests.      |
| Age 15: | Responds to hints or indirect cues in conversation. |

Source: Items 6, 44, 66, and 75 from the Daily Living Skills Subtest and Items 14, 33, 48, and 56 from the Socialization Domain Subtest in *Vineland Adaptive Behavior Scales: Interview Edition, Survey Form*, by Sara Sparrow, David Balla, and Domenic Cicchetti. Copyright © 1984 by NCS Pearson, Inc. Reproduced with permission. All rights reserved. “Vineland” is a trademark, in the US and/or other countries, of Pearson Education, Inc. or its affiliate(s).

skills include the ability to manage oneself, live independently, and assume adult interpersonal roles.

Some experts argue that intellectual disability should be defined solely based on intelligence tests, because measures of adaptive skills are imprecise (Detterman & Gabriel, 2007). Moreover, intellectual limitations imply that adaptive skills are likely to be limited (Zigler & Hodapp, 1986). Since 1959, however, deficits in adaptive behavior have been an essential part of the AAIDD's definition (Heber, 1959).

Deficits in adaptive behavior are less stable than IQ, especially as life demands change from school to the more diverse world of work. Thus, an intellectual disability can be “cured” in the sense that adaptive skills can be taught or environmental demands can be shaped to match an individual's unique abilities and experiences.

**Onset Before Age 18 Years** The third criterion for defining intellectual disability is onset before 18 years of age. This excludes people whose deficits in intellect and adaptive skills begin later in life as a result of brain injury or disease. Besides differences in cause, the most important aspect of the age criterion is the experience of normal development. People with intellectual disabilities have not lost skills they once had mastered, nor have they experienced a notable change in their condition. Unfortunately, this means that their disability may be perceived as “who they are” and not as something that has “happened to them.” This is why we put the “person first” in writing about intellectual disabilities, as a small but constant reminder of the person behind the disorder.

## DIAGNOSIS OF INTELLECTUAL DISABILITIES

Many people seen as having a mild intellectual disability today would not have been viewed as having notable problems in the past. Academic aptitude was less necessary to successful living in earlier, agrarian societies than it is in our modern, technological world. Even today, intellectual disability is defined differently in more industrialized countries than in less industrialized ones because of the educational and technological requirements for work in the industrialized countries (Scheerenberger, 1982).

**Early Efforts** The beginnings of contemporary classifications of intellectual disabilities date to the second half of the nineteenth century. In 1866, the British physician Langdon Down first described a group of children with intellectual disabilities who had a characteristic appearance. Their faces reminded Down of the appearance of Mongolians, who he viewed as inferior, and he used the term *mongolism* to describe them. Despite this offensive terminology, Down's classification turned out to be a valid one. Scientists eventually discovered a specific cause of what we now know as Down syndrome.

The creation of IQ tests helped to improve the classification of intellectual disabilities. The French psychologists Alfred Binet (1856–1911) and Theophile Simon (1873–1961) developed the first successful intelligence test in 1905 in response to a French government effort to identify children in need of special educational services. The Binet scale was refined by the American psychologist Lewis Terman of Stanford University, and these efforts resulted in the Stanford–Binet intelligence tests. The first Wechsler intelligence test was developed by David Wechsler in 1939. Revisions of Wechsler's



This girl with Down syndrome shows that children with intellectual disabilities can join in many normal childhood activities.

individualized intelligence tests continue to dominate contemporary intellectual assessment.

There has always been some controversy about what IQ score cutoff should define intellectual disability. Debates reached a climax in 1959. In an attempt to help more people in need of services, the AAIDD shifted the IQ cutoff from two standard deviations below the mean to one standard deviation below the mean. An IQ score of 85 or lower qualified for the diagnosis—almost 15 percent of the population. This well-intentioned change included far too many well-functioning individuals and distracted attention from those most in need of help. Thus, in 1973, the AAIDD returned to the cutoff of 70 (Grossman, 1983).

**Contemporary Diagnosis** Today, intellectual disability can be classified according to two different systems, one based on IQ scores and the other on known or presumed etiology. Both approaches are reliable, and each is valid for different purposes.

DSM-IV-TR divides intellectual disability into four levels based on IQ scores: mild, moderate, severe, and profound (see Table 15.3). AAIDD abandoned this approach and instead assesses “intensity of needed support” across nine different areas of functioning. However, critics say this new system is cumbersome and unreliable. In contrast, considerable research supports the classification of intellectual disability into levels (Detterman & Gabriel, 2007).

*Mild intellectual disability* is defined by IQ scores between 50–55 and 70. This category accounts for about 85 percent of people with intellectual disabilities. Those with mild intellectual disability typically have few, if any, physical impairments, generally reach the sixth-grade level in academic functioning, acquire vocational skills, and typically live in the community with or without special supports.

People with *moderate intellectual disability* have IQs between 35–40 and 50–55; they make up about 10 percent of those with intellectual disabilities. They may have obvious physical abnormalities such as the features of Down syndrome. Academic achievement generally reaches second-grade level, work activities require close training and supervision, and special supervision in families or group homes is needed for living in the community.

TABLE 15.3 DSM-IV-TR Levels of Intellectual Disability

| Level    | Approximate IQ Range | Adult Mental Age      | Percent of People with Intellectual Disability |
|----------|----------------------|-----------------------|--|
| Mild     | 50–55 to 70          | 9 to 12 year old      | 85   |
| Moderate | 35–40 to 50–55       | 6 to 9 year old       | 10   |
| Severe   | 20–25 to 35–40       | 3 to 6 year old       | 3–4  |
| Profound | Below 20–25          | 3 year old or younger | 1–2  |

Source: Reprinted with permission from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*, (Copyright © 2000). American Psychiatric Association.

*Severe intellectual disability* is defined by IQ scores between 20–25 and 35–40. This category accounts for 3 to 4 percent of people with intellectual disabilities. At this severity level, motor development typically is abnormal, communicative speech is sharply limited, and close supervision is needed for community living.

About 1 to 2 percent of people with intellectual disabilities have *profound intellectual disability*. This severity level is characterized by an IQ below 20–25. Motor skills, communication, and self-care are severely limited, and constant supervision is required in the community or in institutions.

**Axis II** Because of the focus on intellectual difficulties, professionals can overlook emotional problems that actually are *more* common among people with intellectual disabilities than the general population (Volkmar & Dykens, 2002). In order to call attention to possible Axis I mental disorders, intellectual disabilities are coded along with personality disorders on Axis II in DSM-IV-TR. The Axis II placement also reflects the fact that significantly subaverage IQ is enduring.

**Life and Death** The diagnosis of intellectual disability can literally mean a difference between life and death. Why? As we discuss in Chapter 18, in 2002, the United States Supreme Court ruled that the death penalty is “cruel and unusual punishment” for someone with an intellectual disability. In close cases throughout the country, lawyers are now arguing about the precise definition of intellectual disability—and psychological evaluations of intellectual disability can make the difference between life and death (Greenspan & Switzky, 2007). We said earlier that the difference between an IQ of 69 and 71 is trivial. It is—except in the courtroom.

## FREQUENCY OF INTELLECTUAL DISABILITIES

Theoretically, IQ is distributed according to the normal curve, so 2.3 percent of the population should have IQs of 70 or below. In reality, however, more than 2.3 percent of people have IQs below 70. Very low IQ scores, in particular, are found more often than expected, a result of the various biological conditions that produce intellectual disabilities (Volkmar & Dykens, 2002). We, therefore, can think of there being two IQ distributions. One is the normal distribution of IQ scores. The other is the distribution of IQs of people with biological disorders that cause intellectual disabilities (Zigler, 1967; see Figure 15.2 on p. 396).

Even though *more* than 2.3 percent of people have IQs below the 70 cutoff, the best estimate is that only 1 percent of the population has an intellectual disability (Volkmar & Dykens, 2002). The prevalence of intellectual disability is lower than the prevalence of IQs below 70 because (1) IQs cannot be adequately assessed among very young children, who therefore may be omitted from prevalence figures; (2) many adults with low IQs are not considered to have intellectual disabilities because they have adaptive skills; and (3) many people with intellectual disabilities die at a younger age. As an indication of these facts, studies show that twice as many school-age children as preschoolers have intellectual disabilities, but the prevalence rates drop again among adults (Grossman, 1983).

Intellectual disabilities in the United States are more common among the poor and, as a result, among certain ethnic groups. However, the increased prevalence is not found for all subtypes of intellectual disabilities. An intellectual disability with a specific, known organic cause (for example, Down syndrome) generally has an equal prevalence among all social classes, whereas an intellectual disability of nonspecific etiology is more common among families living in poverty (Patton, Beirne-Smith, & Payne, 1990).

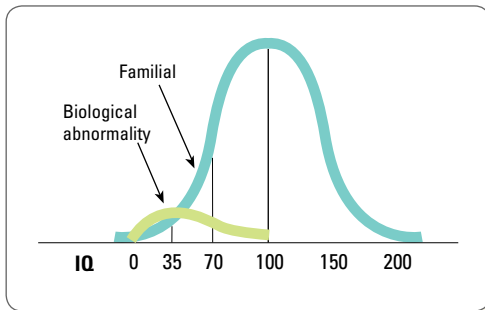
## CAUSES OF INTELLECTUAL DISABILITIES

The causes of intellectual disabilities can be grouped into two broad categories: Cases caused by known biological abnormalities and cases resulting from normal variations in IQ (see Figure 15.2). We review known biological causes before considering cases at the low end of the normal IQ distribution.

*What is the two-curve model of intellectual disability?*

**Biological Factors** About one-half of all cases of intellectual disability are caused by known biological abnormalities (Volkmar & Dykens, 2002). Known biological causes often lead to intellectual disabilities of moderate to profound severity and are associated with physical handicaps. Of the over 250 known biological causes (AAIDD, 2002), we focus only on a few major ones here.





**FIGURE 15.2** The Two-Curve Model of Intellectual Disabilities

The causes of intellectual disabilities can be grouped into two categories. Cultural-familial intellectual disability includes people with no known disorder. The low IQ of this group is attributable to genetic and environmental variation following the normal curve. The second category includes all known biological causes of intellectual disability. The IQ of this group also follows the normal distribution, but the mean is much lower.

Source: Adapted from E. Zigler, 1967, "Familial Mental Retardation: A Continuing Dilemma," *Science*, 155, pp. 292–298. Copyright 1967 by the American Association for the Advancement of Science.

**Chromosomal Disorders** The most common known biological cause of intellectual disability is the chromosomal disorder **Down syndrome**. People with Down syndrome have a distinctive physical appearance. They have slanting eyes with an extra fold of skin in the inner corner, a small head and short stature, a protruding tongue, and a variety of organ, muscle, and skeletal abnormalities. They also have physical handicaps and limited speech (Thapar et al., 1994).

The cause of Down syndrome is an extra chromosome, resulting from the failure of chromosomes to separate during cell division, a *nondisjunction*. Children with Down syndrome have 47 chromosomes instead of the normal 46. The extra chromosome is attached to the 21st pair; thus the disorder often is referred to as *trisomy 21*.

The incidence of Down syndrome is related to maternal age. For women under the age of 30, about 1 in 1,000 births are Down syndrome infants. The incidence rises to 1 in 750 births for mothers between ages 30 and 34, 1 in 300 between 35 and 39, and over 1 in 100 after age 40. Down syndrome can be detected by testing during pregnancy.

In general, children and adults with Down syndrome function within the moderate to severe range of intellectual disability. They exhibit substantial variation in their intellectual level, however, and research suggests that intensive intervention can lead to higher achievement and greater independence. Institutionalization once was commonly recommended, but home or community care is now the rule. In fact, many experts report that people with Down syndrome are especially sociable, although research on distinctive personality traits is not conclusive (Cicchetti & Beegly, 1990).

By their thirties, the majority of adults with Down syndrome develop brain pathology similar to that found in

Alzheimer's disease. About one-third also exhibit the symptoms of dementia (Thase, 1988). Death in mid-adult life is common, although some adults with Down syndrome live into their fifties and sixties.

Several other chromosomal abnormalities have been linked to intellectual disabilities, particularly in the sex chromosomes. *Klinefelter syndrome*, found in about 1 in 1,000 live male births, is characterized by the presence of one or more extra X chromosomes. The most common configuration is XXY. With Klinefelter syndrome, IQ functioning typically is in the low normal to mild range of intellectual disability. Another chromosomal abnormality, *YYY syndrome*, once was thought to increase criminality but is now recognized to be linked with only minor social deviance and a mean IQ about 10 points lower than average. The syndrome occurs in 1 to 2 out of 2,000 male births. *Turner syndrome*, the XO configuration in females, is characterized by a missing X chromosome. Girls with Turner syndrome are small, fail to develop sexually, and generally have intelligence near or within the normal range. The disorder occurs in about 1 in every 2,200 live female births (Thapar et al., 1994).

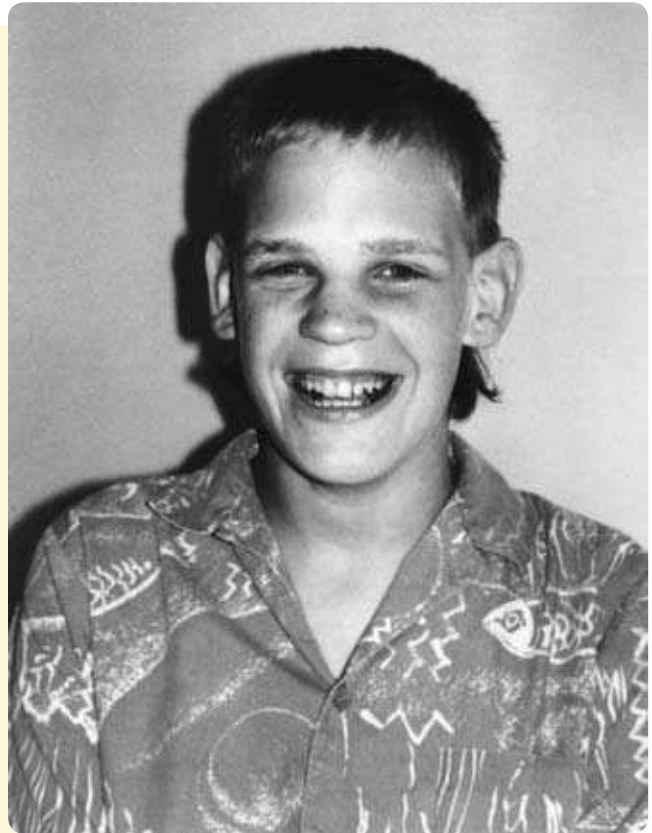
**Genetic Disorders** Few cases of intellectual disability result from dominant genetic inheritance, because such a mutation is unlikely to remain in the gene pool. One exception is **fragile-X syndrome**, the most common known *genetic* cause of intellectual disability (Taylor, Richards, & Brady, 2005). Fragile-X syndrome originally was diagnosed by a weakening or break on one arm of the X sex chromosome (see accompanying photo). The disorder is now known to be transmitted genetically by the FMR1 gene (Fragile-X Mental Retardation), which was discovered in 1991.

Not all children who inherit the FMR1 gene have intellectual disabilities. About 1 in 4,000 male births have the fragile-X mutation, as do about 1 in 6,000 female births. Most boys, but only about one-third of girls with the FMR1 gene, have intellectual disabilities. Girls have two X chromosomes, one of which may function normally. About 1 in 800 men and about 1 in 250 women are carriers of the FMR1 gene. Male carriers never pass the gene to their sons but always affect their daughters. Female carriers with only one affected chromosome have a 50/50 chance of passing the disorder on to their sons or daughters.

Among FMR1 carriers with normal intelligence, learning disabilities are common. Most of those with intellectual disabilities have a characteristic facial appearance that includes an elongated face, high forehead, large jaw, and large, underdeveloped ears (Bregman et al., 1987). Children with fragile-X tend to be socially anxious, avoid eye contact, and have stereotypic hand movements. Approximately 15 percent display the symptoms of autism (Rogers, Wehner, & Hagerman, 2001).

Intellectual disabilities are known to be caused by several recessive gene pairings. **Phenylketonuria**, or **PKU**, is one of these. Geneticists estimate that about 1 in every 54 normal people carries a recessive gene for PKU, but the two genes are paired only in 1 of every 15,000 live births (NIH, 2000).

PKU is caused by abnormally high levels of the amino acid *phenylalanine*, usually due to the inherited absence of or an extreme deficiency in *phenylalanine hydroxylase*, an enzyme that metabolizes phenylalanine. Children with PKU have normal intelligence at birth. However, as they eat foods containing phenylalanine, the amino acid builds up in their system. This *phenylketonuria* produces brain damage that eventually results



Left: Fragile-X syndrome is now known to be transmitted genetically. Originally, it was identified by a gap or break in the long arm of the X chromosome, as pictured. Right: This adolescent boy suffers from fragile-X syndrome. His elongated face prominent forehead, and large ears are typical characteristics of the disorder.

in an intellectual disability. Intellectual disability typically progresses to the severe to profound range.

Fortunately, PKU can be detected by blood testing in the first several days after birth. (All states have laws that require routine screening of newborns for PKU.) Early detection is very important, because intellectual and behavioral impairments are diminished dramatically if the child maintains a diet low in phenylalanine. In such cases, the child is likely to have normal to mildly impaired intelligence. In order to maximize the benefits of the diet, the child should be maintained on it for as long as possible—to age 20 and preferably throughout life (Widaman, 2009). It also is very important for adult women with PKU to regulate their diet shortly before and during pregnancy in order to avoid damage to the fetus. Otherwise, high levels of phenylalanine in the mother's bloodstream can damage the developing brain of the fetus and cause intellectual disability (Widaman, 2009). Maintaining a diet low in phenylalanine is very difficult because phenylalanine is found in most foods and many food additives. Take a look at the labels of some of the foods you have at home (such as diet sodas). You will notice a warning about phenylalanine on many of the labels.

Other relatively rare recessive-gene disorders can also cause intellectual disabilities. *Tay-Sachs disease* is a particularly severe disorder that eventually results in death during the infant or preschool years. The recessive gene that causes Tay-Sachs is particularly common among Jews of Eastern European heritage. *Hurler syndrome*, or *gargoylism*, results in gross physical

abnormalities, including dwarfism, humpback, bulging head, and clawlike hands. Children with this disorder usually do not live past the age of 10. *Lesch-Nyhan syndrome* is most notable for the self-mutilation that accompanies the intellectual disability. Children with this disorder bite their lips and fingers, often causing tissue loss. As with Down syndrome and fragile-X syndrome, many of these genetic abnormalities can be detected during pregnancy.

**Infectious Diseases** Intellectual disabilities can also be caused by various infectious diseases. Damaging infections may be contracted during pregnancy, at birth, or in infancy to early childhood. Among the diseases passed from mother to fetus during pregnancy are *cytomegalovirus*, the most common fetal infection (and one that is usually harmless), and *toxoplasmosis*, a protozoan infection contracted from ingestion of infected raw meats or from contact with infected cat feces. Toxoplasmosis is rare, which makes routine screening impractical.

*Rubella* (German measles) is a viral infection that may produce few symptoms in the mother but can cause severe intellectual disability and even death in the developing fetus, especially if it is contracted in the first three months of pregnancy. Fortunately, rubella can be prevented by vaccination of prospective mothers before pregnancy, which is now a part of routine health care.

The *human immunodeficiency virus (HIV)* can be transmitted from an infected mother to a developing fetus. Fortunately,



only about one-third of children who contract HIV prenatally develop *acquired immune deficiency syndrome (AIDS)*, but those who do develop AIDS rapidly. The effects on the child are profound, including intellectual disability, visual and language impairments, and eventual death (Baroff & Olley, 1999).

*Syphilis* is a bacterial disease that is transmitted through sexual contact. Infected mothers can pass the disease to the fetus. If untreated, syphilis produces a number of physical and sensory handicaps in the fetus, including intellectual disability. The adverse consequences are avoided by testing the mother and administering antibiotics when an infection has been detected. Because penicillin crosses the placental barrier, treating the mother will also cure the disease in the fetus.

Another sexually transmitted disease, *genital herpes*, can be transmitted to an infant particularly during birth. Herpes is a viral infection that produces small lesions on the genitals immediately following the initial infection and intermittently thereafter. The disease is most likely to be transmitted when the lesions are present. If a pregnant woman has an outbreak of genital lesions near or at the time of delivery, a cesarean section can be performed. If there is no outbreak, the risk of infecting the infant is exceedingly small and a vaginal delivery is recommended. Infected infants can develop very serious problems, including intellectual disability, blindness, and possible death.

Two infectious diseases that occur after birth, primarily during infancy, can cause intellectual disabilities. *Encephalitis* is an infection of the brain that produces inflammation and permanent damage in about 20 percent of all cases. *Meningitis* is an infection of the *meninges*, the three membranes that line the brain. The inflammation creates intracranial pressure that can irreversibly damage brain tissues. Encephalitis and meningitis can be caused by a variety of infectious diseases. Cases resulting from bacterial infections can usually be treated successfully with antibiotics. In other cases, the outcome of both encephalitis and meningitis is unpredictable. Neuromuscular problems, sensory impairments, and intellectual disabilities are possible.

**Toxins** Like infectious diseases, toxic chemicals can produce intellectual disabilities when exposure occurs either before or after birth, but exposure during pregnancy creates the greatest risk. Because of its frequent use, alcohol presents the greatest threat. About 1 to 2 of every 1,000 births is a baby with **fetal alcohol syndrome**. This disorder is characterized by retarded physical development, a small head, narrow eyes, cardiac defects, and cognitive impairment. Intellectual functioning ranges from mild intellectual disability to normal intelligence accompanied by learning disabilities, particularly difficulties in mathematics (Rasmussen & Bisanz, 2009).

Women who drink heavily during pregnancy (an average of 5 ounces of alcohol per day) are twice as likely to have a child with the syndrome as are women who average 1 ounce of alcohol per day or less (Baroff & Olley, 1999). Controversy continues about the risk for difficulties associated with drinking in the intermediate range. The Surgeon General of the United States recommends that pregnant women abstain from alcohol altogether.

Environmental toxins also present a potential hazard to intellectual development after birth. *Mercury poisoning* is known to produce severe physical, emotional, and intellectual impairments, but it does not present a major public health problem because few children are exposed to mercury. The mercury compound, *thimerosal*, formerly was used as a vaccine preservative, and as discussed in Chapter 2, it is *not* linked to autism despite



Both of these girls suffer from fetal alcohol syndrome, a preventable form of intellectual disability caused by excessive maternal alcohol consumption during pregnancy.

some hysterical claims that it does. Current concerns about mercury exposure focus on game fish like tuna and swordfish, which contain elevated mercury levels (Hubbs-Tait et al., 2005).

Much more threatening to public health is *lead poisoning*. Until banned by federal legislation, the lead commonly used in paint and produced by automobile emissions exposed hundreds of thousands of children to a potentially serious risk. Although controversy continues about the effects of exposure to low levels of lead, at toxic levels lead poisoning can produce a number of adverse behavioral and cognitive impairments, including intellectual disabilities. Despite federal bans on lead-based paints and leaded gasoline, which greatly reduced children's exposure, lead poisoning continues to pose a risk to children who may eat lead-based paint chips while being reared in dilapidated housing (Hubbs-Tait et al., 2005).

**Other Biological Abnormalities** Pregnancy and birth complications also can cause intellectual disabilities. One major complication is *Rh incompatibility*. The Rh factor is a protein found on the surface of red blood cells, and it is a dominant hereditary trait. People who possess this protein are Rh-positive; people who don't are Rh-negative. Rh incompatibility can occur when the mother is Rh-negative and the father is Rh-positive. In such cases the mother can develop antibodies that attack the blood cells of her Rh-positive fetus. The antibodies destroy oxygen-carrying red blood cells in the developing fetus, with a number of adverse consequences, including a possible intellectual disability.

Rh-negative women develop antibodies only after exposure to their infant's Rh-positive blood. If this exposure occurs at all, it usually does not happen until delivery. Thus, the risk of Rh incompatibility in first births is minimal; the greatest risk is for subsequent pregnancies. This risk can be largely prevented, however, by the administration of the antibiotic RhoGAM to the mother within 72 hours after the birth of the first child. RhoGAM prevents the mother's body from developing internal antibodies against the Rh-positive factors, thus eliminating most of the risk to the fetus during the next pregnancy. In the event that an Rh-negative mother develops antibodies against Rh-positive factors during pregnancy, a fetal blood transfusion must be carried out to replace the destroyed red blood cells.

Another pregnancy and birth complication that can cause intellectual deficits is *premature birth*. Premature birth

**TABLE 15.4 Correlations Between the IQ Scores of Pairs of Relatives Reared Together or Apart**

| Type of Relative      | Reared Together |          | Reared Apart |       |
|-----------------------|-----------------|----------|--------------|-------|
|                       | Correlation     | (N)      | Correlation  | (N)   |
| Monozygotic twins     | .86             | (4,672)  | .72          | (65)  |
| Dizygotic twins       | .60             | (5,546)  | —            |       |
| Biological siblings   | .47             | (26,473) | .24          | (203) |
| Adoptive siblings     | .34             | (369)    | —            |       |
| Parent–child          | .42             | (8,633)  | .22          | (814) |
| Adoptive parent–child | .19             | (1,397)  | —            |       |

Source: Figure 3 (adapted) from “Familial Studies of Intelligence: A Review” by T. J. Bouchard, Jr. and M. McGue, *Science*, 212 (1981), pp. 1055–1059. Copyright © 1981 by the American Association for the Advancement of Science. Reprinted by permission of the publisher.

is defined either as birth before 38 weeks of gestation or a birth weight of less than 5 pounds. There are many potential causes of prematurity: poor maternal nutrition, maternal age of less than 18 years or more than 35 years, maternal hypertension or diabetes, and damage to the placenta. The effects of prematurity on the infant vary, ranging from few or no deficits to sensory impairments, poor physical development, and intellectual disability. More serious consequences occur at lower birth weights, and infant mortality is common at very low weights.

Other pregnancy and birth complications that can cause intellectual disabilities include extreme difficulties in delivery, particularly *anoxia*, or oxygen deprivation; severe *malnutrition* (which is rare in the United States but a major problem in less developed countries); and the seizure disorder *epilepsy*. The intellectual difficulties associated with each of these causes vary but are potentially significant.

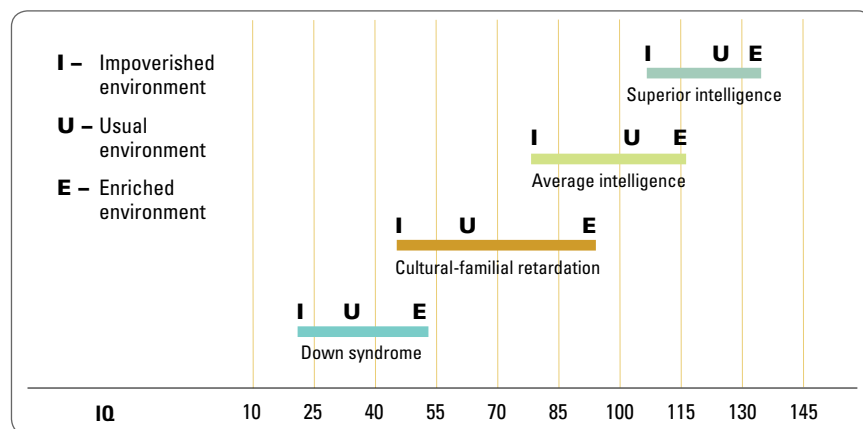
**Normal Genetic Variation** Cases of intellectual disabilities of unknown etiology—often referred to as **cultural-familial retardation**—are generally assumed to be variations in the normal distribution IQ (see Figure 15.1). Cultural-familial retardation runs in families and is linked with poverty. A controversial issue is whether this typically mild form of intellectual disability is caused primarily by genes or by psychosocial disadvantage.

Normal genetic variation clearly contributes to individual differences in intelligence (Thapar et al., 1994). As summarized in Table 15.4, numerous family, twin, and adoption studies point to a substantial genetic contribution to intelligence. For example, the IQs of adopted children are more highly correlated with the IQs of their biological parents than with those of their adoptive ones.

How much of intelligence is inherited? Behavior geneticists calculate an index to measure the extent of genetic contribution to a characteristic, called the *heritability ratio*. Estimates generally indicate that up to 75 percent of the normal range of intelligence is attributable to genetics, but no research specifically identifies the extent of genetic contributions to cultural-familial retardation (Thapar et al., 1994). Moreover, heritability ratios can be misleading, because genes and the environment work together, not separately (Dickens & Flynn, 2001; see Research Methods in Chapter 17).

The concept of *reaction range* better conveys how genes and environment interact to determine IQ (Gottesman, 1963). The reaction range concept proposes that heredity determines the upper and lower limits of IQ, and experience determines the extent to which people fulfill their genetic potential. Figure 15.3 portrays some theoretical reaction ranges for children with

**How can genes and the environment both influence IQ?**



**FIGURE 15.3**

According to the reaction range concept, genes set the limit on IQ and environment determines variation within the limits. Note that the usual environmental contributions to IQ differ for the four groups.

Source: Figure, p. 151, “Theoretical reaction ranges of IQ Scores for Groups with Differing Genetic Predispositions” from *Mental Retardation: Nature, Cause and Management* by G. S. Barloff. Copyright © 1986. Reproduced by permission of Routledge/Taylor & Francis Group, LLC.

Down syndrome, cultural-familial retardation, normal intelligence, and superior intelligence.

**Psychological Factors** The genetic contributions to intelligence do *not* mean that environment matters little or not at all. Environment does matter. In particular, grossly abnormal environments can produce gross abnormalities in intelligence.

An example is Koluchova's (1972) case study of the effects of the abuse and deprivation experienced by two identical twin boys. Until they were discovered at the age of 6, the twins were confined to a closet in almost total isolation. They were beaten regularly throughout their early life. When discovered, the twins could barely walk, had extremely limited speech, and showed no understanding of abstractions, like photographs. Several years of therapy raised their measured intelligence from moderate intellectual disability when first discovered to the normal range by the age of 11.

Fortunately, cases of such torturous abuse are rare. They illustrate the theoretical contribution of experience to intelligence more than the actual contribution. Most children growing up in the United States live in pretty decent environments, if far from perfect ones. As a social ideal, Americans hope to provide all citizens with an equally advantaged environment. In working toward this laudable goal, we can overlook the fact that the influence of genes *increases* as environmental variation *decreases*. In fact, *all* individual differences in IQ would be caused by genes if everyone had exactly the same environmental advantages. Ironically, as we succeed in creating a more nurturing and stimulating world for every child, we run the risk of concluding that "environment doesn't matter." We need to remember our successes—and how truly wretched environments can devastate children's development (see Eugenics: Our History of Shame).

**Social Factors** The range of environments in the United States today still includes many undesirable circumstances for children. Millions of children are reared in psychosocial disadvantage in cities and in the equally unstimulating environments found among the rural poor. In fact, children are the most impoverished age group in the United States (America's Children, 1999).

Cultural-familial retardation is far more frequent among the poor. Part of this is explained by the fact that lower intelligence causes lower social status. People with a below-average IQ generally make less money. However, poverty and psychosocial disadvantage also lower IQ scores.

Impoverished environments lack the *stimulation* and *responsiveness* that promote children's intellectual development (Floyd, Costigan, & Phillippe, 1997). A stimulating environment challenges children's developing intellectual skills. A responsive environment offers encouragement for their pursuits. Unfortunately, mothers with borderline IQ are less sensitive and positive than other mothers (Fenning et al., 2007).

Studies of adopted children demonstrate the positive effects of stimulating and responsive environments (Turkheimer, 1991). Skodak and Skeels (1949) first demonstrated that children who were adopted away from unfortunate circumstances early in life achieved IQ scores at least 12 points higher than those of their biological mothers. More recent studies find similarly dramatic increases (Capron & Duyme, 1989; Schiff et al., 1982). Many children with cultural-familial retardation could function

normally if stimulating and responsive environments helped them to function near the upper end of their potential.

## TREATMENT: PREVENTION AND NORMALIZATION

Three major categories of intervention are essential in the treatment of intellectual disabilities. First, many cases can be prevented through adequate maternal and child health care, as well as early psychoeducational programs. Second, educational, psychological, and biomedical treatments can help people with intellectual disabilities to raise their achievement levels. Third, the lives of people with intellectual disabilities can be normalized through mainstreaming in public schools and promoting care in the community.

**Primary Prevention** Good maternal and child health care is one major step toward the primary prevention of intellectual disability. Health care measures include specific actions, such as vaccinations for rubella or the detection and treatment of infectious diseases like syphilis. In addition, an adequate diet and abstinence from alcohol, cigarettes, and other drugs are essential to the health of pregnant women and the welfare of the developing fetus.

Planning for childbearing can also help to prevent intellectual disability. Pregnancy and birth complications are notably more common among mothers younger than 18 and older than 35. Although most babies born to women outside this age range are healthy and normal, many women are aware of the statistical risks and attempt to time their pregnancies accordingly. Children of teenage mothers also are much more likely to face a life of poverty—a pressing issue, given that close to 10 percent of all children in the United States are born to adolescent mothers (America's Children, 1999).

A more controversial means of preventing intellectual disability is through diagnostic testing and selective abortion. One diagnostic procedure is *amniocentesis*, in which fluid is extracted from the amniotic sac that protects the fetus during pregnancy. Many chromosomal and genetic defects in the fetus can be determined from testing the amniotic fluid, potentially leaving parents with extremely difficult decisions about terminating a pregnancy. In the future, *gene therapy* may instead offer the opportunity for treating the developing fetus.

Many parents opt for amniocentesis despite the emotional turmoil created by the possibility of selective abortion. Older women are particularly likely to consider amniocentesis, given the link between maternal age and Down syndrome. Amniocentesis can cause miscarriage, however. Fortunately, it is now possible to screen for Down syndrome using *ultrasound*, a procedure that uses harmless sound waves to create an image of the fetus (Cuckle, 2001). While not as definitive, ultrasound also has the advantage of being able to detect Down syndrome in the first trimester of pregnancy versus the second trimester with amniocentesis. In fact, the American College of Obstetricians and Gynecologists (2007) now recommends routine ultrasound screening for all interested expecting mothers, not just for women 35 years of age or older.

**Secondary Prevention** Early social and educational interventions can lead to the secondary prevention of cultural-familial retardation. The most important current effort is Head Start, a federal intervention program begun in 1964. The goals of Head Start include providing preschool children living in poverty with early educational experiences, nutrition,

## EUGENICS: OUR HISTORY OF SHAME

Our shameful history of eugenics is one reason why many people argue vehemently against evidence showing substantial genetic contributions to intelligence. **Eugenics** is a movement dedicated to the “genetic improvement” of the human stock. British aristocrat Francis Galton coined the term in 1883 while advocating for “good breeding” among humans. Galton promoted “positive eugenics” by encouraging the elite to intermarry and bear many children. Others took up the mission of “negative eugenics” by putting up barriers to childbearing, as well as undertaking more gruesome efforts to eliminate “undesirables” from the human gene pool (Lombardo, 2001).

You surely are aware that Adolf Hitler embraced eugenic principles while committing genocide in Nazi Germany. You may *not* know that the principles of eugenics were embraced widely in

the United States prior to World War II. Eugenic policies in the United States included laws limiting immigration from southern and eastern Europe, prohibiting interracial marriage, and permitting the forced sterilization of so-called “defectives”: the insane, the diseased, the deformed, the blind, the delinquent, the alcoholic, and primarily the “feeble-minded” (Lombardo, 2001). About 60,000 people in the United States were sterilized involuntarily beginning in the 1920s. Most were people with intellectual disabilities. Despite the decline in the eugenics movement after World War II, forced sterilization continued in some states until the late 1970s (*Los Angeles Times*, May 13, 2002).

The Commonwealth of Virginia was a dubious “leader” in the eugenics movement, second only to California in the number of sterilizations performed. Shockingly, in 1927 the U.S. Supreme

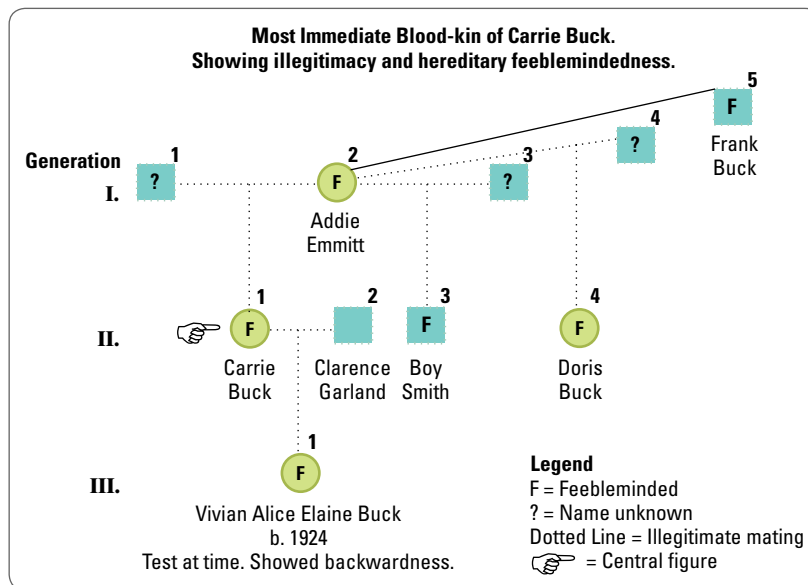
Court upheld Virginia’s forced sterilization law in the infamous case of *Buck v. Bell*. Carrie Buck was a young woman from Charlottesville, Virginia, who had been institutionalized in the Virginia Colony for Epileptics and Feeble-minded. To justify her planned sterilization, Buck was portrayed as “morally delinquent” and “feeble-minded,” although it is doubtful that she was either (Lombardo, 2001). Expert witnesses relied on family “pedigrees,”

### What is eugenics?

family trees indicating intellectual and personality defects across generations, to “prove” that Buck’s problems were hereditary (see Figure 15.4).

The U.S. Supreme Court upheld the Virginia law by a vote of 8 to 1. Buck was sterilized. In a stunning statement, Supreme Court Justice Oliver Wendell Holmes wrote: “It is better for all the world, if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind. . . . Three generations of imbeciles are enough” (*Buck v. Bell*, 274 U.S. 200, 1927). Seventy-five years later, on May 2, 2002, the governor of Virginia apologized for the state’s role in embracing eugenics and sterilizing some 8,000 people from 1927 through 1979 (*Washington Post*, May 3, 2002).

The philosopher George Santayana said, “Those who cannot remember the past are condemned to repeat it.” We believe that we must acknowledge and learn from our shameful history of eugenics. We also believe that society can benefit from research on the many genetic contributions to behavior if that evidence is debated vigorously, considered cautiously, and used wisely. Finally, we strongly believe that it is essential to respect the humanity—and the human rights—of people with intellectual disabilities.



**FIGURE 15.4**

The actual family history used in the U.S. Supreme Court Trial, *Buck v. Bell*, which, in 1927, upheld Virginia’s mandatory sterilization law.

Source: Reprinted from *Journal of Laboratory and Clinical Medicine*, 138, P. A. Lombardo, “Carrie Buck’s Pedigree,” pp. 279–283, Copyright © 2001, with permission from Elsevier.

and health care monitoring. Evidence indicates that Head Start produces short-term increases in IQ (5 to 10 points) and achievement. The academic advantages diminish or disappear within a few years after intervention ends, but data indicate that children who participate in Head Start are less likely to repeat a grade

or to be placed in special education classes. They also are more likely to graduate from high school (McKey et al., 1985; Zigler & Styfco, 1993). Head Start undoubtedly reduces the prevalence of cultural-familial retardation through its influence on adaptive behavior if not on IQ itself.





Raymond Hudlow was involuntarily sterilized at the Virginia Colony for Epileptics and Feeble-minded in 1942. He was released in 1943 and drafted into the army shortly afterward. Fighting for his country in World War II, Hudlow won the Bronze Star for valor, the Purple Heart, and the Prisoner of War Medal.

More specific evidence on preventing intellectual disability through early intervention comes from two research programs—the Carolina Abecedarian Project (Ramey & Bryant, 1982) and the Milwaukee Project (Garber, 1988). Both interventions offered a variety of services to children of mothers with below-average IQs, and both used control groups to assess the effectiveness of intervention. Gains of 20 or more points in IQ were reported in the Milwaukee Project, but questions about the methods of this study suggest that they be interpreted with caution (Baroff & Olley, 1999). More modest gains of 5 to 10 IQ points come from the Abecedarian Project. These projects, together with adoption studies and findings from Head Start, indicate that cases of familial retardation can be prevented by increasing environmental stimulation and responsiveness.

### How can intellectual disabilities be prevented?

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**Tertiary Prevention** Careful assessment early in life is critical to tertiary prevention. Medical screening is essential for detecting conditions like PKU. Unfortunately, many cases of intellectual disability are not detected early, as the doubling in prevalence during the school years indicates. Public screening of children's academic potential typically is not conducted until school age, and intelligence tests for infants and preschoolers are less reliable and valid.

Accurate detection is important, because early interventions can help. Intervention with infants typically takes place in the home and focuses on stimulating the infant, educating parents, and promoting good parent–infant relationships (Shearer & Shearer, 1976). During the preschool years, special instruction may take place in child development centers, which also offer respite care for the parents who need relief from the added demands of rearing a child with an intellectual disability.

Treatment of the social and emotional needs of people with intellectual disabilities may include teaching basic self-care skills during younger ages and various “life-survival” skills at later ages.

Children with intellectual disabilities may also be treated for unusual behaviors, such as self-stimulation or aggressiveness. In general, research indicates that operant behavior therapy is the most effective treatment approach (Bernard, 2002).

Medical care for physical and sensory handicaps also is critical in the treatment of certain types of intellectual disabilities. In addition, medications are helpful in treating disorders such as epilepsy that may co-occur with intellectual disabilities.

As many as 50 percent of institutionalized people with intellectual disabilities are prescribed medication, often inappropriately, to control their behavior problems (Singh, Guernsey, & Ellis, 1992). Neuroleptics are used commonly to treat aggressiveness and other uncontrolled behavior (Grossman, 1983). In some institutions, these drugs have been used primarily to sedate patients, raising broad questions about their misuse (Scheerenberger, 1982).

**Normalization** Normalization means that people with intellectual disabilities are entitled to live, as much as possible, like other members of society. The major goals of normalization include mainstreaming children with intellectual disabilities into public schools and promoting a role in the community for adults with intellectual disabilities.

Prior to 1975, only about half of all children with intellectual disabilities received an education at public expense. That year Congress passed the Education for All Handicapped Children Act,<sup>3</sup> which affirmed that all handicapped children have a right to a free and appropriate education in the “least restrictive environment.” Within the limits set by the handicapping condition, services must be provided in a setting that restricts personal liberty as little as possible.

For many children with intellectual disabilities, the least restrictive environment means **mainstreaming** them into regular classrooms, rather than being taught in special classes. Unfortunately, the extent of mainstreaming and the quality of support services vary widely across school districts and across states (Robinson et al., 2000). This is a matter of concern, because children with intellectual disabilities who are mainstreamed into

<sup>3</sup>The act, which is reauthorized periodically, was renamed Individuals with Disabilities Education Act (IDEA) in 1990.



A young girl with Down syndrome playing an educational game with her mother.





The Special Olympics offers three million people with intellectual disabilities a chance to exercise, compete, and excel in sports competitions—and to change attitudes about intellectual disabilities.

regular classrooms may learn as much as or more than they do in special classes (Taylor et al., 2005).

The *deinstitutionalization* movement that began in mental hospitals in the 1960s also has helped to normalize the lives of many people with intellectual disabilities. Deinstitutionalization has been particularly rapid for those with mild intellectual disability. Of those now living in institutions, 7.1 percent have mild, 13.0 percent have moderate, 24.4 percent have severe, and 55.5 percent have profound levels of intellectual disability (Baroff & Olley, 1999). People with intellectual disabilities who move from institutions to the community receive better care and function at a higher level. These people also contribute to communities through their work and their relationships.

Changing attitudes is ultimately the most effective way to normalize the lives of people with intellectual disabilities and their families. One of our students, whose sister has a profound intellectual disability, offered the following impassioned comments on attitudes:

In my favorite picture of my family, my parents and I are all looking at the camera, but my sister is smiling expectantly up at me, waiting for me to sing the alphabet. Every time I look at this picture I smile. What makes me angry is that other people don't see why. Other people see a vegetable

who will need to be cared for the rest of her life. . . . My sister has been described to me as “damaged,” a “tragedy,” and a “loss,” all by well-meaning psychologists. I've been told that secretly when I look at my sister, I feel disgusted, which is the farthest thing from the truth. . . . I will not lie, when I was in middle school I was disappointed that I didn't have a “normal” sibling who could talk with me or give me advice, but I have now reached the point where I am more upset at the world for not treating her properly and not seeing her the way that I do. This is why I have worked in a summer camp for children with severe and profound disabilities since I was in middle school—this is the only environment I have found where “my kids,” as I call them, are embraced, doted over, seen as sweet, cute, and not ever as “tragedies.”

(Anonymous, 2003)

## Autistic Spectrum Disorders

**Autistic spectrum disorder (ASD)** begins early in life and involves impairments in relationships, communication, and behaviors. The ASDs were called pervasive developmental disorder in DSM-IV-TR, a term no longer used by experts (Lord & Bailey, 2002). The new term evolved, in part, because autism is the best known and the most thoroughly researched ASD. As we discuss, the term ASD also is now favored, because it implies that these disorders are on a continuum (a spectrum). Autism is the most severe ASD; others share similarities with autism but may involve substantially less impairment.

The dictionary definition of autism, “absorption in one's own mental activity,” grossly understates the disorder's severe social disturbances. **Autism** (which DSM-IV-TR calls *autistic disorder*) is characterized by profound indifference to social relationships, odd, stereotypical behaviors, and severely impaired or nonexistent communication. The disorder typically has a chronic, unremitting course. Even those adults who achieve exceptionally good outcomes continue to show severely disturbed social emotions and social understanding. Consider the remarkable case of Temple Grandin, a woman who achieved what may be the most successful outcome of autism on record.

### CASE STUDY Temple Grandin—An Anthropologist on Mars

Temple Grandin, a woman now in her sixties, suffered from the classic symptoms of autism as a child. She had not developed language by the age of 3, and she threw wild tantrums in response to social initiations, even gentle attempts to give her a hug. Grandin spent hours staring into space, playing with objects, or simply rocking or spinning herself. She also engaged in other unusual behaviors, such as repeatedly smearing

her own feces. With the extensive help of her parents and teachers, and her own determination, however, Grandin learned strategies to compensate for, and cope with, her severe psychological impairments. She earned a Ph.D. in animal science and has developed widely used techniques for managing cattle. In stark contrast to Grandin, the majority of people with autism spend most of their adult life in institutions.

One of Grandin's coping strategies is “computing” how other people feel. Like the characters of Data or Mr. Spock from the *Star Trek* series, with whom she identifies, Grandin does not experience normal human emotions. Rather, she describes herself as “an anthropologist on Mars.” Like an anthropologist in a strange culture, she has had to learn how to relate to the human species through

careful observation of “their” behavior. The following is from a book by neurologist

Oliver Sacks, who wrote a detailed case study about Grandin.

“squeeze machine,” a device that gives her a soothing, mechanical hug. In one of her two autobiographies, *Thinking in Pictures*, Grandin describes her development of her squeeze machine:



Temple Grandin with actress Claire Danes, who won a Golden Globe award for her title role as Grandin in an HBO movie.

“I can tell if a human being is angry,” she told me, “or if he’s smiling.” At the level of the sensorimotor, the concrete, the unmediated, the animal, Temple has no difficulty. But what about children, I asked her. Were they not intermediate between animals and adults? On the contrary, Temple said, she had great difficulties with children—trying to talk with them, to join in their games (she could not even play peekaboo with a baby, she said, because she would get the timing all wrong)—as she had had such difficulties herself as a child. Children, she feels, are already far advanced, by the age of three or four, along a path that she, as an autistic person, has never advanced far on. Little children, she feels, already “understand” other human beings in a way she can never hope to.

(Sacks, 1985, p. 270)

Grandin finds human touch—hugging—overwhelming, but also comforting. To solve this dilemma, Grandin developed a

From as far back as I can remember, I always hated to be hugged. I wanted to experience the good feeling of being hugged, but it was just too overwhelming. It was like a great all-engulfing tidal wave of stimulation, and I reacted like a wild animal. . . . After visiting my aunt’s ranch in Arizona I watched cattle being put in the squeeze chute for their vaccinations, I noticed some of them relaxed. I asked Aunt Ann to press the squeeze sides against me and to close the head restraint bars around my neck. I hoped it would calm my anxiety. At first there were a few moments of sheer panic as I stiffened up and tried to pull away from the pressure. Five seconds later I felt a wave of relaxation. . . . I copied the design and built the first human squeeze machine out of plywood panels when I returned to school.

(Grandin, 1995, pp. 62–63)

We know a good deal about the often bizarre behavior of children and adults with autism. But we know little about autism on the inside. The sufferer typically is too disturbed to understand or communicate about their experience. Temple Grandin is a compelling exception to this rule. While discussing how the symptoms of autism appear to the outsider, we return to Grandin’s words in an effort to better understand the inner world of autism.

## SYMPTOMS OF ASD

Judging from physical appearance alone, you would not expect children with autism to have a severe psychological impairment. Some children adopt unusual actions or postures (Wing, 1988), motor milestones may be reached late, and movement may appear awkward or rather uncoordinated (Prior & Ozonoff, 2007). Still, most children are normal in physical appearance, and physical growth is generally normal.

**Early Onset** The normal physical appearance is one reason why autism, which begins early in life, may go unrecognized. In retrospect, many parents recall abnormalities that seem to date to birth. For example, a parent may remember that her autistic child was easy as a baby—too easy, perhaps undemanding and uninterested in attention, cuddling, and stimulation. In 20 percent to 40 percent of cases, the baby

## MyPsychLab

VIDEO CASE

### Asperger’s Disorder



**DAVID**

*“It’s grueling to think about what to say, what not to say.”*

Watch the video “Asperger’s Disorder: David.” As you watch the video, observe David’s odd behaviors and social problems, but ask yourself if

this is a disorder on the same spectrum with autism or something different.

develops normally for a time but either stops learning new skills or loses the skills acquired earlier (Volkmar, Chawarska, & Klin, 2005).

The National Institute of Mental Health hopes to improve the early identification of autism, and researchers are working to identify early warning signs (Volkmar et al., 2005). One clever study used videotapes of 1-year-olds’ birthday parties in this effort. The investigators compared normal children with those later diagnosed with autism or an intellectual disability. The videos revealed that the infants with autism looked

at others and oriented to their names less often than infants with an intellectual disability. Both groups used fewer gestures, looked less at objects held by others, and engaged in more repetitive motor movements than normally developing babies (Osterling, Dawson, & Munson, 2002). Findings like this cannot yet be used for early identification, but scientists are searching for more definitive markers.

**Impaired Communication** Communication problems range from few difficulties in *Asperger's disorder*, a high functioning ASD that we describe shortly, to profound impairments in most cases of autism. Some children with autism fail to speak at all between the ages of 1 and 2, the time when normal children typically learn their first words. Others learn a few rudimentary words such as "Mama" and then suddenly lose their language abilities. According to field studies conducted for DSM-IV, 54 percent of patients with autism remain mute, as do 35 percent of patients with other ASDs (Volkmar et al., 1994).

Others learn to speak but not at the normal rate of language acquisition (Schreibman, 1988). Children who do acquire language, including those with Asperger's disorder, typically have oddities in their speech. A common problem is *dysprosody*, where the subtleties of speech production are unusual—disturbed in rate, rhythm, and intonation. The disturbed child or adult sounds unusual to the normal listener, even when the speech content is not.

Another common problem is *echolalia*, uttering phrases back, perhaps repeatedly. When the mother of a 1 1/2-year-old points to herself and says, "Who is this?" normal toddlers respond with "Mama." A 10-year-old child with autism and echolalia responds to the same question by repeating "Who is this?"

Yet another problem is *pronoun reversal*, for example, confusing the pronoun "you" with the pronoun "I." A child might say "You want a cookie" when he means "I want a cookie." Pronoun reversal is notable for spawning strange theories about autism. One early interpretation was that pronoun reversal showed that children with autism have failed to *individuate*, to become a separate person from their parents (Bettelheim, 1967). A simpler, contemporary explanation is that pronoun reversal demonstrates a lack of understanding of the meaning of pronouns.

Speech difficulties in ASD are not the products of auditory or other sensory problems, nor are they simply disturbances in the mechanics of speech. Rather, the difficulties stem from basic disturbances in the ability to communicate and, even more basically, in the ability to imitate or reciprocate interactions. Unlike infants and toddlers who are deaf or mute, children with autism do not easily use gestures as substitutes for speech. In fact, some children do not engage in the social imitation that is essential for learning basic skills (Prior & Ozonoff, 2007).

Even high-functioning people with ASD have trouble communicating or understanding abstractions. They may fail to generate unique or imaginative speech, or have difficulty comprehending concepts like metaphors. Here is how Temple Grandin describes her struggles with language and abstraction:

I can remember the frustration of not being able to talk at age three. This caused me to throw many a tantrum.

I could understand what people said to me, but I could not get my words out. It was like a big stutter, and starting words was difficult. My first few words were very difficult to produce and generally had only one syllable, such as "bah" for "ball."

(1996, p. 45)

Autistics have problems learning things that cannot be thought about in pictures. The easiest words for an autistic child to learn are nouns, because they are directly related to pictures. . . . Spatial words such as "over" and "under" had no meaning for me until I had a visual image to fix them in my memory. Even now, when I hear the word "under" by itself, I automatically picture myself getting under the cafeteria tables at school during an air-raid drill, a common occurrence on the East Coast during the early fifties. When I read, I translate written words into color movies or I simply store a photo of the written page to be read later. When I retrieve material, I see a photocopy of the page in my imagination. I can then read it like a TelePrompter. . . . When I am unable to convert text to pictures, it is usually because the text has no concrete meaning. Some philosophy books and articles about the cattle futures market are simply incomprehensible.

(pp. 29–31)

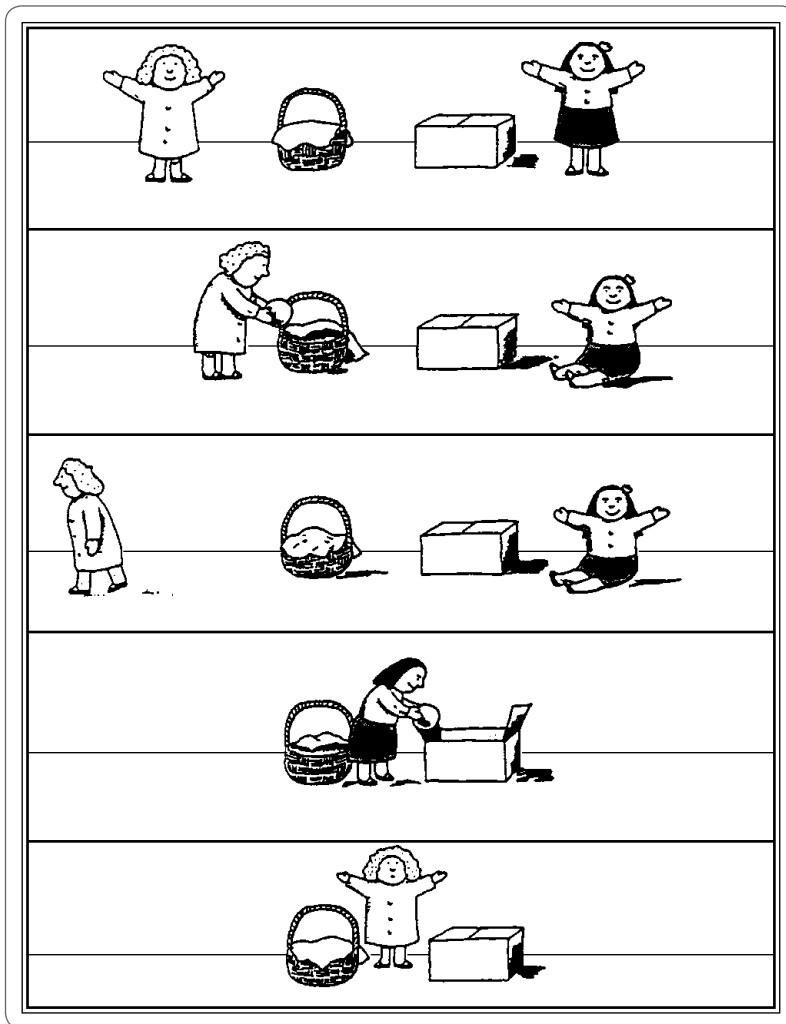
**Impaired Social Interaction** The inability to relate to others is another central feature of ASD. Social impairments range from relatively mild oddities, such as a lack of social or emotional reciprocity, to extreme difficulties. Some children and adults with ASD treat other people as if they were confusing and foreign objects rather than as sources of protection, comfort, and reciprocal enjoyment.

People with autism often lack a *theory of mind*—they fail to appreciate that other people have a point of reference that differs from their own (Baron-Cohen, Tager-Flusberg, & Cohen, 1993). The concept of theory of mind is best illustrated by the "Sally-Ann task" (see Figure 15.5). In this task, the child is shown two dolls, Sally, who has a basket, and Ann, who has a box. Sally puts a marble in her basket and then leaves. While Sally is gone, Ann takes the marble out of Sally's basket and



A mother with her young daughter, who suffers from autism.





**FIGURE 15.5**

Where will Sally (on left) look for the marble? Many children with autism answer “in the box,” evidence that they may lack a “theory of mind.”

Source: U. Frith, 1989, *Autism: Explaining the Enigma*, Oxford: Basil Blackwell, p. 41. Copyright © 1989. Reprinted by permission of Blackwell Publishing Ltd.

puts it into her own box. When Sally returns, the question is: Where will she look for her marble?

Sally should look for the marble in her basket, where she left it, because she did not see Ann hide it. However, children with autism often fail to appreciate Sally’s perspective—they lack a theory of mind. In one early study, 80 percent of children with autism said Sally would search in Ann’s box, whereas only 14 percent of children with Down syndrome made the same error (Baron-Cohen, Leslie, & Frith, 1985).

The theory of mind construct generated considerable research, but we now know that it is not the “core” deficit of autism. Many higher functioning children with ASD do *not* have a theory of mind deficit, while many with intellectual disabilities do (Prior & Ozonoff, 2007; Tager-Flusberg, 2007). Furthermore, the social deficits in autism are emotional not just cognitive (Losh & Capps, 2006). In fact, some children with ASD appear to be missing the basic motivation to form attachments. As infants, they do not seek out attachment figures in times of distress, nor are they comforted by physical contact. As children, they show little interest in their peers, failing to engage in social play or to develop friendships. Throughout life, they avoid others in small but significant ways, for

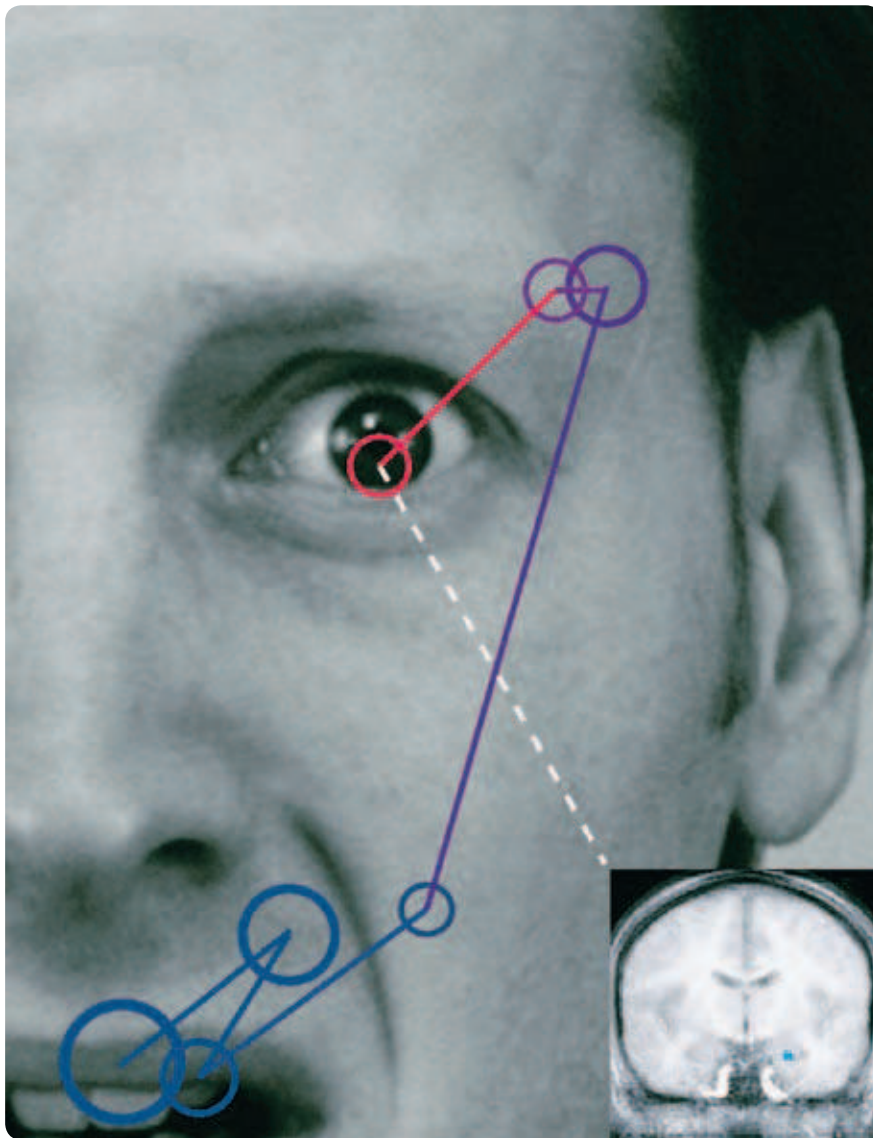
example, through *gaze aversion*, actively avoiding eye contact (see photo).

### **Stereotyped Behavior, Interests, and Activities**

The third defining symptom of ASD is restricted, repetitive, and stereotyped patterns of behavior, interests, and activities. Many children literally spend hours spinning a top or flapping a string in front of their eyes. Others might become uncontrollably agitated if the arrangement of furniture in a room is changed even slightly. Compulsively rigid adherence to daily routines is yet another example of restricted activities and interests.

Not surprisingly, these odd preoccupations and rituals create social complications. People unfamiliar with the disorder find some such behavior bizarre and perhaps frightening. The ritualistic behavior also causes problems for those who are trying to manage and educate children with autism. How do you educate a child who is totally preoccupied with flapping a string in front of his face for hours?

What purpose does stereotyped behavior serve for the disturbed individual? Rituals such as flapping a string or spinning a top seem to serve no other function than providing sensory



A demonstration of gaze aversion in children with autism using eye tracking technology. The circles show where the subjects gazed. Larger circles indicate longer gaze time, and the straight lines indicate eye movement. The dot in the brain slice shows activation of the subjects' amygdala cluster, indicating emotional arousal due to potential eye contact.

feedback or *self-stimulation*. A common interpretation is that the child receives too little sensory input, and ritual self-stimulation increases sensation to a more desirable level. We prefer an alternative interpretation. Self-stimulation *reduces* sensory input by making the stimulation monotonously predictable. In fact, all of the stereotyped behavior in ASD may help to make a terrifying world more constant and predictable. Temple Grandin's (1996) observations seem consistent with our interpretation:

When left alone, I would often space out and become hypnotized. I could sit for hours on the beach watching sand dribbling through my fingers. I'd study each individual grain of sand as it flowed between my fingers. Each grain was different, and I was like a scientist studying the grains under a microscope. As I scrutinized their shapes and contours, I went into a trance which cut me off from the sights and sounds around me.

Rocking and spinning were other ways to shut out the world when I became overloaded with too much noise.

Rocking made me feel calm. It was like taking an addictive drug. The more I did it, the more I wanted to do it. My mother and my teachers would stop me so I would get back in touch with the rest of the world

(pp. 44–45)

**Apparent Sensory Deficits** Although not a part of the diagnosis, many people with autism respond to auditory, tactile, or visual sensations in a highly unusual and idiosyncratic manner. For example, a patient may respond as if he were deaf, even though his hearing is intact, an *apparent sensory deficit* (Lovaas et al., 1971). The sensory deficit is “apparent,” because the sense organ is not impaired even though the response suggests otherwise. Even more puzzling, the “deaf” patient may scream in pain in reaction to a much quieter sound like the scratch of chalk on a blackboard. This inconsistency suggests that the problem lies at some higher level of perception. The sensory apparatus is intact, but these unusual reactions result from some unknown, subcortical brain abnormality involved



in integrating sensory input (Prior & Ozonoff, 2007). Temple Grandin, who called this “sensory jumbling,” believes that this symptom is an understudied aspect of autism:

When I was little, loud noises were also a problem, often feeling like a dentist’s drill hitting a nerve. They actually caused pain. I was scared to death of balloons popping, because the sound was like an explosion in my ear. Minor noises that most people can tune out drove me to distraction. When I was in college, my roommate’s hair dryer sounded like a jet plane taking off.

(p. 67)

**Self-Injury** *Self-injurious behavior* is one of the most bizarre and dangerous difficulties that can accompany autism. The most common forms of self-injury are repeated head banging and biting the fingers and wrists (Rutter, Greenfield, & Lockyer, 1967). The resulting injuries may involve only minor bruises, or they can be severe enough to cause broken bones, brain damage, and even death. Self-injury should not be misinterpreted as suicidal behavior. The child with autism does not have enough self-awareness to be truly suicidal. Instead, self-injury seems to have several possible causes, the most widely accepted of which is self-stimulation (Carr, 1977). Fortunately, self-injury can be treated effectively with behavior modification techniques, as we discuss later.

**Savant Performance** A fascinating ability sometimes associated with autism is the rare child who shows **savant performance**—an exceptional ability in a highly specialized area of functioning. Savant performance typically involves artistic, musical, or mathematical skills. The image on this page portrays the savant artistic abilities of Nadia, a girl with autism who drew this sophisticated picture when she was just 5 years old (Selfe, 1977).

No one has an adequate theory, let alone an explanation, for savant performance. Unfortunately, one thing does seem clear: The existence of savant performance does not indicate that, as many have hoped, children with autism really are normal or even superior in intelligence. Most people with autism do not show savant performance, and most also have an intellectual disability (Fombonne, 2007). Past research showed that about a quarter of children with autism have IQs



Nadia, a girl with autistic disorder, drew this picture when she was about 5 years old. Like Nadia, some children with autism demonstrate savant performance, typically in drawing ability, musical performance, mathematical calculations, or feats of memory.

below 55, about half have IQs between 55 and 70, and only one-fourth have IQs over 70 (Volkmar et al., 1994; see Table 15.5). And for the most part, however, IQ scores are stable over time (Prior & Ozonoff, 2007). It is true that average IQs are higher in more recent samples—perhaps 50 percent fall below 70. The change is largely a result of broadened definitions of the disorder to include less severely disturbed children. Perhaps some cases also are being diagnosed sooner and

TABLE 15.5 IQ Scores for Patients with Autism and Other Autistic Spectrum Disorders

| IQ Score    | Autism |         | Other Autistic Spectrum Disorders |         |
|-------------|--------|---------|-----------------------------------|---------|
|             | N      | Percent | N                                 | Percent |
| >70         | 118    | 26.0    | 122                               | 50.8    |
| 55–69       | 197    | 43.4    | 61                                | 25.4    |
| <20–54      | 114    | 25.1    | 53                                | 22.1    |
| Unspecified | 25     | 5.5     | 4                                 | 1.7     |

Source: From “Field Trial for Autistic Disorder in DSM-IV” by F. R. Volkmar, *American Journal of Psychiatry*, 151 (1994), pp. 1361–1367. Copyright © 1994. Reprinted by permission of American Psychiatric Association.

treated more successfully (Chakrabarti & Fombonne, 2001; Volkmar & Lord, 2007).

### DIAGNOSIS OF AUTISM AND ASD

For several decades, the term *childhood schizophrenia* was used as a synonym for autism (Bender, 1947). However, the symptoms of autism and schizophrenia differ dramatically (Rutter, Greenfield, & Lockyer, 1967), and the misleading term “childhood schizophrenia” has been abandoned. Instead, diagnosis focuses on the cluster of symptoms first described in 1943 by the psychiatrist Leo Kanner (1894–1981) of Johns Hopkins University, a pattern he called “early infantile autism.” Kanner (1943) noted that a group of severely disturbed young children displayed an inability to form relationships, delayed or non-communicative speech, a demand for sameness in the environment, stereotyped play activities, and lack of imagination. To Kanner’s credit, the contemporary diagnosis of autism still emphasizes these symptoms (see Table 15.6).

DSM-IV-TR includes other ASDs. *Childhood disintegrative disorder* is a very rare condition characterized by severe problems in social interaction and communication, in addition to stereotyped behavior. It is distinctive, because the onset occurs after at least two years of normal development. Previously acquired skills are lost and the course generally involves severe impairment (Volkmar & Lord, 2007).

*Rett’s disorder* is characterized by at least five months of normal development followed by a deceleration in head

growth, loss of purposeful hand movements, loss of social engagement, poor coordination, and a marked delay in language. Rett’s disorder was included as an ASD in DSM-IV-TR, because the condition often was confused with autism. Scientists have since identified the genetic mutation that causes Rett’s. The mutation is spontaneous, that is, not inherited from parents. Most experts believe Rett’s now is better classified as a form of intellectual disability. The genetic mutation is located on the X sex chromosome, and Rett’s is found almost exclusively among females. Male fetuses with the mutation rarely survive to term (Dotti et al., 2002; Spector & Volkmar, 2006).

While autism is defined narrowly, childhood disintegrative disorder is rare, and Rett’s is now viewed as an intellectual disability, the definition of ASD—disorders on the autistic *spectrum*—has been expanding. This turn of events is partially due to the rediscovery of the work of Viennese psychiatrist Hans Asperger (1906–1980). Asperger identified a condition very similar to his contemporary, Kanner, except children had higher intellectual functioning and better communication skills. Asperger received little attention in English-speaking countries until 1994 when **Asperger’s disorder** was listed in the DSM. As defined in DSM-IV-TR, Asperger’s disorder is identical to autism, except it involves no clinically significant delay in language. But one study of 157 children with ASD found *no* cases met DSM-IV-TR criteria for Asperger’s disorder, because all children had at least some communication problems and thus could be diagnosed with autism (Mayes, Calhoun, & Crites, 2001).

**TABLE 15.6 DSM-IV-TR Diagnostic Criteria for Autism**

**A. A total of six (or more) items from (1), (2), and (3), with at least two from (1) and one each from (2) and (3):**

1. Qualitative impairment in social interaction, as manifested by at least two of the following:
  - a. marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction
  - b. failure to develop peer relationships appropriate to developmental level
  - c. a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people
  - d. lack of social or emotional reciprocity
2. Qualitative impairments in communication as manifested by at least one of the following:
  - a. delay in, or total lack of, the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gesture or mime)
  - b. in individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others
  - c. stereotyped and repetitive use of language or idiosyncratic language
  - d. lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level
3. Restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:
  - a. encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus
  - b. apparently inflexible adherence to specific, nonfunctional routines or rituals
  - c. stereotyped and repetitive motor mannerisms
  - d. persistent preoccupation with parts of objects

**B. Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years: (1) social interaction, (2) language as used in social communication, or (3) symbolic or imaginative play**

Source: Reprinted with permission from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*, (Copyright © 2000). American Psychiatric Association.

Yet, over the last decade or so, the definition of ASD used in practice has become much broader than described either by Asperger or the DSM-IV-TR. Establishing new, well-accepted diagnostic criteria is an essential goal both for research and for practice (Volkmar & Lord, 2007). One reason why is because some contemporary practitioners give the diagnosis of Asperger's disorder whenever a child shows substantial social oddities. This broadening of the diagnosis is creating a false "epidemic" of autistic spectrum disorders, an epidemic that reflects diagnostic fads—and parents' fears—not new threats to children's mental health.

FREQUENCY OF ASD

For decades autism was viewed as a very rare disorder, occurring in perhaps 4 of 10,000 children (Lotter, 1966). The diagnosis of ASD exploded in the last decade or so, however, and upper-level estimates now suggest that approximately 100 in 10,000 children suffer from the disorder (Baron-Cohen et al., 2009; Kogan et al., 2009). This startling 25-fold increase has created an uproar. Many parents and some professionals believe that environmental



Most co-authors retracted their published speculation about a possible link between autism and the measles/mumps/rubella vaccine. The suggestion, based on only a few case studies, created much public concern about the vaccine. Worries continue to this day, even though no risk has been identified in studies of hundreds of thousands of children.

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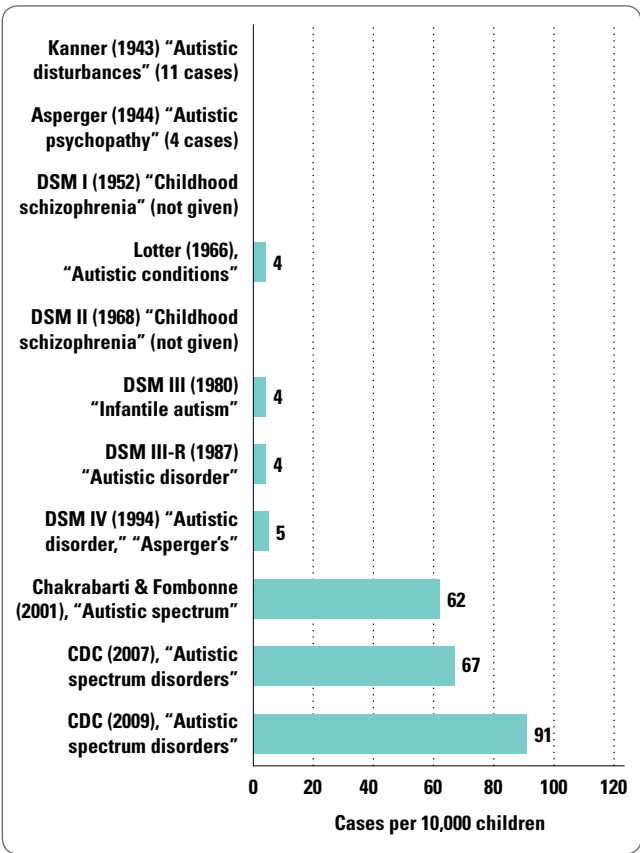


FIGURE 15.6 Prevalence of Autistic Spectrum Disorders in Selected Sources 1943–2009

Recent estimates seem to suggest an "epidemic of autism," but they more likely indicate greater awareness and a broadening definition of autistic spectrum disorder.

Source: Authors' compilation from original sources.

factors, such as pollution or vaccines, caused an "epidemic of autism." The dramatic increase in the number of cases has been carefully and repeatedly documented (Barbaresi et al., 2005; Fombonne, 2007; Newschaffer, Falb, & Gurney, 2005). In fact, the U.S. Centers for Disease Control and Prevention (CDC) (2009) reported an increase of close to 50 percent in the point prevalence of ASD in just four years (between 2002 and 2006) (see Figure 15.6). The surge in the diagnosis of autism has three plausible explanations: (1) Some new environmental agent is causing more ASDs; (2) professionals are using broadened criteria in diagnosing ASD; and/or (3) more children are being identified because of increased awareness and more thorough assessments.

In the minds of many parents, the measles/mumps/rubella (MMR) vaccination, which used to contain *thimerosal*, a mercury-based organic compound, has been the leading suspect in explaining the upsurge in ASD. Despite the fear, even hysteria, about MMR raised in the popular media and on the Internet, no scientific evidence links MMR to ASD (Offit, 2010; see Critical Thinking Matters in Chapter 2). Similarly, no evidence ties other suspected environmental agents, for example, chemical dumps, with the upsurge in ASD (Rutter, 2005; Wing & Potter, 2002). While experts now view the true prevalence of ASD to be far greater than previously suspected—between



30 and 60 cases per 10,000 children (Charman, 2002; Rutter, 2005)—the “epidemic of autism” may be more of a reason for celebration than paranoia. Leading experts agree that, while some undetected environmental cause cannot be completely ruled out, the increasing estimates are most likely due to increased awareness and broadened diagnostic criteria (Barbaresi et al., 2005; Charman, 2002; Miles, 2011; Newschaffer et al., 2005; Rutter, 2005; Wing & Potter, 2002). One piece of evidence in support of this interpretation is the declining percentage of children diagnosed with ASD who have comorbid intellectual disabilities in more recent years. This indicates that the diagnosis is being applied more to less severely disturbed children.

We need to tackle another myth about the epidemiology of autism. Parents of children with autism were once thought to be especially intelligent, a finding that contributed to the mistaken view that children with autism have normal or even superior intelligence. Researchers did repeatedly find that children treated for autism had especially well-educated parents. However, this is because well-educated parents are vigorous in seeking specialized treatment for their troubled children, which means that the parents of children *treated* for autism are more educated than the average parent. In other words, a biased sample created a false correlation (Gillberg & Schaumann, 1982). In the general population, autism is unrelated to parental education (Schopler, Andrews, & Strupp, 1979).

Two legitimate findings about the prevalence of autism have inspired research on possible causes. Three to four times as many boys as girls suffer from autism, suggesting a gender-linked etiology, as in fragile-X syndrome. Autism also is much more common among siblings of a child with autism (Smalley, Asarnow, & Spence, 1988; Smalley & Collins, 1996), suggesting possible genetic causes.

## CAUSES OF AUTISM

Before discussing evidence on biological contributions to autism, we first briefly consider—and reject—environmental explanations.

**Psychological and Social Factors** For many years, parents were blamed for causing autism in their children. Psychoanalytic speculations said that autism results from the

infant’s defense against maternal hostility (Bettelheim, 1967). Behaviorists viewed the disorder as caused by inappropriate parental reinforcement (Ferster, 1961). Both views blamed parents as cold, distant, and subtly rejecting of their children. In fact, in 1960, *Time* magazine published an account of these “refrigerator parents.” The article stated that the parents of children with autism “just happened to defrost long enough to produce a child” (Schreibman, 1988).

*Is there really an “epidemic of autism”?*

Such harmful assertions are simply wrong. Researchers have found no differences in the child-rearing styles of the parents of children with autism when compared with those of the parents of normal children (Cantwell, Baker, & Rutter, 1979). And even if differences existed, common sense would force us to challenge the “refrigerator parent” interpretation. How could a parent’s emotional distance create such an extreme disturbance so early in life? Even heinous abuse does not cause symptoms that approach the form or severity of the problems found in autism. Moreover, if parents are emotionally distant from their autistic child, could this be a reaction to the child’s disturbance? If an infant shows no normal interest in cuddling or mimicking, is it surprising if a parent grows a bit distant?

Speculation about poor parenting—or vaccines—can never be completely disproved. However, logic, null results in empirical studies, and mounting research on biological causes together make it unfathomable to think that autism has a psychological cause. And as we hope you have come to understand, the rules of science require scientists to prove their hypotheses. Until a hypothesis is proven true, the community of scientists assumes it is false. Claims about “refrigerator parents” offer sad testament to the wisdom of this scientific principle.

*Why are psychological theories of the cause of autism wrong?*

**Biological Factors** Despite the severity of the disorder and its unique symptoms, autism does not appear to be one disorder. Instead, current thinking is that, like intellectual disabilities, autistic spectrum disorders include several problems that look similar but actually have different biological causes. Known causes of different “autisms” (note the plural) include fragile-X syndrome, Rett’s disorder, and a handful of other known causes of intellectual disability. Other suspected causes include genetics and brain abnormalities.

**Genetics** Genetic factors are widely thought to play an important role in autism. The prevalence of autism is as much as 100 times greater among siblings of a child with autism, and several studies have found higher concordance among MZ than DZ twins (Smalley et al., 1988; Smalley & Collins, 1996; Steffenburg et al., 1989). In the largest study to date, concordance rates were 60 percent for MZ twins and 0 percent for DZ twins (Bailey et al., 1995). For a broader spectrum of disturbances, the rates were 92 percent for MZ and 10 percent for DZ twins in the same study.

These results suggest that autism is strongly genetic, but there is a puzzle. The DZ rates are *too* low. Recall that, in dominant genetic transmission, rates are 100 percent MZ and 50 percent DZ. The anomaly might be explained if autism is caused by a combination of different genes or perhaps by a spontaneous genetic mutation (Gottesman & Hanson, 2004). Recent research identified a “hot spot” on chromosome 16 (16p.11.2) that is linked with perhaps 1 percent of cases (Weiss



Robert Gagno suffers from autism but shows savant performance in pinball. He is one of the highest ranked pinball players in his home country of Canada.



Scientists are using all kinds of imaging techniques in the search to locate brain abnormalities in autism.

et al., 2008). And one analysis suggested that, if all causes are included (such as fragile-X, Rett's, and 16p.11.2), as many as 25 percent of cases of autism can be attributed to various genetic causes (Miles, 2011).

**Neuroscience of Autism** Different causes could lead to similar abnormalities in brain development, structure, or function, thus producing similar symptoms. Some evidence indicates that the brains of children with autism are larger than average. The problem seems to be developmental. Brain growth appears to be unusually rapid in children with autism, at least until the age of 2 or 3. Then brain growth is arrested, so that cerebral and cerebellar brain volume are smaller than normal at later ages (Courchesne et al., 2001).

Still, no obvious brain abnormalities have been identified in autism. Early theorizing about potential brain damage focused on the left cerebral hemisphere, where language is controlled. However, the communication deficits in autism are more basic, and current thinking focuses more on subcortical brain structures involved in emotion, perception, and social interaction (Waterhouse, Fein, & Modahl, 1996; Wing, 1988). Two likely sites are the cerebellum, where sensorimotor input is integrated, and the limbic system, the area of the brain that regulates emotions (Bauman, 1996; Courchesne et al., 2001; Schreibman, 1988; Waterhouse et al., 1996). Within the limbic system, the amygdalae are a particular focus, and recent evidence indicates that these structures follow the pattern of early rapid then slowed development (Mosconi et al., 2009). The frontal lobe, the site of executive functioning, also may be involved (Moldin, 2003).

Recent theorizing also points to the functioning of *mirror neurons*, neurons that fire both when an individual performs an action and when the individual observes another performing the same action. Mirror neurons were first identified in the 1990s and are known to be involved in many normal abilities that are impaired in ASD including imitation, understanding others' intentions, empathy, and language learning. Research on ASD and the mirror neuron system is in its infancy, but it is exciting because of its potential relevance to several key symptoms (Oberman & Ramachandran, 2007).

The most promising research on neurotransmitters and ASD focuses on endorphins and neuropeptides (Polleux & Lauder, 2004). *Endorphins* are internally produced opioids that have effects similar to externally administered opiate drugs like morphine. One theory suggested that autism is caused by excess endorphins. According to this speculation, people with autism are like addicts high on heroin. They lack interest in others, because their excessive internal rewards reduce the value of the external rewards offered by relationships (Panksepp & Sahley, 1987). More recent theorizing has expanded to include various *neuropeptides*, substances that affect the action of neurotransmitters. Oxytocin and vasopressin, which affect attachment and social affiliation in animals, are two neuropeptides that are the subject of active investigation (Waterhouse et al., 1996). Autism is widely viewed as a brain disorder, but to date, it has defied explanation in terms of specific abnormalities.

## TREATMENT OF ASD

Controversy exists about the degree to which treatment can help children with autism. Some researchers are optimistic about new treatments, whereas others are skeptical, especially because a large number of dubious treatments have been promoted (see Critical Thinking Matters). Everyone acknowledges, however, that there is no cure for autism. Thus, the effectiveness of treatment must be compared against the unhappy course and outcome of the disorder.

**Course and Outcome** Unfortunately, autism is a lifelong disorder. A recent review of 16 follow-up studies concluded that only about 20 percent achieve a "good" outcome, defined as living a somewhat normal and independent life. The outcome is "poor" for 50 percent, who require substantial supervision and support. A major change in more recent years is that more children and adults with autism are cared for in their homes or communities instead of institutions (Howlin, 2007). More recent studies also find somewhat better outcomes, but this may be a result of including higher functioning



# Critical Thinking Matters

## THE BOGUS TREATMENT CALLED FACILITATED COMMUNICATION

*Facilitated communication* is a technique that created excited optimism—and deep skepticism—as a treatment for autism. In facilitated communication, a “facilitator” supports the hand and arm of a disabled individual, thus allowing the child to type on a keyboard. Douglas Biklen (1992) claimed that the technique allows people with autism to communicate, show insight, awareness, and literary talent—and even reveal traumatic experiences that purportedly caused their autism.

In the early 1990s, facilitated communication was touted as a cure for autism throughout the popular media. Eager for a cure, many relatives of people with autism embraced the technique. Unfortunately, but not surprisingly, systematic studies found that facilitated communication offered no benefits (Jacobson, Mulick, & Schwartz, 1995). One study was completed by Eberlin and coworkers (1993), who investigated facilitated communication in 21 adolescents diagnosed with autism and 10 adult facilitators who were enthusiastic about the technique.

The research involved four steps. First, in the baseline condition the adolescents with autism were asked questions and allowed to type or otherwise communicate their answers to the best of their abilities. A special alphabetically configured keyboard was used for typing in this and all other conditions. Second, in the pretest, the adolescents responded to the same questions, but they were encouraged to type their answers with the aid of the facilitator, who was screened from hearing or seeing the questions being asked. Third, in the free response condition the adolescents responded to questions with the aid of the facilitator after the facilitator had received 20 hours of training in the technique. In this condition, the facilitator could see and hear the questions being asked. Finally, in the posttest, the adolescents responded to the identical questions as in the first and second conditions with the aid of the facilitator. The facilitators were screened in this last condition.

Results for a few people during the free response condition contrasted dramatically with the pretest findings.

For example, before facilitated communication, one autistic was able to communicate only by using two manual signs. When asked to define emotion during free response, however, with the aid of a facilitator, this same person typed “EMOTION ZOMETHIN\* FEEL EXPREZ.”

Such dramatic improvements surely would be more impressive if we did not know the results of the posttest. When the facilitators were

### *How is facilitated communication like a Ouija board?*

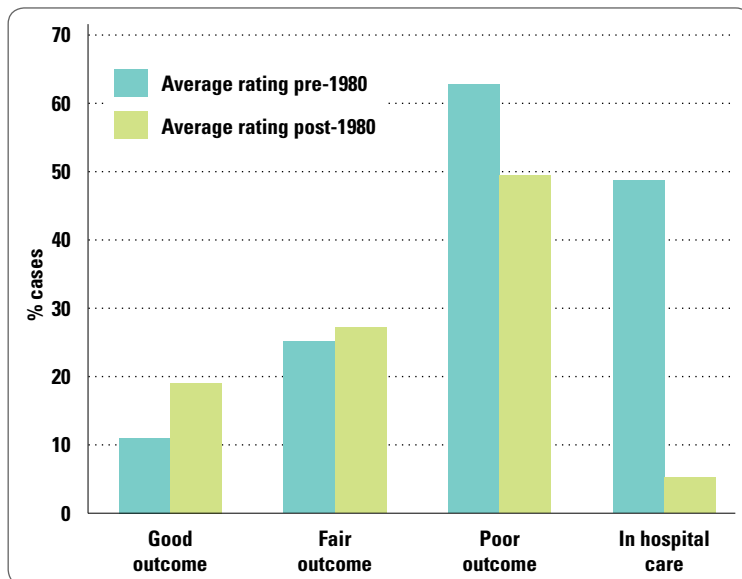
again screened, the autistics performed significantly worse than they had at baseline. Apparently, some facilitators experienced the Ouija board effect. Their own thoughts subtly influenced the “response” they “facilitated.”

The Science Working Group on Facilitated Communication of the American Psychological Association officially concluded that facilitated communication is ineffective (Jacobson, Mulik, & Schwartz, 1995). Yet, a subsequent study found that 18 percent of service providers still used facilitated communication as a treatment (Myers, Miltenberger, & Studa, 1998). And the documentary, *Autism Is a World*, which purports to show that facilitated communication works (and was coproduced by Biklen) was nominated for an Academy Award in 2005.

In considering these unhappy circumstances, we once again urge you to be a healthy skeptic. When a real miracle treatment is discovered, it will be easy to demonstrate its effectiveness scientifically. Until then, without critical thinking, you—and desperate mentally ill people and their relatives—are susceptible to false hope and phony treatments.



A teacher attempting facilitated communication with a student with autism. Evidence indicates that the technique does not allow us to communicate with people with autism.



**FIGURE 15.7**

Adult outcomes for children diagnosed with autism. Outcomes are somewhat better in more recent studies, but good outcomes are infrequent and poor outcomes remain most common. One major change is that, in recent studies, far fewer adults with autism were cared for in institutions, reflecting increased family and community care.

Source: Figure 9.1, p. 282 from "The Outcome in Adult Life for People with ASD" by P. Howlin in *Autism and Pervasive Developmental Disorders*, 2nd edition, ed. by F. Volkmar. Copyright © 2007. Reprinted by Permission of Cambridge University Press.

individuals, not necessarily because of improved care (Howlin, 2007; see Figure 15.7). Asperger's disorder is generally thought to have a much more optimistic prognosis (Gillberg, 1991), but this has not yet been shown empirically (Howlin, 2007).

A more positive prognosis for autism is predicted by language skills at the age of 5 or 6 (Yirmiya & Sigman, 1991) and higher IQ (Schreibman, 1988). Recent research also shows that *joint attention*, coordinating attention with another person through gestures, social responding, or social initiation, predicts language development from preschool age to age 9 (Anderson et al., 2007). Importantly, a quarter or more of young people with autism develop seizure disorders as teenagers (Wing, 1988). In adult life, affective disorders are common (Howlin, 2007).

Statistics offer a sobering view of autistic spectrum disorders. Can treatment help children and adults with ASD to lead more normal lives?

**Medication** A huge variety of medications have been tried for autism, ranging from antipsychotics to opiate agonists. Unfortunately, no medication is very effective, although temporary claims of success have fueled false hope more than once.

A cautionary tale can be told about secretin, a "breakthrough" medication in the late 1990s. Secretin is a hormone involved in digestion. It is sometimes used to test for gastrointestinal problems, which are common in autism. Widespread interest in the drug was sparked by three case studies of children with autism who

reportedly showed remarkable improvement in language and social behavior while taking secretin for a routine gastrointestinal workup (Hovath et al., 1998).

#### What is the most effective treatment for autism?

Rumors spread on the Internet, and thousands of desperate parents across the country sought secretin for their autistic children.

Scientists quickly responded to the intense interest. Unfortunately, the news was not good. A double-blind study using random assignment found no improvement over placebo in 58 autistic children treated with a single dose of secretin (Sandler et al., 1999). Several subsequent studies also showed no benefit (Erickson et al., 2007). As with other "miracle" medications, the effects of secretin are not miraculous.

Even more recent and troubling, desperate parents and at least some physicians have been attempting treat autism with *chelation therapy*, administering agents that remove heavy metals from the body (presumably the mercury that does *not* cause autism). Chelation can be dangerous to children's health, and the National Institutes of Health recently canceled a proposed study of chelation and autism because the risks far outweighed any potential benefits (*Wall Street Journal*, September 18, 2008). In a similar vein of desperation (and quackery), the *Chicago Tribune* (November 23, 2009) reported that various potentially dangerous substances are being misused to "treat" autism by attempting to reduce "inflammation" of the brain, an approach legitimate scientists find frightening. About the only mention of this treatment in the scientific literature is a *warning not to misinterpret research on brain development and try something like this* (Pardo & Eberhart, 2007).

Some legitimate medications are known to help with some symptoms of autism. Certain antipsychotics, particularly *risperidone*, help in behavior management. Medications used in treating obsessive-compulsive disorder (the SSRIs) may also help with some stereotyped behavior in autism (Lewis, 1996). However, no medication can be considered to be an effective treatment (Erickson et al., 2007; Lord & Bailey, 2002).

**Applied Behavior Analysis** Intensive behavior modification using operant conditioning techniques called *Applied Behavior Analysis* (ABA) is the most promising approach to treating autism. ABA therapists focus on treating the specific symptoms of autism, including communication deficits, lack of self-care skills, and self-stimulatory or self-destructive behavior. Even within these different symptom areas, behavior modification emphasizes very specific and small goals. In attempting to teach language, for example, the therapist might spend hours, days, or weeks teaching the pronunciation of a specific syllable. Months of intensive effort may be needed to teach a small number of words and phrases. The lack of imitation among many children with autism is one reason why so much effort goes into achieving such modest goals.

If the first goal of ABA is to identify very specific target behaviors, the second is to gain control over these behaviors

through the use of reinforcement and punishment. Unlike normal children, who are reinforced by social interest and approval, children with autism often do not respond to ordinary praise, or they may find all social interaction unpleasant. For these reasons, the child's successful efforts must be rewarded repeatedly with primary reinforcers such as a favorite food, at least in the beginning phases of treatment.

An example helps to illustrate the level of detail of ABA programs. A common goal in treating echolalia is to teach the child to respond by answering questions rather than repeating them. As an early step in treatment, a target behavior might be to teach the child to respond to the question "What is your name?" with the correct answer "Joshua."

In order to bring this specific response under the control of the therapist, initially it may be necessary to reward the child for simply echoing. Therapist: "What is your name?" Child: "What is your name?" Reward. This first step may have to be repeated hundreds of times over the course of several days.

A logical next step would be to teach the child to echo both the question and the response. Therapist: "What is your name? Joshua." Child: "What is your name? Joshua." Reward. Again, hundreds of repetitions may be necessary.

Gradually, the ABA therapist sets slightly more difficult goals, rewarding only increasingly accurate approximations of the correct response. One such intermediate step might be to echo the question "What is your name?" in a whisper and repeat the response "Joshua" in a normal tone of voice. Over a period of days, even weeks, the child learns to respond "Joshua" to the question "What is your name?"

Similar detailed strategies are used to teach children with autism other language skills. In the hope of speeding the process, some tried teaching sign language to children with autism (Carr, 1982). Unfortunately, this was not a breakthrough. The communication deficits in autism are more basic than receptive or expressive problems with spoken language. Children with autism sometimes use *instrumental* gestures to get what they want, but not *expressive* gestures to show how they feel (Frith, 2003). ABA remains a painfully slow process that differs greatly from the way in which children normally learn to speak. The intensity and detail of ABA remind us that normal children come into the world remarkably well equipped to acquire language.

In addition to teaching communication skills, behavior therapists who work with children with ASD concentrate on reducing the excesses of self-stimulation, self-injurious behavior, and general disruptiveness, as well as teaching new skills to eliminate deficits in self-care and social behavior (Schreibman, 1988). ABA programs have successfully eliminated some behavioral excesses, particularly self-injury, but the treatments are controversial because they typically rely on punishment. A gentle slap or a mild electric shock can reduce or eliminate such potentially dangerous behaviors as head banging, but are such aversive treatments justified? This question confronts therapists, parents, and others concerned with the treatment and protection of children with autism.

Behavior therapists have been fairly successful in teaching self-care skills and less successful in teaching social responsiveness. The struggle with social skills is unfortunate, because treatment outcomes for children with autism are especially positive when social responsiveness improves (Koegel, Koegel, & McNeerney, 2001). As Schreibman (1988) noted, "It is perhaps prophetic that the behavior characteristic which most uniquely defines autism is also the one that has proven the most difficult to understand and treat" (p. 118).

Although ABA focuses on specific target behaviors, ultimately the important question is: To what extent does treatment improve the entire syndrome of autism? Research shows that children with autism can learn specific target behaviors, but do intensive training efforts bring about improvements that are clinically significant?

An optimistic answer to this question was provided by O. Ivar Lovaas (1927–2010), who was a psychologist at UCLA and an acknowledged leader in ABA for autism. In a comprehensive report on the efforts of his research team, Lovaas (1987) compared the outcomes of three groups of children with autism: 19 children who received intensive ABA; 19 children who were referred to the program but who received less intensive treatment due to the unavailability of therapists; and 21 children who were treated elsewhere. Children with extremely low IQ scores were excluded, and treatment began before the children were 4 years of age. The children in the treatment group received the types of interventions described above, including both reinforcement and punishment procedures. In fact, they were treated 40 hours a week for more than two years.

No differences among the three groups of children were found before treatment began. Assessments following treatment were conducted between the ages of 6 and 7 at the time when the children ordinarily would have finished the first grade of school. In the intensive behavior modification group, 9 children (47 percent) completed first grade in a normal school. Eight more children (42 percent) passed first grade in a special class for children who cannot speak. In comparison, only one child (2 percent) in the two control groups completed first grade in a normal classroom, and 18 children (45 percent) completed first-grade classes for aphasic children. Table 15.7 summarizes these outcomes, and also the strong relation between IQ and classroom placement. Note the low mean IQ levels of all the children, despite the investigators' attempts to screen out the most severely impaired children.

These data are reason for considerable optimism. And a follow-up study indicated that many gains continued into late childhood and adolescence (McEachin, Smith, & Lovaas, 1993). Other research shows significant, but notably smaller, gains with very intensive ABA approaches (Smith, Groen, & Wynn, 2000). Recent research with preschoolers indicates that activities designed to encourage joint attention and social coordination improve language learning in ABA treatments (Kasari et al., 2008), at least when children show prior evidence of joint attention (Yoder & Stone, 2006).

We applaud the efforts of Lovaas and others who have used ABA to teach skills to children with autism. Despite the fact that autism apparently is caused by neurological abnormalities, the most effective treatment for the disorder is highly structured and intensive ABA (Rutter, 1996). Still, we must raise cautions: Are the children who passed first grade functioning normally in other respects? Because pretreatment IQ predicted outcome (Lovaas, 1987), does ABA work only with children who are high functioning? But perhaps the most important question about ABA is its cost. The children in the intensive ABA group were treated for 40 hours per week for more than two years. The children in the "limited treatment" control group received almost 10 hours of weekly treatment, yet they showed few improvements. The expenses associated with early but effective treatment clearly are far less than those involved in a lifetime of care (Lovaas, 1987). Still, we wonder: How do we justify devoting so many resources to autism when, in comparison, we neglect intervention with children with intellectual disabilities?

**TABLE 15.7 Educational Placement and IQ of Children with Autism Following ABA**

| Group                           | Classroom | N  | (%)  | Mean IQ |
|---------------------------------|-----------|----|------|---------|
| Intensive Behavior Modification | Normal    | 9  | (47) | 107     |
|                                 | Aphasic   | 8  | (42) | 74      |
|                                 | Retarded  | 2  | (11) | 30      |
| Limited Treatment               | Normal    | 0  | (0)  | —       |
|                                 | Aphasic   | 8  | (42) | 74      |
|                                 | Retarded  | 11 | (58) | 36      |
| No Treatment                    | Normal    | 1  | (5)  | 99      |
|                                 | Aphasic   | 10 | (48) | 67      |
|                                 | Retarded  | 10 | (48) | 44      |

Source: From "Behavioral Treatment and Normal Educational and Intellectual Functioning in Young Autistic Children" by O. I. Lovaas, *Journal of Consulting & Clinical Psychology*, 55 (1987), pp. 3–9. Copyright © 1987, American Psychological Association.

## Getting Help

You may want to learn about getting help for intellectual disabilities or autistic spectrum disorders for several reasons. You may have a family member with a disorder. You may want to know more about preventing intellectual disability in your own children when that time comes. Or you may be thinking of a career in special education or related disciplines.

If you have a family member with one of these disorders, you may find it helpful to get some more information. The National Research Council published an authoritative book called *Educating Children with Autism*. The book not only reviews the best approaches, but it also suggests ways of supporting educators and family members. As a way of getting inside this mysterious disorder, try reading one of Temple Grandin's accounts of her life with autism, *Thinking in Pictures* or *Emergence: Labeled Autistic*. A helpful guide for families is Robert and Martha Perske's *Hope for the Families: New Directions for Parents of Persons with Retardation and Other Disabilities*.

Depending on your age and relationship status, you may not yet

be interested in learning how to prevent intellectual disability. But you will be highly motivated when the time comes to have a baby. We hope that, even if having a child seems like a distant event, you will pay special attention to our discussion of what you can do to limit risk, for personal as well as academic reasons.

If you are interested in a career in special education, we urge you to follow your dream. Working with children with special needs is a challenging and undervalued career, but it also is enormously important and personally rewarding. Even as a nonprofessional you can help people with intellectual disabilities or ASD. In this chapter, we use language that puts the person first by referring to "person with an intellectual disability" rather than "intellectually disabled person." You can put the person first, too, not only in your language, but through your actions. How? Watch the language of others around you, particularly those all too familiar pejorative comments that may seem innocent but are demeaning and

dehumanizing. You can put the person first in your actions by being friendly, helpful, and inclusive when you meet people with intellectual disabilities in your school, work, and community. You can put the person first by doing volunteer work with children or adults with intellectual disabilities or autism. Volunteers are needed in schools and group homes, as well as in work and recreational settings.

You also can put the person first by supporting and advocating fair policies for people with intellectual disabilities and ASD in schooling, employment, housing, and access to recreational activities. You will find many specific advocacy suggestions at the website of the American Association on Intellectual and Developmental Disabilities. Or if you need more motivation to become an advocate, pick up a copy of *Christmas in Purgatory*, by Burton Blatt and Fred Kaplan, a photographic essay on the horrid conditions under which people with intellectual disabilities live in institutions. After winning at the pictures in this book, you will want to do something to help.



## SUMMARY

- **Intellectual disabilities** (formerly known as **mental retardation**) are defined by (1) significantly subaverage intellectual functioning, (2) deficits in adaptive skills, and (3) an onset before age 18.
- People who have significantly subaverage IQs but function adequately in the world are not considered to have an intellectual disability.
- **IQ** tests are reliable and valid (if imperfect) predictors of academic performance.
- DSM-IV-TR divides intellectual disability into mild, moderate, severe, and profound based on IQ scores.
- **Down syndrome** is caused by an extra chromosome on the 21st pair and is the most common of the known biological causes of intellectual disability. **Fragile-X syndrome** is a genetic disorder that often causes intellectual disabilities, especially in boys. Other known biological causes include **phenylketonuria (PKU)**, an inherited metabolic deficiency; infectious diseases transmitted to the fetus during pregnancy or birth, such as rubella, syphilis, and genital herpes; excessive maternal alcohol consumption or drug use during pregnancy; Rh incompatibility; and malnutrition, premature birth, and low birth weight.
- So-called **cultural-familial retardation** typically involves a mild intellectual disability and no known specific etiology. It is assumed to represent normal IQ variation.
- A major policy goal is **normalization** of the lives of people with intellectual disabilities through **mainstreaming** in public schools and promoting care in the community.
- **Autistic spectrum disorder (ASD)** (pervasive developmental disorder in DSM-IV-TR) involves disturbances in relationships, stereotyped activities, and communication that can range from relatively mild to severe.
- **Autism**, the most widely researched ASD, typically involves extreme symptoms, including an intellectual disability.
- **Asperger's disorder**, characterized by the similar difficulties found in autism except without communication problems, was recently included in the DSM and contributed to a much broader definition of ASD.
- Estimates of the prevalence of ASD increased dramatically over the last decade, a trend likely due to increased awareness and broader diagnosis and not new causes of ASD.
- Several known causes of intellectual disabilities may also cause ASD, which appears to be caused by multiple, mostly unidentified biological problems.
- Applied behavior analysis is a promising treatment for autism, but the expense and effort involved are considerable.

## The Big Picture

### CRITICAL THINKING REVIEW

- **How are IQ scores like “grading on the curve”?**  
Contemporary intelligence tests . . . calculate a “deviation IQ.” According to this system, intellectual ability follows the **normal distribution**, the familiar bell-shaped frequency distribution . . . (see p. 391)
- **How can intellectual disabilities be prevented?**  
Good maternal and child health care is one major step toward the primary prevention of intellectual disability . . . (see p. 400)
- **Did the United States really support eugenics?**  
You surely are aware that Adolf Hitler embraced eugenic principles. . . . You may *not* know that the principles of eugenics were embraced widely in the United States prior to World War II . . . (see p. 401)
- **Are children exceptionally intelligent underneath their autism?**  
The existence of savant performance does not indicate that, as many have hoped, children with autism really are normal or even superior in intelligence . . . (see p. 408)
- **Is there an “epidemic of autism”?**  
This broadening of the diagnosis is creating a false “epidemic” of autistic spectrum disorders, an epidemic that reflects diagnostic fads—and parents’ fears—not new threats to children’s mental health . . . (see p. 410)
- **Why are psychological theories of autism wrong?**  
Before discussing evidence on biological contributions to autism, we first briefly consider—and reject—environmental explanations . . . (see p. 411)

## KEY TERMS

|                     |                        |                            |                     |                       |
|---------------------|------------------------|----------------------------|---------------------|-----------------------|
| Asperger's disorder | cultural-familial      | fragile-X syndrome         | median              | phenylketonuria (PKU) |
| autism (autistic    | retardation            | intellectual disability    | mental retardation  | savant performance    |
| disorder)           | Down syndrome          | intelligence quotient (IQ) | mode                | standard deviation    |
| autistic spectrum   | eugenics               | mainstreaming              | normal distribution | standard scores       |
| disorder (ASD)      | fetal alcohol syndrome | mean                       | normalization       | variance              |

# Psychological Disorders of Childhood

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Internalizing and Other Disorders 437

- ▶ Thirteen-year-old Tracy throws away her “good girl” image for sex, drugs, and petty crime in reaction to her parents’ divorce in *Thirteen*, a disturbing movie about adolescence and adolescents.

**H**ave you ever fallen to the floor, kicking, screaming, and crying because you did not get your way? Almost certainly. Temper tantrums like this are normal for frustrated 2-year-old children—but not for 20-year-old college students.



Similarly, it is developmentally normal for 4-year-old children to be terrified of monsters, but not for 14-year-old adolescents. As these examples illustrate, the first question we must ask in evaluating a child’s behavior is: How old is the child?

## The Big Picture

- How are children's psychological disorders different from adults'?
- Is ADHD any different than just being a "bad kid"?
- Are children's psychological problems really a sign of family problems?
- Can medication really help children behave—and do better in school?
- Can young children really be depressed?
- Is it true that antidepressants cause teen suicide?

## OVERVIEW

We must view abnormal behavior within the context of normal development at every age. However, this **developmental psychopathology** approach is absolutely essential to psychological disorders of childhood, because children change rapidly during the first 20 or so years of life. Psychologists become concerned only when a child's behavior deviates substantially from **developmental norms**, behavior that is typical for children of a given age.

Psychological problems that commonly begin during childhood are listed in the DSM-IV-TR category Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence. Other

than mental retardation and autistic spectrum disorders (see Chapter 15), the most important disorders in this category are the various externalizing disorders. **Externalizing disorders** create difficulties for the child's external world. They are characterized by children's failure to control their behavior according to the expectations of parents, peers, teachers, and/or legal authorities. Externalizing disorders are the most commonly diagnosed childhood disorders and account for about half of all children in treatment (Kazdin, 1995). For these reasons, we focus much of this chapter on them.

**Internalizing disorders** are psychological problems that primarily affect the child's internal world—for example, excessive anxiety or sadness. DSM-IV-TR does not list internalizing disorders separately for children. Rather, the manual notes that children may qualify for many "adult" diagnoses, such as anxiety or mood disorders. However, we think it is essential to take a developmental approach and highlight children's unique experience of anxiety and depression. Children do not interpret events or express emotions in the same way as adults; the family, peer, and school contexts typically affect children more dramatically than they affect adults. In our view, children's mood and anxiety disorders are not simply miniature versions of adult diagnoses.

In this chapter, we also introduce many of the 26 *additional* childhood diagnoses included in DSM-IV-TR. Our coverage of these is necessarily limited, not only by sheer number, but also by questions we have about the appropriateness of some diagnostic categories (Taylor & Rutter, 2002).

Few children or adolescents identify themselves as needing a therapist. Instead, some adult, often a parent or teacher, decides that the child has a problem. Sometimes, a child is unable to recognize or admit to his or her difficulties. Other times, however, the problem is as much the adult's as the child's (Yeh & Weisz, 2001). For example, a stressed parent may have trouble coping with normal misbehavior. This can make the assessment of externalizing disorders challenging, as illustrated in the following case study.



Temper tantrums are a normal, if trying, part of child development during the "terrible twos" (and beyond). Awareness of such developmental norms is essential to evaluating abnormal behavior in children.

## CASE STUDY

### Bad Boy, Troubled Boy, or All Boy?

Jeremy W. was 8 years old when his mother brought him to a clinical psychologist on the recommendations of his second-grade

teacher and a school counselor. Mrs. W. was reluctant because she was not sure if she agreed with the school personnel.

In fact, Mrs. W. wasn't sure if she agreed with her husband about what was going on with Jeremy.



According to Mrs. W., Jeremy was constantly in trouble at school. His teacher reprimanded him daily for disrupting the class, not paying attention, and failing to finish his work. The teacher felt that her discipline had little effect. Sometimes Jeremy would listen for a while, but soon he was pestering another child, talking out of turn, or simply staring off into space. Lately, Jeremy had begun to talk back, and his teacher sent him to the principal's office several times.

The psychologist contacted the school to confirm this information. The teacher said that Mrs. W.'s reports were accurate and also noted that Jeremy had no close friends. Other kids thought of him as a "pain." The teacher also shared test information obtained from an earlier referral to the school psychologist. Jeremy had an IQ of 108. However, he was almost a year behind his current grade in reading and arithmetic. The school psychologist suspected a learning disability but thought that Jeremy's behavior problems also were interfering with his learning. She wanted him to remain in his regular classroom for now. After he got some treatment, she would re-evaluate him for possible placement in a

special class for students with learning problems.

Mrs. W. was frightened by the suggestion that Jeremy might be "emotionally disturbed" or "learning disabled." She said Jeremy could be difficult to manage at home, but she had never considered the possibility that he needed psychological help. Jeremy had always been a handful, but in her view, he had never been a bad child. Instead, Mrs. W. thought that Jeremy expressed himself better through actions than words. In this respect, he was the opposite of his 11-year-old sister, who was an A and B student. Mrs. W. was not convinced that Jeremy's teacher was the best person to work with him, but she did agree that he was having problems in school. In her mind, Jeremy was developing low self-esteem, and many of his actions were attempts to get attention.

According to Mrs. W., Jeremy's father spent very little time with him. Mr. W. worked long hours on his construction job, and he often was off with his friends on weekends. Mrs. W. said that her husband was of little help even when he

was home. He would tell his wife that it was her job to take care of the kids—he needed his rest. With tears in her eyes, Mrs. W. said that she needed a rest, too.

In any case, Mrs. W. said her husband was not concerned about Jeremy's behavior or his schoolwork. Instead, he thought that Jeremy was just "all boy" and not much of a student—just as Mr. W. had been as a child. He refused to take time off from work to see the psychologist.

In confidence, Mrs. W. said that she, too, saw a lot of his father in Jeremy—too much of him, in fact. She got no support from her husband in disciplining Jeremy or in encouraging him in his schoolwork.

***She blamed her husband for Jeremy's problems, and she was secretly furious with him.***

She blamed her husband for Jeremy's problems, and she was secretly furious with him.

She knew that Jeremy had to do well in school. She felt like a failure as a mother. She was willing to try anything to help Jeremy, but she doubted that there was anything she could do without her husband's support.

Is Jeremy a disobedient child, as his teacher thinks? A learning-disordered child, as suggested by the school psychologist? Suffering from low self-esteem, as his mother fears? Or is he simply "all boy," as his father claims? What about Jeremy? How does he feel about himself, his family, his schoolwork, and his friendships at school?

Mental health professionals who treat children are constantly vexed by such difficult questions. Treatment often begins with an attempt to achieve consensus about the nature of a child's problem (Hawley & Weisz, 2003). Psychologists want an accurate diagnosis, but another goal is to get adults working together. In Jeremy's case, Mr. and Mrs. W. may need to present a united front to Jeremy. In order to do so, they may need to resolve issues in their marriage. Because of such conflicts, many psychologists prefer to see children in family therapy rather than treat them alone. Many psychologists also work to establish better communication and cooperation between parents and teachers.

Of course, Jeremy is at least part of the problem. If we can trust his teacher's report—and experienced child clinical psychologists do trust teachers—Jeremy clearly has some type of externalizing problem. Perhaps Jeremy's behavior is a reaction to his parents' conflicts; he might act better if they work out their differences. Or perhaps Jeremy is a troubled child who is causing some of his parents' conflicts, not just reacting to them. Mr. and Mrs. W. both felt that Jeremy and his father were a lot alike. Could Jeremy have learned or inherited some of his father's characteristics?

## Externalizing Disorders

Children with externalizing disorders often break rules, are angry and aggressive, impulsive, overactive, and inattentive. These troublesome actions tend to occur together; however, different clusters of problems have different implications for the cause, treatment, and course of children's externalizing disorders.

### SYMPTOMS OF EXTERNALIZING

Many externalizing symptoms involve violations of age-appropriate social rules, including disobeying parents or teachers, annoying peers, and perhaps violating the law. All children break some rules, of course, and we often admire an innocent and clever rule breaker. For example, Calvin of the Calvin and Hobbes cartoons is devilish, but he is not really "bad," and certainly not "sick"!

**Rule Violations** But the rule violations in externalizing disorders are not trivial and are far from "cute." Many schoolteachers lament that they spend far too much time disciplining children, a circumstance that also is unfair to the well-behaved youngsters in the classroom. Even more serious, the Federal Bureau of Investigation reported that 30 percent of arrests for index offenses—major crimes including murder, forcible rape,



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and robbery—were of young people under the age of 21 in 2007 (U.S. Department of Justice, 2009). Other evidence indicates that the worst 5 percent of juvenile offenders account for about half of all juvenile arrests (Farrington, Ohlin, & Wilson, 1986). With all our fears about youth violence, you should know, however, that the rate of violent crime among juveniles is falling (Snyder, 2002; see Figure 16.1).

### When is misbehavior a psychological problem?

Externalizing behavior is a far greater concern when it is frequent, intense, lasting, and pervasive. That is, externalizing behavior is more problematic when it is part of a *syndrome*, or cluster of problems, than when it is a *symptom* that occurs in isolation. The existence of an externalizing syndrome has been demonstrated consistently by statistical analysis of symptom checklists completed about children by parents or teachers. Moreover, agreement among adult raters typically is fairly high (Duhig et al., 2000).

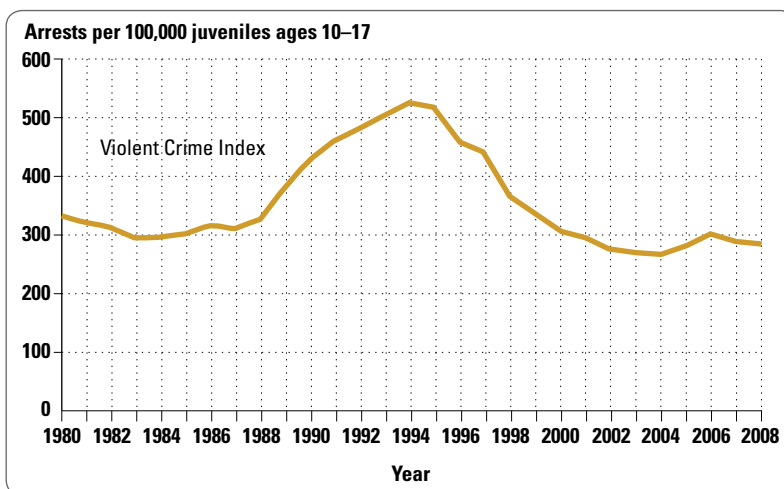
**Children's Age and Rule Violations** Children of different ages are likely to violate very different rules (Lahey et al., 2000). A preschooler with an externalizing problem may be disobedient to his parents and aggressive with other children. During the school years, he is more likely to be disruptive in the classroom, uncooperative on the playground, or defiant at

home. By adolescence, the problem teenager may be failing in school, ignoring all discipline at home, hanging out with delinquent peers, and violating the law.

Children's age also is important to consider in relation to the timing of rule violations. All children break rules, but children with externalizing problems violate rules at a younger age than is developmentally normal (Loeber, 1988). For example, most young people experiment with smoking, alcohol, or sexuality, but children with externalizing disorders do so at a notably younger age.

**Adolescent-Limited or Life-Course-Persistent?** Teenagers often violate the rules laid down by parents, teachers, and society as a means of asserting their independence and perhaps of conforming to their peer group. Because of this, psychologists distinguish between externalizing behavior that is *adolescent-limited*—that ends along with the teen years—and *life-course-persistent* antisocial behavior that continues into adult life (Moffitt, 1993). In fact, externalizing problems that begin *before* adolescence are more likely to persist into adult life than are problems that begin *during* adolescence. The antisocial behavior of children whose problems begin before the age of 12 is more likely to continue when they have fewer social bonds, including larger, less involved families and troubled peer relationships (van Domburgh et al., 2009).

Can adolescent-limited and life-course-persistent antisocial behavior be distinguished in other ways? Many investigators are searching for symptoms that predict adult *antisocial personality disorder (ASPD)* (Lynam et al., 2007). One factor that may be an early indicator of this lifelong pattern is *callousness*, indifference to the suffering of others. Callousness is evident in the finding that young people with antisocial tendencies do not readily recognize sadness and fear in other people's facial expressions (Blair et al., 2001). Recent research shows that measures of callousness predict future ASPD when externalizing disorders are absent, but callousness may not improve prediction when externalizing disorders are present already (Burke, Waldman, & Lahey, 2010; McMahon et al., 2010). Given mixed results like this, experts are debating whether externalizing problems should be subtyped based on the presence or absence of callousness.



**FIGURE 16.1** Arrests of Juveniles for Violent Crimes in the United States, 1980–2008

Despite public fears, youth violence in the United States peaked in the 1990s and has remained comparatively low.

Source: C. Puzzanchera, December, 2009, "Juvenile arrests 2008," *Juvenile Justice Bulletin*, p. 5.



In contrast to boys' physical aggression, girls engage in more relational aggression. As illustrated in the movie *Mean Girls*, relational aggression includes put downs, gossip, and social exclusion.

**Negativity, Anger, and Aggression** Children with externalizing problems often are negative, angry, and aggressive. Younger children may be stubborn and uncooperative, while adolescents may be hostile and physically injure others. In addition to the actions themselves, motivation is important. We chuckle at the innocent adventures of a Calvin, but we judge children harshly if their *intent* is selfish and they show little *remorse*. You might wonder about Jeremy W.'s private motivations and judge him differently based on whether he is an angry child who cares little about being "bad" or an impulsive child who wants to but just cannot consistently be "good."

Motivation also is a key to *relational aggression*, which involves actions designed to hurt others in more subtle ways, for example, put downs, gossip, and social exclusion. Relational aggression is more common among girls, and has been hypothesized to be a marker of girls' conduct disorder (Crick, Ostrov, & Werner, 2006). Recent research indicates, however, that measures of relational aggression add little to the diagnosis of conduct disorder in girls (Keenan et al., 2010).

**Impulsivity** Impulsive children act before they think. They fail to wait for their turn, blurt out answers in class, and disrupt others. Impulsivity in infancy predicts subsequent impulsivity, inattention, and overactivity (Olson, Schilling, & Bates, 1999), but many impulsive children are *trying* to behave. They struggle with *executive functioning*, the internal direction of behavior. Impulsive children seem unable to control their behavior according to the demands of many situations.

**Hyperactivity** **Hyperactivity** involves squirming, fidgeting, and restless behavior. Hyperactive children are in constant

motion. They often have trouble sitting still, even during leisure activities like watching television. Hyperactivity is found across situations, even during sleep, but it is more obvious in structured settings than in unstructured ones (Barkley, 2006). Hyperactive behavior is particularly noticeable in the classroom. Because of this, reports from teachers are critical in identifying hyperactive behavior.

**Attention Deficits** **Attention deficits** are characterized by distractibility, frequent shifts from one uncompleted activity to another, careless mistakes, poor organization or effort, and general "spaciness" (for example, not listening well). As with impulsivity, inattention usually is not intentional or oppositional; rather, it reflects an inability to maintain a focus despite an apparent desire to do so. A particular attention problem is "staying on task," or what is called *sustained attention* (Barkley, 2006). The *continuous performance* test is a commonly used laboratory measure of sustained attention. The task requires children to monitor and respond to a long list of numbers presented on a computer screen (Epstein et al., 2003).

## DIAGNOSIS OF EXTERNALIZING

The DSM-IV-TR divides externalizing disorders into three major types. Attention-deficit/hyperactivity disorder (ADHD) is the problem that you may have heard called "hyperactivity" or perhaps "ADD." Oppositional defiant disorder (ODD) includes a wide range of problem behavior generally found among school-aged children. Conduct disorder (CD) is a lot like what you may think of as juvenile delinquency, because CD involves rule violations that also are violations of the law.

**Brief Historical Perspective** About 100 years ago British physician George Still (1902) speculated that the overactivity of some children he treated might be due to biological “defects.” Since then, professionals have debated whether the misbehavior of school-aged children should be divided into two types. Children with what we call ADHD are assumed to have a biological problem best treated with medication. Children with what we call ODD are seen as having a psychological problem requiring psychological treatment (Schachar & Tannock, 2002).

Interest in what DSM-IV-TR calls conduct disorder also is about 100 years old but has a very different history. At the end of the nineteenth century, juvenile crime was distinguished from adult criminal behavior for the first time in American law. The law adopted a compassionate view, seeing juvenile delinquency as a product of a troubled upbringing. As a result, the law assumed a more parental role, trying to help wayward youth, not just punish them. Thus, the criminal behavior of juveniles came to be seen as a psychological problem, not just a legal one.

**Attention-Deficit/Hyperactivity Disorder** **Attention-deficit/hyperactivity disorder (ADHD)** is characterized by hyperactivity, attention deficit, and impulsivity. According to DSM-IV-TR, at least some symptoms must begin before the age of 7, they must persist for at least six months, and they must be consistent across situations. The manual counts symptoms, viewing the underlying problem as dimensional even though the diagnosis is categorical (see Table 16.1).

Hyperactivity and attention deficit each have been viewed as the core symptom of ADHD. In fact, DSM-II called the disorder *hyperkinesis*, a synonym for “hyperactivity,” whereas DSM-III labeled it *attention-deficit disorder*, or *ADD*. Some experts now view impulsivity as the core characteristic (Barkley, 2006; Nigg, 2001). We are not concerned whether “attention deficit” or “hyperactivity” or “impulsivity” gets top billing for a problem with ever-changing names. Rather, we are concerned about two facts: First, contrary to what some professionals have argued, hyperactivity is not merely a consequence of inattention, or vice versa (Barkley, 2006). Each

**TABLE 16.1 DSM-IV-TR Diagnostic Criteria for Attention-Deficit/Hyperactivity Disorder**

- A. Either (I) or (II):**
- (I) Inattention:** Six (or more) of the following symptoms of inattention have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:
    1. Often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities.
    2. Often has difficulty sustaining attention in tasks or play activities.
    3. Often does not seem to listen when spoken to directly.
    4. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace.
    5. Often has difficulty organizing tasks and activities.
    6. Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort.
    7. Often loses things necessary for tasks or activities.
    8. Is often easily distracted by extraneous stimuli.
    9. Is often forgetful of daily activities.
  - (II) Hyperactivity and Impulsivity:** Six (or more) of the following symptoms of hyperactivity-impulsivity have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:
 

**Hyperactivity**

    1. Often fidgets with hands or feet or squirms in seat.
    2. Often leaves seat in classroom or in other situations in which remaining seated is expected.
    3. Often runs about or climbs excessively in situations in which it is inappropriate.
    4. Often has difficulty playing or engaging in leisure activities quietly.
    5. Is often “on the go” or often acts as if “driven by a motor.”
    6. Often talks excessively.

**Impulsivity**

    1. Often blurts out answers before questions have been completed.
    2. Often has difficulty awaiting turn.
    3. Often interrupts or intrudes on others.
- B. Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before age 7 years.**
- C. Some impairment from the symptoms is present in two or more settings.**
- D. There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.**

**Code Based on Type**

**Combined Type:** Criteria for I and II are met for past 6 months.

**Predominantly Inattentive Type:** Criteria for I are met but Criteria for II are not met for past 6 months.

**Predominantly Hyperactive-Impulsive Type:** Criteria for II are met but Criteria for I are not met for past 6 months.

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## ADHD

**JIMMY**

*"I think without it (medicine)  
I would be dreaming the whole  
entire day."*

Watch the video "Jimmy: ADHD"  
on MyPsychLab. As you watch  
the video, remember that Jimmy  
did not take his psychostimulant

before the interview. Note his rapid speech as well as his  
"fidgetiness."

is an independent symptom. Second, some children have problems primarily with only one of the two symptoms, as is evident in the subtypes of ADHD listed in DSM-IV-TR (see Table 16.1).

**Oppositional Defiant Disorder** **Oppositional defiant disorder (ODD)** is defined by a pattern of negative, hostile, and defiant behavior. The symptoms must last for at least six months, and, as with other diagnoses, they must cause clinically significant impairment in life functioning. As you can see from Table 16.2, the rule violations in ODD typically involve minor transgressions, such as refusing to obey adult requests, arguing, and acting angry. Such misbehavior is a cause for concern among school-aged children, and it often foreshadows the development of much more serious antisocial behavior during adolescence and adult life. However, these types of rule violations fall within developmental norms for adolescents, who are typically somewhat rebellious. Thus, a problem with the DSM-IV-TR diagnostic criteria for ODD—and for virtually every childhood disorder—is that the diagnostic criteria need to reflect developmental norms more fully.

**Comorbidity** Professionals long debated whether ADHD and ODD are the same or separate disorders. But, debate has subsided considerably in recent years with a new consensus: The two disorders are separate but frequently comorbid (Waschbusch, 2002). Approximately half of all children with one disorder also have the other problem (Schachar & Tannock, 2002).

Not only are ADHD and ODD highly comorbid, but about 25 percent of children with each problem also have a learning disability (LD). ADHD also can be comorbid with internalizing disorders, particularly among girls (Rucklidge & Tannock, 2001; Schachar & Tannock, 2002).

**Subtypes of ADHD** ADHD is subtyped into predominantly inattentive, predominantly hyperactive-impulsive, or combined types. Predominantly inattentive children have difficulty with inattention and information processing, but show little or no hyperactivity (Milich, Balentine, & Lynam, 2001). They often are described as "spacy" rather than "distractible," and they struggle with learning far more than behavior control. Some people use the DSM-III term *ADD* for the predominantly inattentive type of ADHD. The term is technically inaccurate but correctly places the focus on inattention.

Most experts now view the predominantly hyperactive-impulsive subtype and the combined subtype as the same problem. Confusion was created, because the different symptoms often emerge at different ages. Hyperactivity and impulsivity are most evident during the preschool years, but attention deficits begin (or are first noticed) during the early school years (Hart et al., 1995).

**Conduct Disorder** **Conduct disorder (CD)** is a persistent and repetitive pattern of serious rule violations, most of which are illegal as well as antisocial—for example, assault or robbery (see Table 16.3). DSM-IV-TR distinguishes between conduct disorders that begin before or after the age of 10. As noted, earlier onset conduct disorders predict more life course persistent antisocial behavior.

**TABLE 16.2 DSM-IV-TR Diagnostic Criteria for Oppositional Defiant Disorder**

**A. A pattern of negativistic, hostile, and defiant behavior lasting at least 6 months, during which four (or more) of the following are present:**

1. Often loses temper.
2. Often argues with adults.
3. Often actively defies or refuses to comply with adults' requests or rules.
4. Often deliberately annoys people.
5. Often blames others for his or her mistakes or misbehavior.
6. Is often touchy or easily annoyed by others.
7. Is often angry and resentful.
8. Is often spiteful and vindictive.

**B. The disturbance in behavior causes clinically significant impairment in social, academic, or occupational functioning.**

Note: Consider a criterion only if the behavior occurs more frequently than is typically observed in individuals of comparable age and developmental level.

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**TABLE 16.3 DSM-IV-TR Diagnostic Criteria for Conduct Disorder**

**A. A repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated, as manifested by the presence of three (or more) of the following criteria in the past 12 months, with at least one criterion present in the past 6 months:**

**Aggression to People and Animals**

1. Often bullies, threatens, or intimidates others.
2. Often initiates physical fights.
3. Has used a weapon that can cause serious physical harm to others.
4. Has been physically cruel to people.
5. Has been physically cruel to animals.
6. Has stolen while confronting a victim.
7. Has forced someone into sexual activity.

**Destruction of Property**

8. Has deliberately engaged in fire setting with the intention of causing serious damage.
9. Has deliberately destroyed others' property.

**Deceitfulness or Theft**

10. Has broken into someone else's house, building, or car.
11. Often lies to obtain goods or favors to avoid obligations.
12. Has stolen items of nontrivial value without confronting a victim.

**Serious Violations of Rules**

13. Often stays out at night despite parental prohibitions, beginning before age 13 years.
14. Has run away from home overnight at least twice while living in parental or parental surrogate home.
15. Is often truant from school, beginning before age 13 years.

**B. The disturbance in behavior causes clinically significant impairment in social, academic, or occupational functioning.**

**Code Type Based on Age at Onset**

**Conduct Disorder Childhood-Onset Type:** Onset of at least one criterion characteristic of Conduct Disorder prior to age 10 years.

**Conduct Disorder Adolescent-Onset Type:** Absence of any criteria characteristic of Conduct Disorder prior to age 10 years.

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Conduct disorder is roughly equivalent to juvenile delinquency. Most of the symptoms involve *index offenses*—crimes against people or property that are illegal at any age, although a few are comparable to *status offenses*—acts that are illegal only because of the youth's status as a minor, for example, truancy from school. However, *juvenile delinquency* is a *legal* classification. Technically, youths are not delinquent until a judge finds them guilty of either a criminal or status offense. Adolescents who repeatedly break the law have conduct disorders regardless of whether they are arrested and convicted.

## FREQUENCY OF EXTERNALIZING

A recent study of a nationally representative sample found that fully 19.1% of adolescents in the United States had an externalizing disorder at some point in their life (Merikangas

et al., 2010; see Research Methods). Similarly, the Centers for Disease Control and Prevention found that 9.5 percent of children in the United States had a lifetime diagnosis of ADHD (CDC, 2010). The CDC found recent increases in the diagnosis of ADHD, and both prevalence figures surely reflect an increasing willingness on the part of U.S. professionals to diagnose externalizing disorders. Diagnostic practices are more conservative in Europe, where 1 to 2 percent of children receive an ADHD diagnosis despite similar frequencies of externalizing behavior (Schachar & Tannock, 2002).

After the first few years of life, two to 10 times as many boys as girls have externalizing problems (Keenan & Shaw, 1997). Except for the normative increase during adolescence, the prevalence generally declines with age, although it declines at much earlier ages for girls than for boys (Keenan & Shaw, 1997). In fact, the prevalence of life-course-persistent

# RESEARCH METHODS

## SAMPLES: HOW TO SELECT THE PEOPLE WE STUDY

**P**psychologists typically do not use a **representative sample**—a sample that accurately represents some larger group of people. Instead, we often use *convenience samples*—groups of people who are easily recruited and studied. For many purposes, convenience samples work just fine. For example, we do not need a representative sample to study the effectiveness of alternative treatments for ADHD.

For some purposes, however, obtaining representative samples is essential. For example, many children with externalizing problems in clinical settings come from single-parent families, and some studies of clinical samples have concluded that single parenting causes behavior problems. But we need to be cautious in *generalizing* from convenience or clinical samples. These groups are unrepresentative of the population of children and families. Consider this: Pediatricians surely would greatly



overestimate the prevalence of ear infections if they generalized from *their* clinical samples! In fact, when we study representative samples of children from single-parent families, we find that most children do *not* have psychological problems. Most children, and most single parent families, are *resilient*; they cope successfully with the stressors of single parenting (Emery, 1999a).

How do scientists select representative samples so they can generalize accurately to a larger population? First, the researcher must identify the *population* of interest, the entire group of people to whom the researcher wants to generalize—for example, children under the age of 18 living in the United States. Second, the researcher must *randomly select* participants from the population and obtain a large enough sample to ensure that the results are statistically reliable. This allows researchers to make generalizations that sometimes seem remarkable, such as accurately predicting the outcome of a political election from polls of a relatively small number of voters.

Errors can occur in identifying the population of interest or in random selection. One of the most famous errors occurred in 1948, when newspaper

headlines heralded Thomas E. Dewey's election over Harry S Truman in the U.S. presidential election. Actually, Truman won handily. Where did the pollsters go wrong? They made a mistake in identifying the population of voters. The researchers sampled randomly from the U.S. population, but more Democrats went to the polls to vote for Truman than Republicans did for Dewey. (This is one reason why election pollsters now do exit surveys.) The polls also were conducted a week or more before the election, and late voter sentiment swung from Dewey to Truman.

### *Why is it dangerous to generalize from clinical or convenience samples?*

Political scientists have become much more sophisticated in their sampling strategies since 1948. A fortunate trend in psychology is a new collaboration with sociologists in studying normal and abnormal behavior. Many large-scale surveys now follow representative samples of children or families over time and include measures of psychological well-being. Psychological scientists increasingly are using these samples to make sure that the same pattern of findings obtained in intensive studies of small convenience samples are found in representative samples of the population.

antisocial behavior is far lower among girls than boys, even more so than for other externalizing problems (Earls & Mezzacappa, 2002).

**Family Risk Factors** Externalizing disorders are associated with various indicators of family adversity, a fact highlighted by British psychiatrist Michael Rutter, an international authority on the epidemiology of child psychopathology. Rutter's (1989) Family Adversity Index includes six family predictors of behavior problems among children: (1) low income, (2) overcrowding in the home, (3) maternal depression, (4) paternal antisocial behavior, (5) conflict between the parents, and (6) removal of the child from the home. Rutter

found that the risk for externalizing problems did not increase substantially when only one family risk factor was present. However, the risk increased fourfold when two family adversity factors were present. The risk for children's antisocial behavior increased even further with three or more sources of family adversity.

Other epidemiological findings underscore the relationship between children's externalizing problems and social disadvantage (Earls & Mezzacappa, 2002). For example, externalizing disorders are found in more than 20 percent of children living in inner-city neighborhoods and are associated with divorce and single parenting (National Academy of Sciences, 1989).



Preschoolers need to learn to share, cooperate, and generally “be nice.” Human nature includes selfish and aggressive motivations (as well as altruistic ones). Inborn variation and the availability and success of socialization both contribute to the development of externalizing disorders.

## CAUSES OF EXTERNALIZING

All children need to learn to control their behavior. If you doubt this, visit any preschool. Children frequently need to be reminded to share, to cooperate, and not to hit, push, scratch, or bite. The natural behavior we observe in children also can be wonderful—preschoolers freely make friends, exchange favors, and show empathy when others are hurt. Still, all children need some discipline (together with a lot of love). Of course, different children need—or receive—more or less guidance. Thus, biological, psychological, and social factors all can contribute to externalizing problems.

**Biological Factors** Biological factors involved in externalizing disorders include a difficult temperament, neuropsychological

abnormalities, and genetics. Biological risk factors can be a “double whammy,” because they affect behavior problems directly and also strain relationships with parents, teachers, and peers.

**Temperament** Children differ in their **temperament**, inborn behavioral characteristics including activity level, emotionality, and sociability (Buss, 1991). Temperament can be classified in various ways, but Thomas and Chess’s (1977) grouping into easy, difficult, and slow-to-warm-up is a useful summary. *Easy* children are friendly and obey most rules; *difficult* children challenge parental authority; *slow-to-warm-up* children are shy and withdrawn. Longitudinal research on infants and toddlers shows that a difficult temperament is a risk factor for later externalizing disorders (Shaw et al., 1997).



**Neuropsychological Abnormalities** Research suggests other biological contributions to externalizing disorders, particularly to ADHD. Brain damage can produce overactivity and inattention, but *hard signs* of brain damage, such as an abnormal CT scan, are found in less than 5 percent of cases of ADHD (Rutter, 1983). Much more common are neurological *soft signs*, such as delays in fine motor coordination (as may be evident in poor penmanship). However, many children with ADHD do not show soft signs, while many normal children do (Barkley, 2006). Thus, their implications are ambiguous.

Minor anomalies in physical appearance, delays in reaching developmental milestones, maternal smoking and alcohol consumption, and pregnancy and birth complications also are more common among children with ADHD. Still, researchers have yet to discover a specific marker of biological vulnerability. One candidate is impairment in the prefrontal cortical-striatal network. This area of the brain controls executive functions including attention, inhibition, and emotion regulation (Barkley, 2006), although this too may be a problem only for a subset of cases (Nigg et al., 2004).

**Genetics and ADHD** Several studies show that genetic factors strongly contribute to ADHD. For example, a study of almost 4,000 Australian twins found concordance rates among MZ twins of roughly 80 percent, whereas DZ twins had concordance rates of approximately 40 percent (Levy et al., 1997). These rates are close to what one would expect for a *purely* genetic disorder (where the concordances would be 100 percent for MZ and 50 percent for DZ twins). In fact, genetic factors explain 90 percent of the variance in ADHD symptoms, a much higher proportion than for most behavior disorders (Burt, 2010; Nikolas & Burt, 2010). Such evidence has spurred a search for specific genes that may cause ADHD. The dopamine receptor gene (DRD4) has been thought to be involved, but studies often fail to replicate earlier findings, and many other candidate genes have been (inconsistently) linked to ADHD (Banaschewski et al., 2010; Gizer, Ficks, & Waldman, 2009). Possible explanations for the disappointing results of efforts to identify specific genes include polygenic contributions to ADHD, the existence of as-of-yet unidentified subtypes of ADHD (with different causes), and other complexities such as gene–environment interactions.

Single genes (yet to be identified) cause some cases of ADHD. However, most cases appear to be polygenic. As we hope you know by now, this means that that ADHD is *not* an “either you have it or you don’t” disorder, that is, a problem qualitatively different from normal (see Chapter 2). In fact, the best evidence indicates that variation in attention and activity level is quantitative not qualitative (Barkley, 2006). You cannot be “a little bit pregnant,” but you *can* be “a little bit ADHD.”

Why is this important? Because people tend to think of “genetic” as meaning you have a “gene for” a given condition. But like most mental disorders, most cases of ADHD appear to involve many genes. This leaves us with the very important question of deciding where to draw the line dividing “normal” activity or attention struggles from “abnormal” ADHD. The dividing line question is particularly important to consider (as we do shortly) in relation to the “either/or” decision of whether to medicate a child.

**Gene–Environment Interactions and ODD** Genes contribute less to ODD than to ADHD (Burt et al., 2001). However, genetic influences are stronger for early- than late-onset antisocial behavior (Taylor, Iacono, & McGue, 2000). Genes

play a role in the continuity between early-onset ODD and adult antisocial behavior, but adolescent limited antisocial behavior largely reflects the environment of teen rebellion (Gottesman & Goldsmith, 1994).

If genes contribute to antisocial behavior, an essential question is: What is the inherited mechanism? Hyperactivity or inattention may be directly inherited, but rule violations surely are not (Earls & Mezzacappa, 2002). No one suggests that there is a “crime gene,” let alone an “argue with your teacher gene”!

Part of what is inherited may be a tendency to react more negatively to adverse environments. In a much cited study, the effect of childhood maltreatment on adolescent conduct problems differed depending on the gene producing monoamine oxidase activity (MAOA). (The MAOA gene encodes an enzyme that metabolizes neurotransmitters and renders them inactive.) Child maltreatment predicted significantly more adolescent conduct problems if the boys were genetically predisposed to low rather than high MAOA activity (Caspi et al., 2002). In a similar vein, a recent study linked low SES to increased callousness only among youth with a certain allele for the serotonin transporter (5-HTTLPR) gene (Sadeh et al., 2010). You should know that independent replication is essential, because chance results are common in the fervent search to discover specific genes that influence complex social behaviors (Risch et al., 2009). Still, interactions between genes and the environment undoubtedly contribute to many psychological problems, including antisocial behavior.

**Social Factors** *Socialization* is the process of shaping children’s behavior and attitudes to conform to the expectations of parents, teachers, and society as a whole. Many psychologists believe that parental explanation, example, and appropriate discipline are most important in socializing children, but other influences cannot be ignored. Peer groups exert strong if sometimes subtle conformity pressures that increase as children grow older. School and television also are powerful socialization agents.

**Parenting Styles** Parental love is sometimes mistakenly viewed as the opposite of disciplining children, but warm parent–child relationships make discipline both less necessary and more effective (Shaw & Bell, 1993). In fact, developmental psychologists classify parenting into four styles based on warmth and discipline (see Figure 16.2).

**Authoritative parents** are both loving and firm, and they rear well-adjusted children. In contrast, **authoritarian** parents lack warmth, and their discipline is often harsh and autocratic. Children of authoritarian parents generally are compliant, but they also may be anxious. **Indulgent** parents are the opposite of authoritarian parents: affectionate but lax in discipline. Their children tend to be impulsive and noncompliant, but not extremely antisocial. Finally, **neglectful** parents are unconcerned either with their children’s emotional needs or with discipline. Children with serious conduct problems often have neglectful parents (Hoeve et al., 2008).

**Coercion** More specific problems in parenting also contribute to children’s externalizing. One example is psychologist Gerald Patterson’s (1982) concept of **coercion**, which occurs

*Can you be a “little bit ADHD”?*

*Can parents be both loving and disciplinarians?*

when parents *positively* reinforce a child’s misbehavior by giving in to the child’s demands. The child, in turn, *negatively* reinforces the parents by ending his or her obnoxious behavior as soon as the parents capitulate. Thus, coercion describes an interaction in which parents and children reciprocally reinforce child misbehavior and parent capitulation, as is illustrated in the following brief case study.

**BRIEF CASE STUDY**

**I Want Candy!**

Ms. B. finally admitted that she had lost all control of her 4-year-old son Billy. Ms. B. was a single parent who was exhausted by her routine of working from 8 to 5:30 every day and managing Billy and the household in the evenings and on weekends. She had no parenting or financial support from Billy’s father or anyone else, and Ms. B. was worn down. When it came time to discipline Billy, she usually gave in—either because this was the easiest thing to do or because she felt too guilty to say no.

Ms. B. described many difficult interactions with Billy. One example stood out. Ms. B. often stopped at the grocery store with Billy after work, and he inevitably gave her trouble. Dealing with the candy aisle was a particular problem. Billy would ask for some candy when they first approached the aisle. Ms. B. told him no, but in an increasingly loud voice Billy protested, “I WANT CANDY!” Ms. B. would try to be firm, but soon she was embarrassed by the disapproving looks on the faces of other parents. Feeling resentful and resigned, she would grab a bag of M&Ms and give it to Billy. This gave her a few minutes of peace and quiet while she completed her shopping.

Clearly, Ms. B. rewarded Billy for his misbehavior. Billy also (negatively) reinforced his mother by quieting down when she gave in to his demands. Because both parties were reinforced, the coercive interaction should (and did) continue over time (Patterson, 1982).

The coercion concept has direct, practical implications. Parents need to break the pattern by ignoring the misbehavior (extinction), punishing it, or rewarding more positive actions (Herbert, 2002). In Billy’s case, the psychologist recommended the use of *time-out*, the technique of briefly isolating a child following misbehavior. The next time Billy acted up in the grocery

store, Ms. B. left her shopping cart, and she and Billy went to sit in the car until he quieted down. She then completed her shopping. Two trips to the car were needed the first day, but Billy’s behavior improved as a result. He soon was earning rewards for being good—not for being bad—while shopping.

**Negative Attention** Sometimes children misbehave as a way of getting attention rather than of getting what they want. *Negative attention* is the idea that a “punishment” sometimes may actually reinforce misbehavior. For example, a “class clown” may like the attention that comes from getting in trouble. That is, the teacher’s attempt at punishment actually serves as a reinforcement. We think it is essential to understand *why* negative attention is reinforcing. Many do not get enough positive attention—enough love. For them, any attention is better than being ignored. If so, increasing attention and affection would be a better way of treating their externalizing behavior than increasing discipline (Emery, 1992).

**Inconsistency** Inconsistency also is linked with children’s externalizing problems (Patterson, DeBaryshe, & Ramsey, 1989). Inconsistency can involve frequent changes in the style and standards of one parent, or two parents may be inconsistent in their rules and expectations. Inconsistency often becomes a problem when parents have conflicts in their own relationship—when they are unhappily married or are divorced (Emery, 1982; Repetti, Taylor, & Seeman, 2002). Some angry parents even deliberately undermine each other.

Yet another problem occurs when parents’ actions are inconsistent with their words. For example, consider the contradiction inherent in angry and harsh physical punishment (Gershoff, 2002). On one hand, such discipline tells children to follow the rules. On the other hand, it teaches children that anger and aggression are acceptable means of solving problems. Children often learn from what their parents do, not what they say.

**Peers, Neighborhoods, Television, and Society** Peer groups also can encourage delinquent and antisocial behavior (Dishion, McCord, & Poulin, 1999), and among adolescents, peer influences may be stronger than parental ones (Walden et al., 2004). In fact, socialized delinquency, in which criminal acts occur in the company of others, may be an important subtype of externalizing disorders (Kazdin, 1995).

Neighborhood and society also contribute to externalizing problems. Television violence is rampant, as is violence in computer games, and research shows that aggressive children both prefer and become more aggressive in response to video violence (Anderson et al., 2010). Youth who witness violence in their communities also are more likely to be violent themselves

|                                      | Accepting, Responsive, Child-centered | Rejecting, Unresponsive, Parent-centered |
|--------------------------------------|---------------------------------------|--|
| Demanding, controlling               | Authoritative                         | Authoritarian                            |
| Undemanding, low in control attempts | Indulgent                             | Neglectful                               |

**FIGURE 16.2**  
Four styles of parenting, based on dimensions of parental warmth and discipline efforts.  
*Source:* E. E. Maccoby and J. A. Martin, 1983, “Socialization in the Context of the Family: Parent–Child Interaction,” in E. M. Hetherington (Ed.), *Socialization, Personality, and Social Development*, Vol. 4, *Handbook of Child Psychology*, pp. 1–101. New York: Wiley.



A young boy playing *Grand Theft Auto*. More aggressive children seek out, and are influenced by, the violence found routinely in video games, television shows, and other popular media.

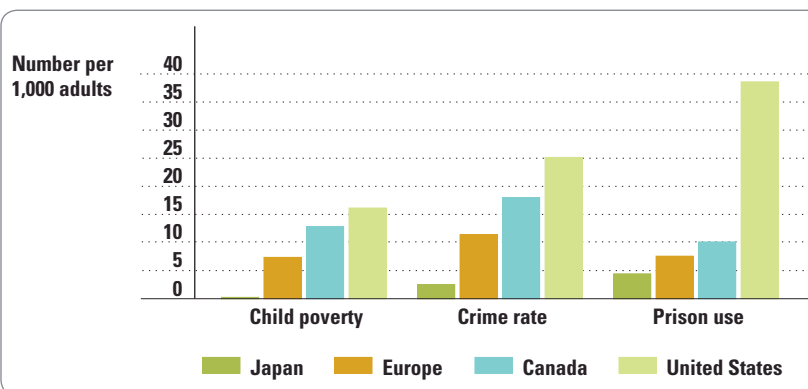
(Shahinfar, Kupersmidt, & Matza, 2001), and in general, children who grow up in unstable, poor, inner-city neighborhoods are more likely to have externalizing problems (Dupéré et al., 2007; Stouthamer-Loeber et al., 2002; see Figure 16.3).

**Social Factors in ADHD** There are few theories of how social factors play a role in the development of ADHD (Hinshaw, 1994). Mothers of children with ADHD are more critical, demanding, and controlling compared to the mothers of normal children (Mash & Johnston, 1982). However, research shows that problems primarily are a *reaction* to the children's troubles, not a cause of them. Children with ADHD become more attentive and compliant while medicated, and their mothers' behavior "improves" as well—mothers become less negative and less controlling (Danforth, Barkley, & Stokes, 1991). The improved mothering is due to the medicine's effects on the

children—and the children's effects on their mothers. In fact, children's disruptive behavior can strain marriages as well as parenting (Wymbs & Pelham, 2010).

This does not mean that good parenting is unimportant. Ineffective parenting surely intensifies ADHD symptoms (Hinshaw et al., 2000), and maternal warmth and understanding may help to prevent ADHD (Tully et al., 2004). Family and social adversity also contribute to ODD and its comorbidity with ADHD (Burt et al., 2001).

**Psychological Factors** *Low self-esteem*, feelings of low worth, is sometimes blamed as causing externalizing problems. But research shows, perhaps surprisingly, that children with ADHD *overestimate* rather than undervalue their competence (Hoza et al., 2004). The best explanation for this positive



**FIGURE 16.3**

Higher rates of child poverty are linked to higher rates of crime throughout the world. However, increased prison use is *not* tied to lower crime rates—and international comparisons contradict the frequent charge that the U.S. is "soft on crime."

Source: From M. A. Jones and B. Krisberg, 1994, *Images and Reality: Juvenile Crime, Youth Violence, and Public Policy*, San Francisco: National Council on Crime and Delinquency. For educational purposes only. Copyright © National Council on Crime and Delinquency, 1994. All rights reserved. For information contact: info@sf.nccd-crc.org. www.nccd-crc.org.



illusory bias appears to be self-protection, trying to appear more competent to peers and oneself (Owens et al., 2007).

Lack of *self-control*, the internal regulation of behavior, is often linked to externalizing disorders. A specific problem with self-control is *delay of gratification*—the ability to defer smaller but immediate rewards for larger, long-term benefits, for example, studying for an exam rather than going out with friends. Children with externalizing problems are less able to delay gratification than are other children. They opt for immediate rewards rather than for long-term goals, an impediment to achieving educational and career goals (Nigg, 2001).

Studies by psychologist Ken Dodge and his colleagues also show that aggressive children overinterpret their peers' aggressive intentions (Dodge et al., 2003). They view other children as threatening and may attempt to "get you before you get me." Psychologist Seth Pollak and his colleagues show one way that such biases can develop. Physically abused children see more anger in neutral facial expressions than normal children (Pollak & Tolley-Schell, 2003). This bias may be adaptive when living in a threatening family, but it's maladaptive in other circumstances.

What about the "conscience" of children with externalizing problems? Psychologist Lawrence Kohlberg's (1985) hierarchy of moral reasoning shows that, as they grow older, children use increasingly abstract moral principles. A young boy may say that the reason he behaves well is because "Mommy will get mad." An older boy may say "You need to follow the rules." A teenager might explain "It is the right thing to do." Consistent with Kohlberg's theorizing, aggressive children reason more like younger children, focusing on immediate consequences rather than following principles that guide behavior even when you aren't likely to get caught (Stams et al., 2006).

**Integration and Alternative Pathways** How can we integrate evidence on the diverse contributions to the development of externalizing behavior? Two conclusions seem clear. First, externalizing disorders have many causes, not one. Second, biological, psychological, and social factors clearly interact in causing externalizing disorders. Temperament theorists note, for example, that the *goodness of fit* between a child's temperament and the family environment may be of greatest importance to healthy psychological development (Shaw & Bell, 1993). For example, research shows that impulsive youth have unusually high rates of juvenile offending when they grow up in poor versus better-off neighborhoods. However, whether the neighborhood is poor or better off has no effect on offending for nonimpulsive youth (Lynam et al., 2000).

## TREATMENT OF EXTERNALIZING DISORDERS

Numerous treatments have been developed for children's externalizing disorders, but unfortunately, the problems can be difficult to change (Kazdin, 1997). The most promising treatments include psychostimulants for ADHD, behavioral family therapy for ODD, and intensive programs for treating conduct disorders and delinquent youth.

**Psychostimulants and ADHD** Psychostimulants are medications that increase central nervous system activity, and in appropriate dosages, the medications increase alertness, arousal, and attention. Psychostimulants produce immediate



Psychostimulants like Ritalin clearly are effective, short-term treatments for behavior and attention problems in ADHD. However, they do not appear to benefit learning or lead to long-term improvements.

and noticeable improvements in the behavior of about 75 percent of children with ADHD. Before considering their effects further, we first must consider a long-held, and mistaken, view about psychostimulants and ADHD.

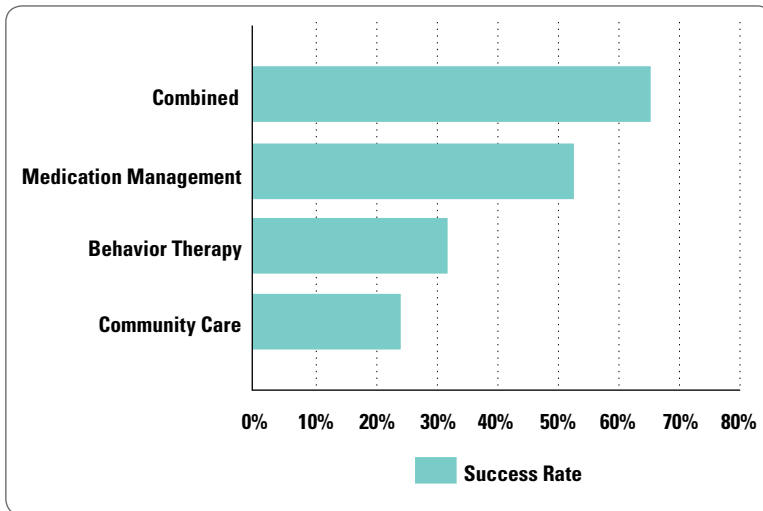
**"Paradoxical Effect"?** Psychostimulants heighten energy and alertness, and they lead to restless, even frenetic, behavior when abused. These effects are accurately conveyed by a street name for the drugs, "speed." The U.S. psychiatrist Charles Bradley (1937) was one of the first to observe that these medications seem to have a "paradoxical effect" on overactive children: The drug slows them down. For many years, professionals believed that this was proof of abnormal brain functioning in ADHD. The real irony, however, is that the idea of a paradoxical effect was wrong.

One reason for the enduring "paradoxical effect" paradox is that it was deemed unethical to give psychostimulants to normal children, even though the medication was given regularly to millions of "abnormal" children. A group of researchers at the National Institute of Mental Health eventually found a clever way around this problem. They obtained permission from colleagues to study the effects of psychostimulants on *their* children. The researchers found that the psychostimulants affected the normal children in the same way as ADHD children. The medication improved attention and decreased motor activity (Rapoport et al., 1978). In fact, psychostimulants have the same effects on *adults* when taken in comparably small dosages. There is *no* paradoxical effect of psychostimulants on children with ADHD.

**Usage and Effects** The most commonly prescribed psychostimulants are known by the trade names of Ritalin, Dexedrine, Cylert, and Adderall. Each has the effect of increasing alertness and arousal. Psychostimulants usually are prescribed by pediatricians, who typically are consulted following a child's difficulties in the early years of school. The fact that behavior problems in school are the main concern is demonstrated in how psychostimulants are prescribed. A pill is taken in the morning before school, and because the effects of many psychostimulants last only three or four hours, another pill may be taken at the lunch hour.<sup>1</sup> A third pill may or may not be taken after school, but

<sup>1</sup>Release delivery versions of psychostimulants (trade names Concerta, Adderall XR) are available that release medication in a manner similar to taking three separate pills throughout the day.





**FIGURE 16.4** Success Rates at the End of Treatment in the MTA

Psychostimulants produce notable short-term improvements in ADHD, as long as medication is managed carefully. Community care, which usually included medication, led to much less improvement. Medication outperforms behavior therapy in the short-term, but not in the long term as revealed by MTA follow-up studies (not shown).

Source: Reprinted from *The Journal of the American Academy of Child and Adolescent Psychiatry*, 40 (2), J. M. Swanson, et al., "Clinical Relevance of the Primary Findings of the MTA: Success Rates Based on Severity of ADHD and ODD Symptoms at the End of Treatment", 168–179.

the medication typically is not taken on weekends or during school vacations because of concerns about side effects.

Children take psychostimulants for years, not days or weeks. Traditionally, medication was discontinued in early adolescence, because it was believed that the problem was "outgrown" by that age. However, research shows that, while hyperactivity usually improves during the teen years, problems with inattention and impulsivity often continue (Schachar & Tannock, 2002). Thus, psychostimulants now are taken through the teen years, and perhaps into adulthood, as interest has grown in "adult ADHD," inattention, impulsivity, and, to a lesser extent, overactivity in adults (Barkley, 2006).

Numerous double-blind, placebo-controlled studies show that psychostimulants improve children's attentiveness and decrease their hyperactivity (Barkley, 2006). In the largest treatment study to date, the Multimodal Treatment of Study of Children with ADHD (MTA), 579 children with ADHD were randomly assigned to one of four treatments: (1) controlled medication management, (2) intensive behavior therapy, (3) the two treatments combined, or (4) uncontrolled community care (which typically included medication). A 14-month follow-up assessment showed that the controlled medication and combined treatments produced significantly more improvements in ADHD symptoms than the alternatives. Intensive behavior therapy (part of the combined treatment) added only a slight improvement over medication for ADHD symptoms (see Figure 16.4) but may have modestly helped comorbid aggressive behavior (MTA, 1999; Swanson et al., 2001), parenting (Wells et al., 2006), and minority children and families (Arnold et al., 2003).

More aggressive behavior therapies, including summer treatment programs, may produce more notable benefits (Pelham et al., 2002). Still, this evidence establishes psychostimulant medication as the first-line treatment for the behavioral symptoms of ADHD. However, the findings also indicate that improvements are needed in standard community medication management, which was much less effective than carefully controlled medication use. Unfortunately, standard community practice often involves little ongoing monitoring of ADHD children.

Psychostimulants improve hyperactivity and impulsivity, but their effects on attention and learning are less certain. Children on medication complete more reading, spelling, and arithmetic assignments with somewhat improved accuracy (Pelham et al., 1985), but their grades and achievement test scores improve little if at all (Henker & Whalen, 1989). This pattern of improvement in behavior but not in learning also was observed in the MTA (1999).

An even more troubling and puzzling fact is that psychostimulants have not been found to lead to *long-term* improvements in behavior, learning, or any other areas of functioning (see Table 16.4). For example, an eight-year follow-up of the MTA Cooperative Study showed no benefits of psychostimulants (or behavior therapy) on ADHD or other symptoms (Molina et al., 2009). Is this null result due to failure to take medication consistently over the course of many years, a short-coming of medication as a treatment for ADHD, or some other issue? No one knows for sure, but continued medication use did not predict greater improvement in the MTA (Molina et al., 2009). Clearly, the difference in short- versus long-term results is a puzzle that needs solving.

**TABLE 16.4** Short-Term and Long-Term Effects of Psychostimulants on ADHD Symptoms

|            | Hyperactivity/Impulsivity  | Inattention/Learning   |
|------------|--|--|
| Short-term | Dramatic improvements; less active and more focused; fewer social problems | More work completed, but no change in grades or standardized test scores |
| Long-term  | No demonstrated benefit  | No demonstrated benefit  |

The important issue of the effectiveness of psychostimulants in treating ADHD preschoolers was investigated in another large-scale clinical trial, the Preschoolers with ADHD Treatment Study (PATs). Randomization and other critical aspects of the design were necessarily compromised because of ethical concerns in treating this young age group. The study produced two clear results: (1) Preschoolers who remain on the medication improve over 10-month follow-up (although there is no control group) and (2) about one-third of preschoolers discontinue medication (Vitiello et al., 2007).

**Side Effects** The side effects of psychostimulants can be troubling, including decreased appetite, increased heart rate, and sleeping difficulties. These are minor problems for children's health, but not for parents who want their children to eat right and go to bed! Other side effects are more serious, such as an increase in motor tics in a small percentage of cases.

Evidence that psychostimulants can slow physical growth also is a very important concern. Past research found that children maintained on psychostimulants fell somewhat behind expected gains in height and weight, but the growth effect was interpreted as minor.

### Are psychostimulants overused?

Moreover, rebounds in growth occur during medication-free periods (Barkley, 2006). (This is why the medication may be discontinued when children are not in school.) Is the slowed growth minor? In the MTA, newly medicated children gained 6 pounds less and grew .8 inches less than never medicated children over three years (Swanson et al., 2007). Whether this is minor may be a matter of interpretation, but in the eyes of school-aged boys, being smaller is *not* a minor matter.

**Are Psychostimulants Overused?** Psychostimulants are effective, but parents and professionals still face a basic question: Should we use medication to correct children's misbehavior? Currently, 2.7 million children in the United States—4.8 percent of the school-age population—are treated with psychostimulants for ADHD (CDC, 2010). This startling number generates considerable controversy, as do these facts: (1) Between

1987 and 1996 stimulant use for youth under age 18 increased 300 percent to 700 percent (Zito et al., 2003); (2) the use of psychostimulants tripled among preschoolers during the 1990s (Zito et al., 2000); (3) psychostimulants are used three to 10 times more often in the United States than in Europe, Canada, and Australia (Vitiello, 2008); and (4) the United States consumes 90 percent of the psychostimulants produced in the world (LeFever et al., 2003).

Are psychostimulants overused in the United States? Pills can be a "quick fix" not only for troubled children, but also for troubled schools. Many public schools are underfunded, overcrowded, and inadequately staffed. Do we need to look at the bigger picture of children's lives instead of looking to a pill for a quick fix?

Psychostimulants are an inexpensive and effective treatment for ADHD, especially in comparison with the alternatives (see Critical Thinking Matters). Still, the benefits of medication are limited, various side effects are a concern, and there is no bright line between normal and abnormal behavior in diagnosing ADHD. Should mental health professionals in the United States raise the threshold for making the diagnosis and for prescribing medication? We think this is a reasonable question to ask.

**Other Medications for ADHD** Over the last decade, many children have taken antidepressants for ADHD. Although depression and ADHD often co-occur, this is not the reason for the treatment. Rather, antidepressants may affect ADHD symptoms directly for unknown reasons. However, antidepressants clearly are a second-line treatment. Their use is justified only following the failure of psychostimulants (DeVane & Sallee, 1996).

Strattera, a norepinephrine reuptake inhibitor, is the only nonstimulant medication approved by the U.S. Food and Drug Administration (FDA) for the treatment of ADHD. Strattera is often prescribed to adults with ADHD, because it has less potential for abuse. Misuse of psychostimulants is common at older ages. For example, as many as 35 percent of college students on psychostimulants are estimated to use or "share" the medication as a study aid or for recreation (Wilens et al., 2008). Unfortunately, Strattera is less effective than psychostimulants, and it can have serious side effects, including increasing suicidal thinking (Bangs et al., 2008; Newcorn et al., 2008).

Clonidine, which can lead to decreases in aggressive behavior, is used in combination with psychostimulants in 20 percent or more of cases. Despite this frequent practice, the use of clonidine is controversial. The medication's primary use is for high blood pressure in adults, and only limited research supports its effectiveness for ADHD. Most controversial, there are isolated reports of sudden death among treated children (Hazell & Stuart, 2003).

**Behavioral Family Therapy for ODD** Behavioral family therapy (BFT) teaches parents to be very clear and specific about their expectations for children's behavior, to monitor children's actions closely, and to systematically reward positive behavior while ignoring or mildly punishing misbehavior. BFT is sometimes used as an adjunct or alternative to medication in treating ADHD, although it offers limited benefits for ADHD symptoms (MTA Cooperative Study, 1999). However, BFT is more promising as a treatment of ODD (Brestan & Eyberg, 1998).



Many people believe that psychostimulants are used too soon and too often in treating ADHD.  
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# Critical Thinking Matters

## ADHD'S FALSE CAUSES AND CURES

"We don't know what causes this" and "There is no cure" are *not* the kind of answers desperate parents want to hear about their psychologically troubled children. Unfortunately, these often are the most honest and scientifically accurate answers. Even more unfortunately, the absence of answers does not prevent many self-appointed experts from responding to parents' questions with partial truths, dubious theories, or pure fantasy. Myths abound for every mental disorder. But if we were to give a prize for the most misleading information, ADHD might just win.

Self-proclaimed "experts" have blamed the cause of ADHD on everything from fluorescent lights (the lights were installed in schools during a time of increasing rates of ADHD) to sugar (a favorite among teachers and parents—after all, children get "hyper" around Halloween) to a failure to learn to crawl properly before learning to walk (somehow out-of-sequence locomotion is supposed to disrupt developing brain circuitry, a theory we never understood, nor do we wish to try). We hope we do not need to say this, but just in case: There is no

evidence to support any of these theories or treatments based on them. We know, for example, that sugar can cause cavities, but increasing dietary sugar does not produce hyperactivity nor does decreasing sugar cure it (Milich, Wolraich, & Lindgren, 1986).

Recently, a number of "experts" blamed the MMR vaccine for causing ADHD along with autism, learning disabilities, and who knows what else (see Critical Thinking Matters in Chapter 2). Some still do, despite widespread evidence to the contrary. Some even claim that drug companies and the National Institute of Mental Health are conspiring to cover up evidence. We give these worries the same credibility as theories that the government is covering up evidence of extraterrestrials visiting Earth. But saying, "Ridiculous!" to discredited ideas is easy. The trick for you is to be an inquiring skeptic, so you will not fall victim to the next bogus idea.

The past can be an instructive warning about the future. Consider a theory popular in the 1970s—that ADHD is caused by food additives, particularly *salicylates*, which are commonly found in processed foods. Physician Benjamin Feingold (1975) offered this theory in his immodestly titled book, *Why Your Child Is Hyperactive*. Feingold recommended a natural-foods diet as an ADHD cure. Hundreds of thousands of parents embraced the Feingold diet. Many reported that their children's symptoms improved. (Do a Web search, and you will still find advocates.) Congress considered banning salicylates. Any

problem? Well, the "benefits" were nothing more than a placebo effect. Keeping kids on a natural foods diet requires a lot of work, and parents *believed* their efforts made a difference. It did—in the parents' minds. Research showed that actual ADHD behavior did not change (Conners, 1980).

### **Why is there so much misinformation about ADHD?**

Among the other treatments that do *not* work for ADHD are food supplements (amino acids and megavitamins are two often recommended "treatments"); play therapy (the therapist plays with the child and interprets the play analogous to the way an analyst interprets free association); eye movement desensitization and reprocessing (see Chapter 7); neurofeedback (where patients watch EEG readings and try to alter their brain waves); sensorimotor integration therapy (which may include exercises like watching a pencil as you touch your nose with it); acupuncture (the ancient Chinese procedure); or various homeopathic remedies, including *pycnogenol* (an organically based substance that advocates claim is as effective as Ritalin—and also helps to cure tennis elbow!). Again, *none of these treatments work* (Waschbusch & Hill, 2004).

Critical thinking is one thing that will work for you, if you learn to use it. Sure: Watch science fiction movies and suspend belief for a couple of hours. But when it comes to real life problems, critical thinking matters.



BFT typically begins with *parent training*. Parents are taught to identify specific problematic behaviors such as fighting with siblings, list preferred alternative behaviors like speaking nicely, and set consequences for appropriate and inappropriate behavior. Parents may also make a "star chart" for recording children's progress and perhaps develop a "daily report card" that the child

carries home from school as a way of coordinating discipline in both settings (Scott, 2002).

Parent training also may include teaching parents about punishment strategies, such as time-out. Conventional wisdom holds that punishment should be firm but not angry and that rewards should far outweigh punishments. Some experts





Research shows that parent involvement leads to more effective treatment for oppositional-defiant disorder.

believe that parent training should directly emphasize increasing warmth as well as discipline in parent–child relationships (Cavell, 2001). From this perspective, the goal is to teach authoritative parenting.

Research supports the short-term effectiveness of BFT (Patterson, 1982), and parent training can be effectively delivered in groups (Webster-Stratton, 1994), to parents of toddlers (Gardner et al., 2007), or even through the popular media (Sanders, Montgomery, & Brechman-Toussaint, 2000). However, evidence on long-term effectiveness is less certain, and benefits generally are limited to children under the age of 12 (Kazdin, 1997). In considering the challenges for BFT, recall that the parents of children with externalizing problems often live in adverse circumstances that make it difficult to alter their parenting (Emery, Fincham, & Cummings, 1992). Parents can be effective in changing children’s behavior, but psychologists need to develop more ways to help parents who live in difficult circumstances (Scott, 2002). In fact, BFT is less effective when parents are unhappily married, depressed, substance abusers, or harsh and critical with their children (Beauchaine, Webster-Stratton, & Reid, 2005). BFT is more effective when treatment includes efforts to help parents cope with *their* stress (Kazdin & Whitley, 2003).

Some behavioral therapies also include direct training of children as well as parents. *Problem-solving skills training* (PSST) is one commonly used technique in which children are taught to slow down, evaluate a problem, and consider alternative solutions before acting. Some evidence indicates that the combination of PSST and parent training leads to more improvement than either therapy alone in treating ODD (Kazdin, Siegel, & Bass, 1992). However, PSST offers only minimal help to children with ADHD.

**Treatment of Conduct Disorders** Exciting claims about the effectiveness of new programs for treating conduct disorders or juvenile delinquency are commonly reported in the popular media. You should be skeptical when you learn of a new “solution.” Research indicates that conduct disorders among adolescents are even more resistant to treatment than are externalizing problems among younger children (Kazdin, 1997).

Some BFT approaches have shown promise in treating young people with family or legal problems (Alexander &

Parsons, 1982). These treatments are based on principles similar to those in programs for younger children, except that *negotiation*—actively involving young people in setting rules—is central to BFT with adolescents. An obvious reason for the negotiation strategy is that parents have less direct control over adolescents than younger children. Because of diminishing parental control, many mental health professionals also advocate for treating externalizing problems prior to adolescence.

**Multisystemic Therapy** *Multisystemic therapy* (MST) is another intervention with conduct disorders that has received considerable attention (Henggeler & Borduin, 1990). MST combines family treatment with coordinated interventions in other important contexts of the troubled child’s life, including peer groups, schools, and neighborhoods. Several studies now document that MST improves family relationships, and to a lesser extent, delinquent behavior and troubled peer relationships (Curtis, Ronan, & Borduin, 2004). A 13-year follow-up study found significantly lower **recidivism**, or repeat offending, among seriously troubled youth treated with MST versus individual therapy. Despite this positive result, you should know that recidivism remained high for both groups: 50 percent following MST versus 81 percent for individual therapy (Schaeffer & Borduin, 2005). The data point to the importance of coordinating efforts to help troubled youth in the various contexts of their lives—and to the frequent failure to prevent recidivism even following such extensive efforts.

**Residential Programs and Juvenile Courts** Many adolescents with serious conduct problems or very troubled families are treated in residential programs outside the home. One of the most actively researched residential programs is *Achievement Place*, a group home that operates according to highly structured behavior therapy principles. Achievement Place homes, like many similar residential programs, are very effective while the adolescent is living in the treatment setting. Unfortunately, the programs do little to prevent recidivism once the adolescent leaves the residential placement (Bailey, 2002; Emery & Marholin, 1977; Kazdin, 1995). Delinquent adolescents typically return to family, peer, and school environments that do not consistently reward prosocial behavior or monitor and punish antisocial behavior.



Boot camps have been advocated widely as treatments for juvenile delinquency. But like other temporarily fashionable treatments, boot camps unfortunately do not reduce recidivism.



Many delinquent youths are treated in the juvenile justice system, where *rehabilitation* is supposed to be the goal. The philosophy of the juvenile justice system in the United States is based on the principle of *parens patriae*—the state as parent. In theory, juvenile courts are supposed to help troubled youth, not punish them. This lofty goal is belied by research indicating that *diversion*—keeping problem youths out of the juvenile justice system—is an effective “treatment” (Davidson et al., 1987).

Such struggles have led some to treat juvenile offenders more like criminals than troubled youth. Statistics indicate that punishment rather than rehabilitation is becoming more common in the United States (Bailey, 2002). In the 1990s, more youth were placed into custody, and more minors were transferred out of the juvenile justice system and tried as adults. These trends have declined in recent years, however (Puzzanchera, Adams, & Sickmund, 2010).

**Realism, Not Pessimism** We see the difficulties in treating problem youth as a challenge, not a defeat. Therapists need to work to establish good relationships with troubled youth, an important predictor of treatment outcome for externalizing problems (Shirk & Karver, 2003). More effort also must be made to coordinate intervention across the different contexts of youths’ lives (Schaeffer & Borduin, 2005). Another key is preventing externalizing disorders by easing the family adversity that creates them (Earls & Mezzacappa, 2002), or teaching new ways of coping with adversities that cannot be readily changed (Lochman & Wells, 2004). We need to be realistic about the limited effectiveness of treatment, but if we do not want troubled youth to give up on themselves, we cannot give up on them.

**Course and Outcome** Do children “outgrow” externalizing disorders? For ADHD, hyperactivity generally declines during adolescence. However, attention deficits and impulsivity are more likely to continue, as measured, for example, by higher levels of motor vehicle accidents (Barkley, 2006). The continuity of symptoms into adult life is evident in the growing interest in adult ADHD (Mannuzza et al., 1998).

Importantly, the prognosis for ADHD depends on whether there is comorbid ODD or CD. If so, youth are more likely to develop problems with substance abuse, criminality, and other forms of antisocial behavior (Hinshaw, 1994). In fact, roughly half of all children with ODD or CD continue to have problems with antisocial behavior into adulthood (Hinshaw, 1994; Kazdin, 1995). As we have noted, adolescent-onset antisocial behavior is less likely to continue than childhood-onset antisocial behavior (Moffitt, 1993).

## Internalizing and Other Disorders

Teachers cannot ignore disruptive children in the classroom, but they may overlook anxious or depressed children who sit quietly and unhappily alone. The negative effect of externalizing disorders is an important reason why we have focused on these problems, but like schoolteachers, we do not want to overlook children whose troubles are *not* disruptive. We begin with a case study.

### CASE STUDY Turning the Tables on Tormentors

Mark was 12 years old when his mother took him to a new psychologist. Both Mark and his mother agreed that he had been depressed for well over a year, and nine months of “play therapy” resulted in little improvement. Mark felt sad most of the time, cried often, and felt helpless and hopeless about the future. He had withdrawn from his usual activities, and his straight As had fallen to Bs, Cs, and even a few Ds—despite an IQ of 145. Teasing was a particular problem, one that brought Mark to tears during the first appointment. A group of boys at his school constantly tormented Mark, calling him the “little professor.” Their teasing frequently brought Mark to the point of tears.

Mark’s family was well functioning, and there was no family history of depression. Mark’s mother was a homemaker, and his father was a police officer. His parents were happily married, and his two younger brothers were doing well. Mark’s mother attributed many of his problems to his unusual intelligence and to the fact that Mark had played with few children during the first years of his life. The family had

lived in an apartment in an unsafe neighborhood before the birth of his brothers.

The new treatment followed a cognitive behavior therapy approach but began with a careful period of building rapport. Establishing a good therapeutic relationship was very important to Mark who was socially isolated and unhappy with his previous therapy. Treatment eventually focused on social skills training and behavioral activation. Mark was encouraged to rejoin various activities and to initiate relationships with his peers. His parents were told to treat Mark normally. In particular, they were encouraged to hold the same high (but not demanding) expectations for Mark’s schoolwork as they did for their other sons.

A special emphasis of treatment was how Mark could deal with his tormentors. As a step, the therapist began to tease Mark playfully—and to encourage teasing back in return. This was viewed both as a way of teaching Mark some skills and of desensitizing him to teasing, which is normal if sometimes vicious among 12-year-

old boys. Given the strong therapeutic relationship that had developed, Mark quickly learned not only to play this game but to relish it. With his high IQ, he soon became devastatingly clever in his banter.

**he soon became devastatingly clever in his banter.**

The benefits clearly generalized outside of the therapy session. Mark no longer cried when he was teased; instead, he learned retorts that set his tormentors on their heels. In fact, Mark did not limit his self-defense to words. He punched one particularly mean boy in the nose one day—a response that was *not* encouraged in therapy but one that did not upset his father, the police officer (or, privately, the therapist).

Over the course of about three months of therapy, Mark’s mood improved considerably. He started getting As again and re-engaged in various activities. Teasing was no longer an issue. He remained himself—a quiet, intelligent, and introspective boy—but he learned to have more reasonable expectations, to stay involved, and how to handle his tormentors.

## SYMPTOMS OF INTERNALIZING DISORDERS

The case of Mark shows that children do suffer from “adult” disorders such as depression. Yet the diagnosis is not always so clear. Imagine, for example, if Mark was 6 years old. Although he might act and look sad, he certainly would be less able to express or reflect on his feelings or feel hopeless about the future. Moreover, his parents would have difficulty interpreting his crying, withdrawal, and grades without a good awareness of how Mark himself felt. Even if 6-year-old Mark could tell them that he was sad, the meaning of his words would be difficult to interpret. At young ages, children do not have the same ability to experience and express their thoughts and emotions as adults.

Children’s internalizing symptoms include sadness, fears, and somatic complaints, as well as other indicators of mood and anxiety disorders—for example, feeling worthless or tense. DSM-IV-TR does not have a separate category for children’s internalizing disorders, but the manual does identify some unique ways in which children experience the symptoms. When diagnosing major depressive episodes among children and adolescents, for example, the clinician is allowed to substitute “irritable mood” for “depressed mood.” Children sometimes act angry when they are feeling sad, and they may try to hide their true emotions, especially when talking to adults.

The diagnosis of phobia is another example. In contrast to adults, children are not required to recognize that their fears are excessive or unreasonable, because children often have limited insight into their problems. In fact, children may lack the cognitive capacity to experience some symptoms found among adults.

Self-awareness emerges with age, and it is not until adolescence that children fully develop the cognitive abilities necessary for “adult” insight.

### How do children’s fears change with age?

Children’s capacity to experience and recognize emotions also emerges over the course of development, as does their ability to express—and to mask—their own feelings. This makes it much more difficult for adults to evaluate children’s inner distress than it is to observe their externalizing behavior.

**Depressive Symptoms** The assessment of depression in children can be particularly difficult. One study of children hospitalized for depression found a correlation of *zero* between children’s and parents’ ratings of the children’s depression (Kazdin, French, & Unis, 1983). In another study, children’s ratings of depression were associated with their hopelessness, low self-esteem, and internal attributions for negative events. Their *parents’* ratings of the children’s depression, in contrast, were associated with the parents’ ratings of externalizing behavior, not with children’s internal distress (Kazdin, 1989). Finally, and perhaps of greatest concern, parents systematically underestimate the extent of depression

reported by their children and adolescents (Kazdin & Petti, 1982; Rutter, 1989).

Given parents’ and children’s widely differing perceptions, psychologists are rightly concerned if *either* a parent *or* a child notes problems. In assessing children’s internalizing problems, mental health professionals must obtain information from *multiple informants*—parents, teachers, and the children themselves (Harrington, 2002).

When assessing children directly, child clinical psychologists are sensitive to different signs that may indicate depression at different ages: unresponsiveness to caregivers under the age of 2; sad expressions and social withdrawal in preschoolers; somatic complaints in young school-aged children; more direct admission of sad feelings or marked irritability in older school-aged children or early adolescents; and full-blown depression, including suicide risk, among adolescents.

Depression in children also differs from depression in adolescents in its lower prevalence, equal frequency among boys and girls, stronger relation with family dysfunction, and less persistent course (Harrington, 2002).

**Children’s Fears and Anxiety** *Anxiety* is a general and diffuse emotional reaction that often is linked with anticipation of future, unrealistic threats. In contrast, *fear* is a reaction to real and immediate danger. As with depression, children often have trouble identifying their anxiety, but they are more aware of their fears, which are immediate and have a clear environmental referent. For the same reasons, adults can observe much of children’s fearful behavior for the same reasons. Thus, research on the development of children’s fears is more advanced than it is for their anxiety.

Two findings from fear research are important to note. First, children develop different fears for the first time at different ages, often suddenly and with no apparent cause. For example, infants typically develop a fear of strangers in the months

just before their first birthday; preschoolers develop fears of monsters and the dark between the ages of 2 and 4; and children between ages 5 and 8 often develop fears related to school. (If you ever dreamed of going to school in your underwear, you are not alone!) In short, many fears are developmentally normal. Second, fears of monsters, the dark, and many other things become less frequent with age (Meltzer et al., 2009). Apparently, children “outgrow” many fears, probably by gradually confronting them in everyday life. Developing and overcoming fears is normal and ultimately adaptive, much like getting sick and gaining resistance to physical illness.

### Separation Anxiety Disorder and School Refusal

The special case of separation anxiety illustrates this. *Separation anxiety* is distress expressed following separation from an attachment figure, typically a parent or caregiver. This normal fear



Depression becomes much more common during adolescence, especially among teenage girls.

## Calvin and Hobbes

by Bill Watterson



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develops around a baby's eighth month of life. An infant who easily tolerated separations in the past may suddenly start to cling, cry, and scream whenever a parent tries to leave, even for a brief separation. Separation anxiety generally peaks around 15 months and lessens over time. Toddlers and preschoolers typically continue to experience distress upon separation, however, particularly when left in an unfamiliar circumstance.

Although normal at younger ages, separation anxiety can become a serious problem if children fail to "outgrow" it (Silverman & Dick-Niederhauser, 2004). **Separation anxiety disorder** is defined by symptoms such as persistent and excessive worry for the safety of an attachment figure, fears of getting lost or being kidnapped, nightmares with separation themes, and refusal to be alone. For a child to be diagnosed, he or she must exhibit three or more of these symptoms for at least four weeks.

Separation anxiety disorder is especially problematic when it interferes with school attendance. *School refusal*, also known as *school phobia*, is characterized by an extreme reluctance to go to school and is accompanied by various symptoms of anxiety, such as stomachaches and headaches. Some children are literally school phobic—they are afraid of school or specific aspects of attending school. But in many cases, school refusal can be traced to separation anxiety. In such cases, the parent, as well as the child, may have difficulty separating. Whatever its origins, school refusal is a serious problem that has been linked to lower achievement and increased school dropout (Pina et al., 2009).



Separation anxiety is a normal fear that typically develops just before a baby's first birthday. Toddlers and preschoolers continue to show a degree of distress even during routine separations from their attachment figures.

**Troubled Peer Relationships** Children with internalizing problems may have troubles with their peers. One way to evaluate children's relationships is by obtaining information on who is "liked most" and who is "liked least" from a large group of children who know one another (for example, children in a classroom). This *peer sociometric* technique is used to group children into five categories (Coie & Kupersmidt, 1983; Newcomb, Bukowski, & Pattee, 1993):

- *Popular* children receive many "liked most" and few "liked least" ratings.
- *Average* children also receive few "liked least" ratings, but they receive fewer "liked most" ratings than popular children.
- *Neglected* children receive few of either type of rating.
- *Rejected* children receive many "liked least" ratings and few "liked most" nominations.
- *Controversial* children receive many positive and many negative ratings from their peers.

Rejected children are likely to have externalizing problems (Patterson, Kupersmidt, & Griesler, 1990), and peer rejection predicts the development of increased aggression (Dodge et al., 2003). Children with ADHD may be rejected because their symptoms impede social relationships (Greene et al., 2001; Hoza et al., 2005), whereas rejected children with ODD and CD are likely to have a few close friends—friends who, unfortunately, also engage in antisocial behavior (Olweus, 1984).

Not surprisingly, neglected children are likely to have internalizing symptoms such as loneliness (Asher & Wheeler, 1985). An optimistic finding is the neglected status is not particularly stable over time and across situations (Newcomb et al., 1993). Apparently, children who are left out of one social group often succeed in finding friends as they grow older, change schools, and participate in new activities.

**Specific Developmental Deviations** A number of troubling symptoms of children's psychological disorders are best understood as **developmental deviations**, significant departures from age-appropriate norms in a specific area of functioning. In fact, some developmental deviations are considered disorders in their own right. Specific deviations in reading (*dyslexia*), writing (*dysgraphia*), or arithmetic (*dyscalculia*) are considered to be learning disabilities if the deviation is substantial (see What Are Learning Disabilities?). Similarly, once a child is past the age when most children toilet appropriately, problems in bladder or bowel control are considered to be abnormal. Of course, we can only determine if a child is delayed if we have good development norms.



## WHAT ARE LEARNING DISABILITIES?

The DSM-IV-TR category of *learning disorders*—we prefer the term used by educators, **learning disability (LD)**—is a diagnosis for students who perform substantially below their ability in a specific area of learning. (Many wonder why learning disorders are included in the DSM, a listing of *mental disorders*, when the difficulties are so clearly academic in nature.) LD is defined in many different ways, but all definitions have problems (Waber, 2010). The most common approach has been the *discrepancy definition*, comparing scores on intelligence tests with scores on academic achievement tests. LD can be defined in this way as a difference of one or two standard deviations between aptitude and achievement in a specific area of learning—reading, writing, or mathematics. Thus, a diagnosis of reading disorder (*dyslexia*) would be made if a child scored a standard deviation above the mean on the verbal portion of an intelligence test (an IQ of 115) but a standard deviation below the mean in reading.

Although widely used, both the reliability and validity of the discrepancy definition has been called into question. For example, 30 percent of children diagnosed this way in third grade no longer meet diagnostic criteria in fifth grade (Francis et al., 2005). Parents and politicians also have objected to the definition, arguing that it excludes children who could benefit from special instruction. In fact, federal legislation passed in 2005 (IDEA, see below) prohibited using the discrepancy definition as a way of excluding children from being diagnosed LD, although the method can be used legally to *include* children as LD. The diagnostic method currently in vogue is called “response-to-intervention” (RTI). This

approach calls for the use of evidence-based methods to teach children. It defines LD as those children who still fail to learn. Among the many problems with this approach is the absence of evidence-based teaching methods (Reynolds & Shaywitz, 2009; Waber, 2010).

The lack of an evidence base is not the result of a lack of effort to treat LD. In 1975, the U.S. Congress passed the Education for All Handicapped Children Act (now called the Individuals with Disabilities Education Act, or IDEA), a law mandating that local school systems provide special resources for educating handicapped children, including children with LD. The federal legislation dramatically increased the number of children identified as having LD, rising from less than 2 percent in 1976–1977 to over 4 percent in 2002–2003 (Office of Special Education Programs, 2003). However, some commentators wonder whether this reflects overly broad definitions of LD (Lyon, 1996). And it is not clear that the identification of more students has led to more effective education. Intervention attempts include intensive tutoring, individually or in small groups (including teacher-based direct instruction and student-based cooperative learning); behavior therapy programs in which academic success is systematically rewarded; psychostimulant medication; counseling for related problems (for example, low self-esteem); and various special efforts such as training in visual-motor skills. Unfortunately, no treatment has demonstrated consistent success (Swanson, Harris, & Graham, 2003; Waber, 2010).

Another problem is that research has not identified a specific psychologi-

cal, neurological, or genetic cause of LD (Mash & Wolfe, 2010; Snowling, 2002; Swanson et al., 2003). LD appears to involve disruptions in several aspects of information processing, including perception, attention, language processing, and executive function. Typically, the cause is viewed as biological. Neuroimaging research on reading disabilities identifies

### *What are some problems with defining learning disabilities?*

activity differences particularly in the temporal-parietal region of the left hemisphere of the brain (Miller, Sanchez, & Hynd, 2003; Shaywitz, Mody, & Shaywitz, 2006). (Recall that language abilities are lateralized in the left hemisphere.) Behavior genetic research shows that LD, like normal reading abilities, is moderately heritable, and genetic linkage analysis suggests possible loci on chromosomes 1, 2, 6, 15, and 18 (Kovas & Plomin, 2007; Thomson & Raskind, 2003). Special attention is currently focused on the *DCDC2*, which appears to affect how neurons function in the left temporal-parietal region (Waber, 2010). While exciting, advances in genetics and imaging are a long way from identifying a specific deficit in LD, let alone leading to more effective treatments.

Perhaps 5 percent of all schoolchildren in the United States do not achieve at a level consistent with their abilities (Waber, 2010). LD is “real” in the sense that these children seem to have the ability and motivation to perform better in school, yet they do not. Despite decades of legislation, special teaching programs, and research, however, controversy is rampant about the definition, cause, and treatment of LD.

## DIAGNOSIS OF INTERNALIZING AND OTHER DISORDERS

**Brief Historical Perspective** In 1896, the psychologist Lightner Witmer (1867–1956) of the University of Pennsylvania established the first psychological clinic for children in the United States. Despite the early origins of child clinical psychology, children were largely ignored in early classifications of mental disorders (Garber, 1984). DSM-I (1952) contained only

two separate diagnoses for children; DSM-II (1968) listed seven childhood disorders. DSM-III (1980), in contrast, contained a proliferation of diagnostic categories, 40 in all. Although laudable, the new effort was overly ambitious. Many of the new diagnoses were criticized and subsequently dropped.

**DSM-IV-TR Classification** With minor exceptions, the DSM-IV-TR defines affective and anxiety (internalizing) disorders exactly the same for children as for adults. As noted, we



are troubled that this approach ignores essential developmental considerations. For example, children show sadness in different ways at different ages, while younger children lack the cognitive capacity to understand time and therefore cannot truly feel hopeless about the future.

**Bipolar Disorder in Children?** The DSM needs to include more developmental considerations. Yet, you should know that trying to equate symptoms in children and adults is a tricky business. Recent efforts to diagnose bipolar disorder in children provide an instructive example of reasons for caution. Beginning in the 1990s, some clinicians and researchers suggested that, in children, mania is expressed by severe, unpredictable, and relatively brief episodes of irritability, rather than by the classic, more enduring mood swings seen in adults (Biederman et al., 2004; Mick et al., 2005). One goal of this suggestion was to identify mania misdiagnosed as ADHD in children (Biederman et al., 1998). But instead of identifying mania in children, the approach actually led to a huge overdiagnosis of childhood bipolar disorder (and often treating these children with antipsychotic medications<sup>2</sup>). Between 1994 and 2003, the diagnosis of bipolar disorder in children increased by a factor of 40 (Moreno et al., 2007)! The increase might have been justified if childhood bipolar had been underdiagnosed. However, longitudinal research shows that episodic irritability in youth does *not* predict mania in adult life (Stringaris et al., 2009).

Much will be gained by identifying *heterotypic continuity*, different surface manifestations of the same underlying problem, between the symptoms of mental disorders in children and adults. The next version of the DSM may, in fact, include a diagnosis called “temper dysregulation disorder” in an effort to better understand the long-term meaning of episodic irritability in children and adolescents. For now, the main lesson of the recent overdiagnosis of “childhood bipolar disorder” is that we cannot assume the validity of what might appear to be examples of heterotypic continuity. As always, we need research to prove our contentions.

Childhood bipolar disorder is not the only example of problems in diagnosing children. Table 16.5 summarizes the childhood disorders contained in DSM-IV-TR. Many of these diagnoses may be unfamiliar to you, because they are rare and unusual problems; others probably are not mental disorders at all. We consider these items on the list only briefly.

**Pica and Rumination Disorder** Pica is the persistent eating of nonnutritive substances, such as paint or dirt. This feeding disorder is rarely diagnosed, except among children with mental retardation. Rumination disorder, the repeated regurgitation and rechewing of food, is found primarily among infants. It is a rare but potentially serious problem that causes very low weight gain and can even lead to death.

**Tourette’s Disorder and Stereotypic Movement Disorder** *Tourette’s disorder* is a rare problem (4 to 5 cases per 10,000 people) that is characterized by repeated motor and verbal tics. The tics can be voluntarily suppressed only for brief periods of time and interfere substantially with life functioning. *Stereotypic*

*movement disorder* is self-stimulation or self-injurious behavior that is serious enough to require treatment, as may occur in mental retardation or pervasive developmental disorder.

**Selective Mutism and Reactive Attachment Disorder** *Selective mutism* involves the consistent failure to speak in certain social situations (for example, in preschool) while speech is unrestricted in other situations (for example, at home). Selective mutism is found among less than 1 percent of the children treated for mental health disorders. *Reactive attachment disorder* is characterized by severely disturbed and developmentally inappropriate social relationships. Children may resist comfort and cuddling, for example, or they may “freeze” and watch others from a safe distance. Reactive attachment disorder is caused by parenting that is so grossly neglectful that the infant or preschooler fails to develop a selective attachment relationship. In Chapter 18, we discuss child abuse and neglect, social problems that, unfortunately, are not rare.

**Enuresis and Encopresis** *Encopresis* and *enuresis* refer, respectively, to inappropriately controlled defecation and urination. According to DSM-IV-TR, enuresis may be considered abnormal beginning at age 5, as most children have developed bladder control by this age. Bedwetting is found among approximately 5 percent of 5-year-olds, 2 to 3 percent of 10-year-olds, and 1 percent of 18-year-olds. Encopresis, a much less common problem, may be diagnosed beginning at age 4. Encopresis is found among approximately 1 percent of all 5-year-olds and fewer older children.

Encopresis and enuresis typically are causes of, not reactions to, psychological distress. The symptoms that sometimes accompany enuresis or encopresis—for example, shyness or social anxiety—generally disappear once children learn to control their bowels and bladders. Encopresis and especially enuresis can be effectively treated with various biofeedback devices. The best-known is the *bell and pad*, a device that awakens children by setting off an alarm as they begin to wet the bed during the night. The bell and pad is about 75 percent effective in treating bedwetting among young school-aged children (Houts, 1991).

**An Overinclusive List** Beginning with DSM-III, too many “disorders” that are not in fact mental disorders were listed as psychological problems of childhood (Garmezy, 1978). Many have been dropped, but as you might suspect from Table 16.5, the list still is overinclusive. “Developmental coordination disorder” is perhaps the most obvious example. The DSM defines this problem as, “Performance in daily activities that require motor coordination is substantially below that expected given the person’s chronological age and measured intelligence” (p. 58). In poking fun at such diagnostic overzealousness, two pediatricians proposed a new diagnostic category they called “sports deficit disorder.” The major diagnostic criterion is always being the last one chosen for a team (Burke & McGee, 1990).

“Learning disorders” and “communication disorders” are more examples of overinclusion. Educators call these childhood problems *learning disabilities* and *speech and hearing problems*, respectively. These both are common and serious difficulties experienced by children, but we question their status as mental disorders. Both problems are primarily educational concerns.

**Does DSM-IV-TR include too many childhood “disorders”?**

<sup>2</sup>Questions are now being raised about the possibly overuse of antipsychotics in treating “bipolar” disorder in children, including a possible increase in law suits (*New York Times*, October 2, 2010).

**TABLE 16.5 DSM-IV-TR Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence****Attention-Deficit and Disruptive Behavior Disorders**

Attention-deficit/hyperactivity disorder  
    Combined type  
    Predominantly inattentive type  
    Predominantly hyperactive-impulsive type  
Conduct disorder  
Oppositional defiant disorder

**Learning Disorders**

Reading disorder  
Mathematics disorder  
Disorder of written expression

**Motor Skills Disorder**

Developmental coordination disorder

**Communication Disorders**

Expressive language disorder  
Mixed receptive-expressive language disorder  
Phonological disorder  
Stuttering

**Feeding and Eating Disorders of Infancy or Early Childhood**

Pica  
Rumination disorder  
Feeding disorder of infancy or early childhood

**Tic Disorders**

Tourette's disorder  
Chronic motor or vocal tic disorder  
Transient tic disorder

**Elimination Disorders**

Encopresis  
    With constipation and overflow incontinence  
    Without constipation and overflow incontinence  
Enuresis

**Other Disorders of Infancy, Childhood, and Adolescence**

Separation anxiety disorder  
Selective mutism  
Reactive attachment disorder of infancy or early childhood  
Stereotypic movement disorder

Note: This listing does not include mental retardation or pervasive developmental disorders, which we discussed in Chapter 15. It also does not include "Not Otherwise Specified" (NOS) subtypes of the diagnoses.

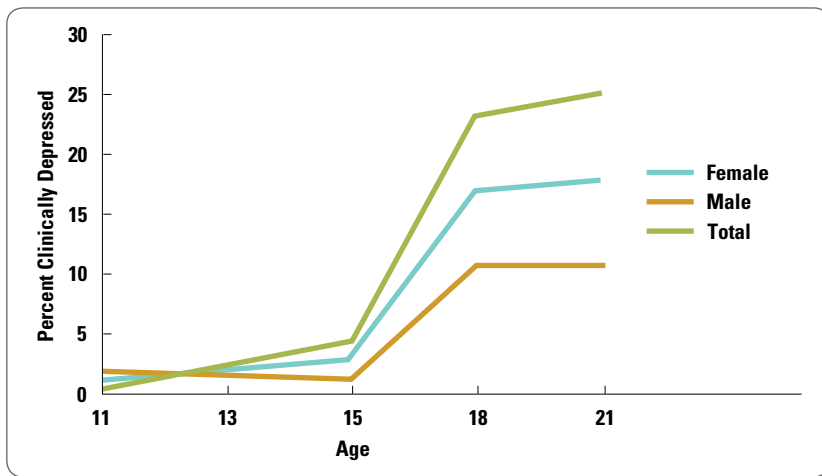
Source: Reprinted with permission from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*, (Copyright © 2000). American Psychiatric Association.

**Contextual Classifications?** As a final note, we remind you that children's behavior is intimately linked with the family, school, and peer contexts. Because of this, some experts have suggested that diagnosing individual children is misleading and misguided. Instead, children's psychological problems could be classified within the context of key relationships, particularly the family (Group for the Advancement of Psychiatry, 1995). As you saw in the case of Jeremy, parents, teachers, and peers often are part of a child's "individual" problem. In fact, DSM-V study groups are examining the possibility of including

"relational disorders" in the next edition of the manual, a topic we consider further in Chapter 17.

## FREQUENCY OF INTERNALIZING DISORDERS

The prevalence of externalizing disorders decreases as children grow older, but the opposite is true for internalizing disorders. Depression increases dramatically during adolescence,



**FIGURE 16.5**

The prevalence of depression increases rapidly during adolescence, particularly among girls.

Source: Adapted from B. L. Hankin, et al., 1998, "Development of Depression from Preadolescence to Young Adulthood: Emerging Gender Differences in a 10-Year Longitudinal Study," *Journal of Abnormal Psychology*, 107, pp. 128–140. Copyright © 1998, American Psychological Association.

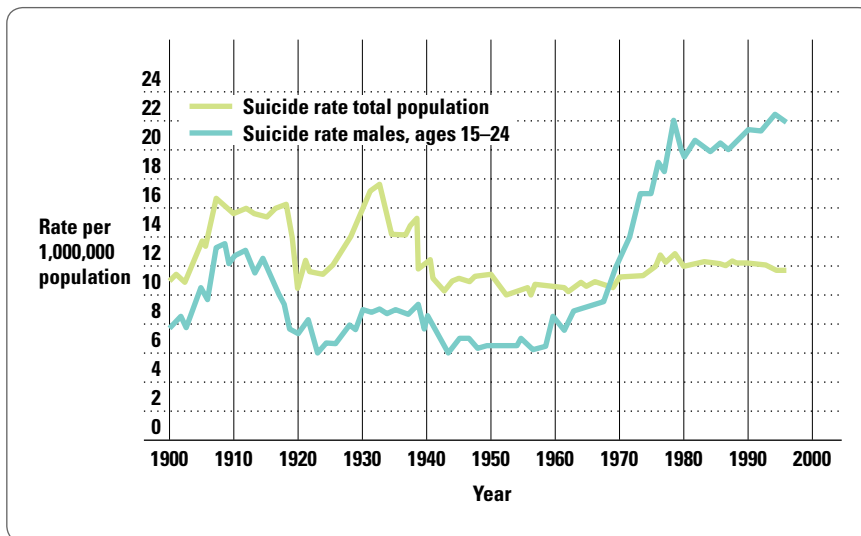
especially among girls (Garber, Keiley, & Martin, 2002; see Figure 16.5). According to one startling estimate, 35 percent of young women and 19 percent of young men experience at least one major depressive episode by the age of 19 (Lewinsohn, Rohde, & Seeley, 1998). Some have claimed that such statistics point to an “epidemic” of teen depression. However, objective evidence suggests that the only thing that has increased is awareness of the problem (Costello et al., 2006).

A recent national estimate found that fully 31.9 percent of adolescents met diagnostic criteria for an anxiety disorder at some time in their life (Merikangas et al., 2010). Another national study estimated that 3.7 percent of boys and 6.3 percent of girls suffered from PTSD during the past six months (Kilpatrick et al., 2003). Estimates of the prevalence of both anxiety and depression are controversial, however, because there is no “gold standard” for diagnosing these problems in children and adolescents (Harrington, 2002). Much lower rates of clinically significant anxiety and depression are suggested by the relatively small numbers of young people in treatment for internalizing

problems. Similarly, researchers found severe impairments in less than one-third of adolescents diagnosed with an anxiety disorder in the recent national study (Merikangas et al., 2010).

The fact that younger boys have more externalizing disorders while older girls have more internalizing problems leads to a distinctive pattern in child treatment referrals. Parents, teachers, and other adults seek treatment for children with externalizing problems, especially school-aged boys. The increase in depression among girls—and self-initiated treatment—begins to balance the gender ratio during the teenage years (Lewinsohn et al., 1994). By early adult life, notably more females than males are treated for psychological problems.

**Suicide** Adults need to be sensitive to children’s internal distress, as evidence on the epidemiology of suicide underscores in a dramatic fashion. Suicide is the third leading cause of death among teenagers, trailing only automobile accidents and natural causes. Suicide is extremely rare among children under the age of 10 (Shaffer & Gutstein, 2002). However, adolescent suicide rates tripled between 1960 and 1990 (see Figure 16.6). Teen



**FIGURE 16.6**

Teen suicide rates tripled between the 1960s and 1990s but have fallen in recent years.

Source: Figure 16-9: “U.S. Suicide Rates, Total Population and Males 15–24”, from *Suicide in America: New and Expanded Edition* by Herbert Hendin. Copyright © 1995, 1989 by Herbert Hendin, M.D. Used by permission of W. W. Norton & Company, Inc.

suicide declined 28.5 percent from 1990 to 2003, but increased 8 percent from 2003 to 2004 (CDC, 2007). The increase coincides with a drop in prescribing antidepressants to adolescents based on FDA “black box” warnings. As we discuss later, experts are debating whether antidepressants reduce or increase suicidality.

In comparison to adults, suicide attempts among adolescents are more impulsive, are more likely to follow a family conflict, and are more often motivated by anger than depression (Shaffer & Gutstein, 2002). *Cluster suicides* also can occur among teenagers. When one teenager commits suicide, his or her peers are at an increased risk. The risk sometimes stems from suicide pacts; the death also may make suicide more acceptable to despondent teenagers who may or may not know the victim.

**Causes of Internalizing Disorders** Most research on the causes of mood and anxiety disorders among children is based on the same theories of etiology we have discussed in relation to adults. Evidence simply is lacking or inadequate on the development of many other psychological problems of childhood. Thus, our discussion of causal factors is limited.

**Biological Factors** Except for some research documenting genetic influences on childhood onset obsessive-compulsive disorder (March, Leonard, & Swedo, 1995), few behavior genetic studies have been conducted on children’s internalizing disorders. Moreover, existing research once again calls attention to the problems in classifying and assessing anxiety and depression among children. In the few studies completed to date, widely different estimates of genetic contributions are obtained based on children’s versus parents’ reports (Rutter et al., 1998).

Jerome Kagan and colleagues (Kagan & Snidman, 1991) have conducted important, basic research that suggests a more general, biological predisposition to anxiousness. These psychologists have identified a temperamental style that they call *inhibited to the unfamiliar*. Infants with this temperamental style cry easily and often in response to novel toys, people, or circumstances. Their psychophysiological response (e.g., heart rate acceleration) also indicates fearfulness. About 10 percent of babies consistently show this pattern during the first two years of life (Kagan & Snidman, 1991), and these children are more likely to develop anxiety disorders as they grow older (Klein & Pine, 2002). One prevention study found that the rate of anxiety disorders can be significantly reduced by parent education. The keys are discouraging overprotectiveness, a common reaction to temperamentally inhibited children, and encouraging gradual exposure to the sources of children’s fear (Rapee et al., 2005).

**Social Factors: A Focus on Attachments** Together with John Bowlby (1969, 1973, 1980), Canadian American psychologist Mary Ainsworth (1913–1999) developed *attachment theory*, a set of proposals about the normal development of attachments and the adverse consequences of troubled attachment relationships. Troubled attachments may include the failure to develop a selective attachment early in life; the development of an insecure attachment; or multiple, prolonged separations from (or the permanent loss of) an attachment figure.



Mourners at the funeral of a young person who committed suicide.

**Reactive Attachment Disorder** Extreme parental neglect deprives infants of the opportunity to form a selective attachment. Such neglect can cause *reactive attachment disorder*, or what attachment researchers sometimes call *anaclitic depression*—the lack of social responsiveness found among infants who do not have a consistent attachment figure (Sroufe & Fleeson, 1986). Research on the consequences of extreme neglect for children is strongly buttressed by evidence from animal analogue research. Nonhuman primates who are raised in isolation without a parent or a substitute attachment figure have dramatically troubled social relationships (Suomi & Harlow, 1972).

**Insecure Attachments** Attachment theory also predicts that variations in the quality of early attachments are associated with children’s psychological adjustment. Attachment quality can be broadly divided into secure (healthy) and anxious attachments. Infants with *secure attachments* separate easily and explore away from their attachment figures, but they readily seek comfort when they are threatened or distressed. Infants with **anxious attachments** are fearful about



exploration and are not easily comforted by their attachment figures, who respond inadequately or inconsistently to the child's needs (Cassidy & Shaver, 2008). Anxious attachments are further subcategorized into (1) *anxious avoidant attachments*, where the infant is generally unwary of strange situations and shows little preference for the attachment figure over others as a source of comfort; (2) *anxious resistant attachments*, where the infant is wary of exploration, not easily soothed by the attachment figure, and angry or ambivalent about contact; and (3) *disorganized attachments*, where the infant responds inconsistently because of conflicting feelings toward an inconsistent caregiver who is the potential source of either reassurance or fear (Cassidy & Shaver, 2008).

A number of longitudinal studies have demonstrated that anxious attachments during infancy foreshadow difficulties in children's social and emotional adjustment throughout childhood. However, an insecure attachment does not seem to result in the development of any particular emotional disorder. Rather, insecure attachments predict a number of internalizing and social difficulties, including lower self-esteem, less competence in peer interaction, and increased dependency on others (Cassidy & Shaver, 2008). Stable, anxious attachments during infancy also predict externalizing behavior at 3 years of age (Shaw & Vondra, 1995). Thus, anxious attachments are a general rather than a specific risk factor for children's psychological problems.

**Separation and Loss** Separation and loss clearly cause distress among children. In the short run, children move through a four-stage process akin to grief when they are separated from or lose an attachment figure. The process includes (1) numbed responsiveness, (2) yearning and protest, (3) disorganization and despair, and, ultimately (4), reorganization and detachment or loss of interest in the former attachment figure (Bowlby, 1979). However, there is considerable controversy about the long-term consequences of separation and loss. Bowlby (1973) asserted that detachment increases the risk for depression. Critics suggest, however, that what Bowlby called detachment really is adjustment to new circumstances (Rutter, 1981). This interpretation highlights children's **resilience**—their ability to “bounce back” from adversity (Masten, 2001). The resilience interpretation is consistent with research that fails to find a relationship between childhood loss and depression during adult life (Harrington & Harrison, 1999).

**Psychological Factors** **Emotion regulation** is the process of learning to identify, evaluate, and control your feelings. As with children's conduct, emotion regulation in children progresses from external to internal control with age. For example, attachment figures soothe the anxiety of infants and toddlers. As they grow older, however, children develop *internal working models* or expectations about relationship security, and these expectations help them to control their own fear.

Some research links troubles with emotion regulation to children's internalizing disorders, particularly among children with a depressed parent (Goodman & Gotlib, 1999). A particular concern is *role reversal*, where children come to care for a parent rather than vice versa. Caretaking children attempt, and

inevitably fail, to make a depressed Mom or Dad happy. This leaves children feeling guilty and responsible (Zahn-Waxler et al., 1990). In fact, adolescent girls who engage in emotional (but not practical) caretaking of a depressed mother are more depressed themselves (Champion et al., 2009).

Of course, it is laudable for a child to feel empathy and concern for a troubled parent. Yet, with their parents' help, children need to learn that taking care of a disturbed parent is not their “job”—not their responsibility. Optimistically, recent research shows that the development of internalizing symptoms in children can be prevented by a psychoeducational program that teaches parenting skills to depressed parents and coping skills to their children. Of note, the program also reduces parents' depressive symptoms (Compas et al., 2009).

## TREATMENT OF INTERNALIZING DISORDERS

“Adult” treatments often have been used without evidence that they work specifically for children. For example, antidepressant medications are second only to psychostimulants as the most commonly prescribed psychotropic drugs for children and adolescents (Zito et al., 2000). Yet, only fluoxetine (Prozac) has proven effectiveness for children (Whittington et al., 2004).<sup>3</sup>

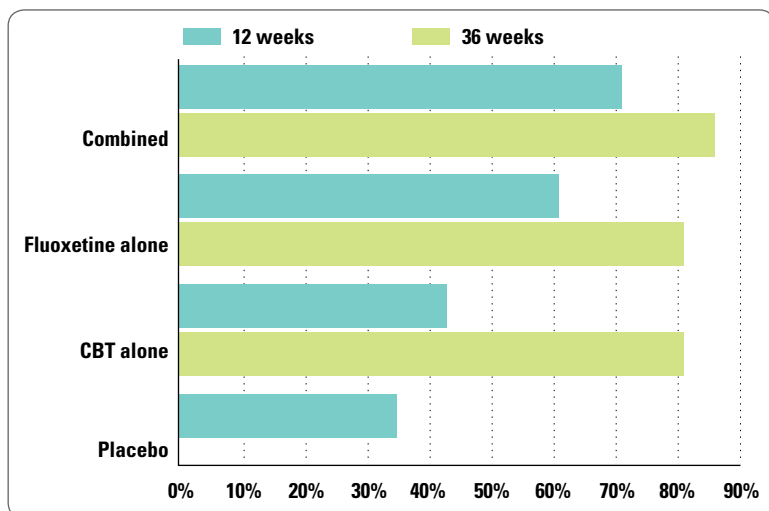
Fortunately, more research is now focusing on how various treatments work specifically for children. An outstanding example is the Treatment for Adolescents with Depression Study (TADS). This multisite clinical trial randomly assigned 439 depressed adolescents to receive either (1) fluoxetine alone, (2) cognitive behavior therapy (CBT), (3) combined medication and CBT, or (4) placebo (TADS, 2004). After 12 weeks of treatment, 71 percent of patients receiving combined therapy improved, which was statically superior to medication alone, CBT alone, or placebo. Medication alone also was statistically superior to CBT or placebo at 12 weeks (see Figure 16.7; TADS, 2004).

Importantly, the results at 36 weeks showed no differences between treatments (see Figure 16.7). (The longer-term results must be qualified because random assignment was broken after 12 weeks.) Of critical importance, however, 14.7 percent of patients in the medication-only group attempted, planned, or thought seriously about suicide at 36 weeks, significantly more than in the combined group (8.4 percent) or with CBT alone (6.3 percent) (TADS, 2007). Together with the superior short-term response, this outcome strongly supports combining medication with CBT in treating depressed adolescents (Reinecke, Curry, & March, 2009).

Evidence that antidepressants increase suicidality in TADS and other studies (Hammand, Laughren, & Racoosin, 2006) led the FDA to require manufacturers to place a “black box” warning on the medications in 2004 (see photo). Prescriptions to children

**Do antidepressants increase adolescents' suicidal risk?**

<sup>3</sup>Recent evidence does indicate, however, that about 40 percent of youth are helped by switching antidepressants if the first is ineffective (Walkup, 2010).



**FIGURE 16.7**

The Treatment of Adolescents with Depression Study (TADS) found that combined fluoxetine and CBT significantly accelerated treatment response (at 12 weeks) compared to all other treatments. Fluoxetine alone worked significantly faster than CBT alone or placebo. No differences were found at 36 weeks. CBT, alone or combined with medication, reduced suicidality (not shown) compared to medication alone.

Source: TADS (2004, 2007)

and adolescents declined significantly as a result (Olson, Marcus, & Druss, 2008), but as we noted earlier, adolescent suicide *increased* during this time (CDC, 2007).

What is the wise course given this conflicting information? Some experts argue that, while antidepressants increase suicidality for *some* teens, the medications reduce suicidality for *more* adolescents. From this perspective, the benefits of antidepressants outweigh their risks (Bridge et al., 2007; Friedman & Leon, 2007). We generally agree. Our view is that antidepressants

are a valuable treatment option for adolescent depression. But suicide potential needs to be carefully assessed, and if there is any hint of suicide risk, medication should not be used or should be combined with CBT.

Turning to the treatment of children's anxiety, there are no large-scale clinical trials comparable to the TADS. Fortunately, however, the number of developmentally sensitive, smaller-scale studies of individual and family treatments is increasing (Hirshfeld-Becker et al., 2010; Kendall et al., 2008; Silverman et al., 1999). CBT is an effective treatment, with benefits evident even six to seven years after treatment (Barrett et al., 2001; Kendall et al., 2004). Family and individual CBT generally are equally effective (Kendall et al., 2008). Medication also may help. Imipramine in combination with CBT may be more effective in treating school refusal than therapy alone (Bernstein et al., 2000), and Luvox helps mixed anxiety in children (RUPP Anxiety Group, 2001). Both clomipramine and SSRIs also are effective in treating children with obsessive-compulsive disorders (Rapoport & Swedo, 2002), although exposure and response prevention, perhaps in combination with medication, still is the treatment of choice for children with OCD, as it is for adults (March et al., 2004).

**Suicidality and Antidepressant Drugs**

Antidepressants increased the risk compared to placebo of suicidal thinking and behavior (suicidality) in children, adolescents, and young adults in short-term studies of major depressive disorder (MDD) and other psychiatric disorders. Anyone considering the use of [Insert established name] or any other antidepressant in a child, adolescent, or young adult must balance this risk with the clinical need. Short-term studies did not show an increase in the risk of suicidality with antidepressants compared to placebo in adults beyond age 24; there was a reduction in risk with antidepressants compared to placebo in adults aged 65 and older. Depression and certain other psychiatric disorders are themselves associated with increases in the risk of suicide. Patients of all ages who are started on antidepressant therapy should be monitored appropriately and observed closely for clinical worsening, suicidality, or unusual changes in behavior. Families and caregivers should be advised of the need for close observation and communication with the prescriber. [Insert Drug Name] is not approved for use in pediatric patients. [The previous sentence would be replaced with the sentence, below, for the following drugs: Prozac: Prozac is approved for use in pediatric patients with MDD and obsessive compulsive disorder (OCD). Zoloft: Zoloft is not approved for use in pediatric patients except for patients with obsessive compulsive disorder (OCD). Fluvoxamine: Fluvoxamine is not approved for use in pediatric patients except for patients with obsessive compulsive disorder (OCD).] (See Warnings: Clinical Worsening and Suicide Risk, Precautions: Information for Patients, and Precautions: Pediatric Use)

On October 15, 2004, the US Food and Drug Administration (FDA) ordered drug companies to place this "black box" warning on the labels of antidepressant medications. The warning remains, although some more recent evidence suggests that antidepressants may actually lower teen suicide risk.

**Course and Outcome** Psychologists used to believe that children "outgrew" internalizing problems. But research shows that some internalizing disorders persist over time. Specific fears tend to be relatively short-lived, but more complex disorders, such as depression (Harrington et al., 1990; Kovacs et al., 1984) and obsessive-compulsive disorder (March et al., 1995), are likely to continue from childhood into adolescence and adult life. Childhood depression predicts a sixfold increase in the risk for suicide in young adults (Harrington, 2002). This prognosis shows the pressing need to develop more effective treatments for children and adolescents with serious internalizing disorders.

# Getting Help

After reading this chapter, you might be wondering about your own mental health during your childhood. If so, your first reaction, as always, should be caution about the “medical student’s syndrome”: the tendency to diagnose yourself with every new disorder. Most psychological disorders are on a continuum with normal behavior, and most of us struggle at some time with a short attention span, restlessness, difficulty in learning, or moodiness. Still, we urge you to consider getting help if you are deeply concerned that you may have ADHD, a learning disability, or long-hidden depression. Or perhaps you are struggling to come to grips with a very difficult childhood experience, anything from your parents’ divorce to abuse. If so, a first step could be to contact your college’s counseling center. Or you may want to begin by talking with an advisor, professor, or dean at your school. Many colleges also offer testing for learning disabilities or other academic-related problems.

Or you may be concerned about a younger brother or sister, or perhaps a child you are working with as

a volunteer. If so, you may want to begin your search for information and help at the website of the National Institute of Child Health and Human Development. An excellent book for working with children with attention-deficit/hyperactivity disorder is Russell Barkley’s *Taking Charge of ADHD*. For dealing with children who have ODD or other behavior problems, or simply for help with managing children, Rex Forehand and Nicholas Long’s book *Parenting the Strong-Willed Child* offers a lot of sound, practical advice. Martin Seligman’s engaging book *The Optimistic Child* focuses on the prevention of depression in children. Katharine Manassis’ *Keys to Parenting Your Anxious Child* offers helpful advice about dealing with children who are anxious but not necessarily suffering from an anxiety disorder.

Playing a game with children is something else you can do to help them (and you) to understand their feelings. The Feelings Company sells therapeutic games online; simply looking through the games may give you some creative ideas. For example, you and your young friend could make

up cards with different feeling words (sad, mad, scared), facial expressions, or leading questions (When was the last time you felt really, really sad?). Turn this into a game, and you may turn the game into a meaningful conversation.

What if you know a child or an adolescent who you think needs professional help? If the young person has confided in you, that’s a great start. You can do a lot by being a caring friend or sibling and a good role model. But you also want to encourage a child with an internalizing problem to confide in a parent—if not about the details of the problems, at least about the child’s interest in getting help. Or you may know a parent who is looking to find help for a child with an externalizing disorder. In either case, asking for names from a teacher or school counselor is a good place to start. In fact, the child’s school may be able to—or required to—provide free services for a troubled student. Another option is the child’s pediatrician, who can prescribe medication if appropriate, or make a referral to a mental health professional.

## SUMMARY

- **Externalizing disorders** create difficulties for the child’s external world, as children fail to control their behavior according to the expectations of others.
- **Attention-deficit/hyperactivity disorder (ADHD)** is particularly noticeable in school and is characterized by inattention, overactivity, and impulsivity.
- **Oppositional defiant disorder (ODD)** is characterized by negative, hostile, and defiant behavior and is also common among school-aged children.
- **Conduct disorder (CD)** is similar to ODD, except the rule violations are much more serious and it is more common among adolescents than younger children.
- **Internalizing disorders** primarily affect the child’s internal world, for example, excessive anxiety or sadness. DSM-IV-TR does not list internalizing disorders for children but notes that children may qualify for many “adult” diagnoses, such as anxiety or mood disorders.
- DSM-IV-TR does include 26 additional childhood disorders, such as *learning disorder* and **separation anxiety disorder**. Some of these disorders are rare; others are questionable in their status as “mental disorders.”
- Boys are more likely to have externalizing problems during childhood, but girls have more internalizing in adolescence and early adult life.
- Family adversity is an important risk factor for externalizing problems.
- Teen suicide rates surged until recently but have declined over the last few years.

- Parents are most effective when they are **authoritative**: loving and firm in disciplining their children.
- **Coercion** is a parenting problem that occurs when parents reinforce children's misbehavior by giving in to their demands.
- The causes of internalizing disorders in children have been studied inadequately but may involve problems with attachments.
- Biological factors in ADHD include **temperament**, neuropsychological abnormalities, and especially genetics.
- Lack of self-control, a tendency to overattribute aggressive intentions to others, and less developed moral reasoning are

psychological characteristics related to externalizing disorders.

- The most promising treatments for externalizing disorders include **psychostimulants** for attention-deficit/hyperactivity disorder (but only in the short term), **behavioral family therapy** for oppositional defiant disorder, and multisystemic family therapy for conduct disorders and **juvenile delinquency**.
- Recent research shows that antidepressants, cognitive behavior therapy, and especially the combination are effective in treating adolescent mood disorders, where suicide is an important concern. Cognitive behavior therapy and perhaps medication is the treatment of choice for children's anxiety disorders.

## The Big Picture

### CRITICAL THINKING REVIEW

- **How are children's psychological disorders different from adults'?**

Other than mental retardation and autistic spectrum disorders (see Chapter 15), the most important . . . are the various externalizing disorders . . . (see p. 420) Table 16.5 summarizes the childhood disorders contained in DSM-IV-TR . . . (see p. 442)

- **Is ADHD any different than just being a "bad kid"?**

About 100 years ago British physician George Still (1902) speculated that the overactivity of some children he treated might be due to biological "defects." Since then, professionals have debated whether the misbehavior of school-aged children should be divided into two types . . . (see p. 424)

- **Are children's psychological problems really a sign of family problems?**

Externalizing disorders are associated with various indicators of family adversity . . . (see p. 427)

- **Can medication really help children behave—and do better in school?**

Psychostimulants improve hyperactivity and impulsivity, but their effects on attention and learning are less certain . . . And even more troubling . . . psychostimulants have not been found to lead to *long-term* improvements . . . (see p. 433)

- **Can young children really be depressed?**

The assessment of depression in children can be particularly difficult . . . (see p. 438)

- **Is it true that antidepressants cause teen suicide?**

Evidence that antidepressants increase suicidality in TADS and other studies led the FDA to require manufacturers to place a "black box" warning on the medications in 2004 . . . (see p. 445)

## KEY TERMS

anxious attachment  
attention deficit  
attention-deficit/  
hyperactivity  
disorder (ADHD)  
authoritative parents

coercion  
conduct disorder  
(CD)  
developmental  
deviation  
developmental norms

developmental  
psychopathology  
emotion regulation  
externalizing  
disorders  
hyperactivity

internalizing disorders  
learning disability (LD)  
oppositional defiant  
disorder (ODD)  
psychostimulants  
recidivism

representative sample  
resilience  
separation anxiety  
disorder  
status offense  
temperament



# Adjustment Disorders and Life-Cycle Transitions

The Transition to Adulthood 453

Family Transitions 457

The Transition to Later Life 464



► *Failure to Launch* is about “extended adolescence,” young people delaying the transition into adult roles until their later 20s, or in this comedy, until 35.

People frequently seek guidance from a mental health professional for problems in living or what DSM-IV-TR calls adjustment disorders. These problems are *not* mental disorders, although individual psychological problems like depression may result from—or cause—problems in living. Young adults may want a therapist’s perspective on struggles associated with

becoming an adult, for example, sorting out values and goals, family issues, or relationship concerns. In midlife, many people seek help for conflicts that arise from an unhappy marriage, a divorce, or lifestyle choices. Older adults sometimes consult therapists about adjusting to later life, including dealing with retirement, loneliness, and bereavement.

## The Big Picture

- Why do people seek treatment if they don't have a DSM disorder?
- What is adult development?
- Do all young adults have an identity crisis?
- Is the "midlife crisis" a myth?
- How are family relationships critical to psychological well-being?
- Is the transition to later life depressing?

## OVERVIEW

In fact, half of people receiving treatment do *not* meet diagnostic criteria for a mental disorder (Kessler, Demler, et al., 2005). Many otherwise well-functioning people seek help with life difficulties or *psychological pain*, upsetting but normal emotions that can result from difficult life events, for example, hurt feelings, sadness, anger, or longing (Laumann-Billings & Emery, 2000).

How can we describe the issues other than mental disorders that bring people into therapy? DSM-IV-TR uses two approaches. First is the diagnosis *adjustment disorder*, the development of clinically significant symptoms in response to stress that are *not* severe enough to be considered a mental disorder. Second is a list of *other conditions that may be a focus of clinical attention*, a DSM-IV-TR list that includes things such as a "partner relational problem" and "phase of life problem."

Unfortunately, DSM only very briefly describes adjustment disorders and other conditions that may be the focus of treatment. There are some good reasons for this shortcoming. People face an array of life problems. Trying to list every possibility

can seem like an impossible task. In fact, experts have only rarely attempted to classify problems in living, and they disagree about existing proposals. Certainly this enterprise is far behind our (imperfect) efforts to classify mental disorders.

Still, we have learned much about *adult development*, the fairly predictable challenges that occur during adult life in relationships, work, life goals, and personal identity. Several theorists divide adult development into three periods—early, middle, and later life. Consistent with this division, we highlight three major **life-cycle transitions**, struggles in moving from one stage of adult development into a new one. The *transition to adult life* is a time for grappling with the major issues related to identity, career, and relationships. *Family transitions* in the middle adult years may include very happy events, like the birth of the first child, or very unhappy ones, like a difficult divorce. The *transition to later life* may involve major changes in life roles (e.g., retirement), grief over the death of loved ones, and more abstract issues that accompany the inevitability of aging and mortality. As an introduction, consider the following case study.



Moving into a new stage of adult life can be a happy time, but many people struggle with the changes brought about by life transitions.

Chuck M. was 51 years old when his wife told him she wanted a divorce. Chuck had been married for 27 years, and he was totally unprepared for her announcement. He knew that his marriage was not perfect, but he had thought of his wife's complaints as normal "nagging." Chuck was content in his lifestyle, and he could not fathom what his wife was thinking. After serving in the navy for 20 years, Chuck was collecting a pension and working as a technician for an electronics company. His two children were grown, the family was financially secure, and Chuck was planning to retire to Florida in another 10 or 15 years. His life was on the course he had set long ago.

At first, Chuck simply did not believe what was happening. His wife said that she had been unhappy for years, but she only recently got the courage to leave him. This account clashed with Chuck's view of their marriage. He openly wondered if the real problem was his wife's menopause, or what he called "her change of life."

Reality began to hit Chuck when his wife moved out of their house and into an apartment. Chuck's wife said that she wanted a friendly divorce, and she telephoned him a few times a week just to talk. Chuck did not want a divorce, but he worked hard to avoid conflict. He said that

he wanted to avoid hard feelings. Although he saw no need for it, Chuck consulted a clinical psychologist at his wife's suggestion. She had been seeing a counselor and found their discussions helpful.

Chuck remained stoic during the first several therapy sessions. He freely discussed the events of his life and admitted that he now realized that he had taken his wife for granted. He grudgingly acknowledged that he was a "little upset" and "pretty angry" but he could not or would not describe his emotions with intensity or detail. Mostly, he wanted the therapist to help him to figure out what was wrong with his wife.

A few weeks later, Chuck's feelings came flooding out when his wife told him that she was in love with another man. Chuck raged to the therapist about how he felt used and cheated. He was stunned, but he was not going to let his wife get away with this. He immediately contacted a lawyer. He wanted to make sure that his wife "didn't get a dime" out of the divorce settlement. Chuck also called his children and told them all of the details about what had happened. He seemed bent on revenge.

Chuck admitted that, in addition to anger, he felt intense hurt and pain: real, physical pain, as though someone had

just punched him in the chest. When the therapist asked if any of these emotions were familiar to him, Chuck recalled his feelings when he was 17 years old. His father died suddenly that year, and Chuck remembered feeling intense grief over the loss. He had controlled his feelings at the

***He grudgingly acknowledged that he was a "little upset" and "pretty angry"***

time, so he was surprised by the strong emotions he now felt in recalling the unfortunate event over 30 years later. His current feelings about his marital separation reminded him a lot of his sadness at his father's death, but his present grief was more volatile and he was much angrier than before.

Chuck talked more about his intense loneliness and sadness as therapy continued over the next few months and it became clear that his marriage really was ending. He kept up his daily routine at home and at work, but he said that it seemed as if he were living in a dream. In the midst of his grief, he sometimes wondered if his entire marriage, his entire life, had been a sham. How could he have been so blind? Who was this woman he had been married to? What was he supposed to do with himself now?

## SYMPTOMS

Are Chuck's reactions typical "symptoms" of adjustment to divorce?<sup>1</sup> Life-cycle transitions differ greatly, and different people respond to the same event in various ways. Chuck's feelings may have little in common with other people's reactions to divorce, let alone with people who are experiencing other major life changes.

Yet, there are similarities across diverse life-cycle transitions. The psychologist Erik Erikson (1902–1994) highlighted *conflict* as a common theme. Erikson organized each of his eight stages of psychosocial development around a central conflict, or what he termed a "*crisis of the healthy personality*" (Erikson, 1959/1980). According to Erikson, the conflict inherent in change creates both intrapsychic and interpersonal tension, as the comfortable but predictable known is pitted against the fearsome but exciting unknown.

We also view conflict as a commonality across different life-cycle transitions. By definition, transitions involve change, and conflict is a frequent consequence of change. Conflict is not necessarily bad; in fact, conflict may be necessary in order for change to occur. Nevertheless, conflict can be distressing. During life-cycle transitions, interpersonal conflicts commonly occur in close relationships. Emotional conflicts include uncertain and difficult feelings. Cognitive conflicts often involve broad doubts about what Erikson (1968) called *identity*, our global sense of self.

*Psychological pain* often is another common "symptom" of life-cycle transitions. What do we mean by psychological pain? People often draw analogies between physical and emotional pain. We talk about hurt feelings, painful memories, or getting "stabbed in the back" by a betrayal. Chuck said he felt like he'd been punched in the chest. Well, the analogy may be more than that. Research shows that many of the same brain systems are involved in both physical and psychological pain (MacDonald & Leary, 2005; Panksepp, 2005). Emotional pain may feel like physical pain, because both experiences involve similar, evolved brain structures and processes. Recent research even shows that *acetaminophen*, an over-the-counter pain reliever

<sup>1</sup>We discuss normal reactions to life-cycle transitions in this chapter but use the terms *symptoms* and *diagnosis* for the sake of consistency with earlier chapters.

you have surely taken for a headache, reduces psychological pain—according to both self-report and measured brain activity (DeWall et al., 2010).

In explaining the consequences of some difficult life transitions, other research shows that psychopathology is a relatively infrequent outcome, but psychological pain is common (Laumann-Billings & Emery, 2000). People remain psychologically intact, but difficult life experiences *hurt*. Pain in the absence of pathology may also explain why such a high percentage of people in therapy do not suffer from a DSM-IV-TR mental disorder. A common reason for seeking treatment probably is pain relief—relief from emotional pain.

DIAGNOSIS

As noted earlier, DSM-IV-TR includes two ways of classifying life issues that are not mental disorders but bring people to the attention of mental health professionals. **Adjustment disorders** involve clinically significant symptoms in response to stress, but the symptoms are not severe enough to warrant classification as a mental disorder (see Table 17.1). Adjustment disorders are similar to acute stress disorders and post-traumatic disorders, because stress causes all three conditions. However, an adjustment disorder can be a reaction to a stressor of any severity, not just traumatic stress.

DSM-IV-TR also contains a list of *other conditions that may be a focus of clinical attention*, sometimes referred to as “V codes”<sup>2</sup> (see Table 17.2). This manual offers only very brief descriptions of each problem. For example, here is the manual’s entire coverage of *partner relational problem*: “This category should be used when the focus of clinical attention is a pattern of interaction between spouses or partners characterized by negative communication (e.g., criticism), distorted communication (e.g., unrealistic expectations), or noncommunications (e.g., withdrawal) that is associated with clinically significant impairment in individual

<sup>2</sup>The term *V code* has no special meaning. It refers to the letter of an appendix in the International Classification of Disease where the codes were once located.

or family functioning or the development of symptoms in one or both partners” (p. 737). (And you thought relationships were complicated!) Because of such limited coverage, we focus on other approaches to conceptualizing life-cycle transitions.

**Erikson’s Psychosocial Development** Erik Erikson (1959/1980) highlighted that development continues throughout adult life. His theory of psychosocial development (see Table 2.5) includes four stages of adult development: (1) identity versus role confusion, (2) intimacy versus self-absorption, (3) generativity versus stagnation, and (4) integrity versus despair.

Erikson viewed *identity versus role confusion* as the major challenge of adolescence and young adulthood. The young person’s goal is to integrate various role identities into a global sense of self. The resolution of the **identity crisis**, this period of basic uncertainty about self, provides the first complete answer to the question “Who am I?” In Erikson’s view, the resolution of the identity crisis allows young adults to embark on a journey toward achieving long-term life goals.

According to Erikson, one life goal is to form an intimate relationship early in adulthood. *Intimacy versus self-absorption* centers on the conflict between closeness and independence. Self-absorbed people either become dependent in intimate relationships or remain aloof from others. True intimacy is a balance between closeness and independence.

Erikson’s third crisis of adult life is *generativity versus stagnation*. Generativity is defined by accomplishments in middle adult life, including career and family achievements. People who stagnate may have both a family and a job, but they live their life without a sense of purpose or direction.

Erikson’s last stage involves the conflict between *integrity and despair*. People can look back on their lives either with a sense of accomplishment or despair and anger. Integrity comes from “the acceptance of one’s one and only life cycle as something that had to be and that, by necessity, permitted of no substitutions” (Erikson, 1963, p. 260). Despair comes from the impossible desire to change the past and from yearning for a second chance at life.

**Adult Transitions** Erikson focused on the psychological side of psychosocial development, whereas many contemporary

TABLE 17.1 DSM-IV-TR Diagnostic Criteria for Adjustment Disorder

- A. The development of emotional or behavioral symptoms in response to an identifiable stressor(s) occurring within 3 months of the onset of the stressor(s).
- B. These symptoms or behaviors are clinically significant as evidenced by either of the following:
  - 1. Marked distress that is in excess of what would be expected from exposure to the stressor
  - 2. Significant impairment in social or occupational (academic) functioning
- C. The stress-related disturbance does not meet the criteria for another specific Axis I disorder and is not merely an exacerbation of a preexisting Axis I or Axis II disorder.
- D. The symptoms do not represent bereavement.
- E. Once the stressor (or its consequences) has terminated, the symptoms do not persist for more than an additional 6 months.

Source: Reprinted with permission from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*, (Copyright © 2000). American Psychiatric Association.



**TABLE 17.2 DSM-IV-TR Listing of Other Conditions That May Be a Focus of Clinical Attention\***

**Relational Problems**

Relational problem related to a mental disorder or general medical condition

Parent–child relational problem

Partner relational problem

Sibling relational problem

**Additional Conditions That May Be a Focus of Clinical Attention**

Noncompliance with treatment

Malingering

Adult antisocial behavior

Child or adolescent antisocial behavior

Borderline intellectual functioning

Age-related cognitive decline

Bereavement

Academic problem

Occupational problem

Identity problem

Religious or spiritual problem

Acculturation problem

Phase of life problem

\*The category also includes the subgroups of psychological factors affecting medical conditions (see Chapter 8), medication-induced movement disorders (see Chapter 13), and problems related to abuse or neglect (see Chapter 18).

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approaches emphasize social relationships. Psychologist Daniel Levinson (1986) noted three major (and many minor) transitions between broad “eras” or “seasons” in adult life. The *early adult transition* involves moving away from family and assuming adult roles. The *midlife transition*—often called a “midlife crisis”—is a time for becoming less driven and developing more compassion. The *late adult transition* is characterized by the changing roles and relationships of later life.

We should consider all models of adult development with some caution. History, ethnicity, gender, culture, and personal values all influence what tasks are “normal.” For example, Erikson assumed that normal adult development included forming an enduring intimate heterosexual relationship, an idea that may seem old fashioned given the diverse lifestyles and demographics of our times.

Another caution is that transitions may not be so predictable. Not everyone experiences an identity crisis during the transition to adult life, nor do all people have a midlife crisis when they turn 40. Women also confront different issues than men in physical aging, relationships, and values (Stewart & Ostrove, 1998). Still, the outlines offered by Erikson and Levinson capture broad commonalities in the experiences of a great many people. Most of us create **social clocks**—age-related goals for ourselves—and we evaluate our achievements to the extent that we are “on time” or “off time.”

## The Transition to Adulthood

In the United States, the transition to adult life typically begins in the late teen years, and it may continue into the middle twenties or even later (Furstenberg, 2010). This is the time young adults assume increasing independence, and many leave their family home. By the end of the transition, most young adults have begun life roles in the central areas of adult development: love and work. More subjectively, 90 percent of American 30-year-olds also report that they feel like they have fully reached adulthood (Arnett, 2007).

### SYMPTOMS OF THE ADULT TRANSITION

Erikson (1959/1980) argued that, in order to assume successful and lasting adult roles, young people need a **moratorium**, a time of uncertainty about themselves and their goals. In his words:

The period can be viewed as a *psychosocial moratorium* during which the individual through free role experimentation may find a niche in some section of his



Young people often explore new roles, relationships, and activities as they search for identity during the transition to young adult life.

society, a niche which is firmly defined and yet seems to be uniquely made for him. In finding it the young adult gains an assured sense of inner continuity and social sameness which will bridge what he was as a child and what he is about to become, and will reconcile his conception of himself and his community's recognition of him. (pp. 119–120, italics in original)

**Identity Crisis** Erikson focused on the **identity crisis** as the central conflict during the transition to adult life. Identity

#### What is involved in the search for identity?

conflicts are epitomized by the searching question “Who am I?” Erikson’s view of identity has broad, popular appeal. In

fact, a search for identity is a frequent theme in coming of age novels like Khaled Hosseini’s *The Kite Runner* or Sue Monk Kidd’s *The Secret Life of Bees* and movies such as *Juno* or *Almost Famous*. At this time of change, many of us feel unable to decide on a career, and our choices can be tentative and volatile. We question our values about religion, sex, and morality. We often doubt our ability to succeed in work or in relationships. Significantly, we also lack perspective on our experience. We feel as though we are confronting fundamental questions about who we are, not merely passing through a “stage.”

A contemporary approach to identity is the construction of a “life story,” an informal autobiography that gives our lives a consistent theme. By creating a life story, we make our new identity concrete and public (Pasupathi, 2001), and perhaps oversimplify the answer to the question “Who am I?” to make our narrative clear, concise, and compelling.

A somewhat different approach focuses on searching for, and finding, “meaning in life.” For example, a recent study of high school seniors from different ethnic backgrounds examined how much young people were searching for meaning in life and the degree to which they had found meaning (Kiang & Fuligni, 2009). Twelfth-graders who were searching for meaning had lower psychological adjustment; those who had found meaning in life were better adjusted. These patterns held across ethnic groups, although Asian Americans

reported higher levels of searching for meaning than either Latin or European Americans. Having found meaning in life accounted for much of the relation between *ethnic identity* and well-being, suggesting that a big part of the protective effect of ethnic identity is imparting meaning in the lives of youth.

**Changing Roles and Relationships** Young people also grapple with more concrete questions than “Who am I?” and “What’s the meaning of life?” They also make very important decisions about whether and where to go to college, how to manage intimate relationships, and what career path to pursue. Such major decisions can permanently alter the course of life. At the same time, young adults and their parents must negotiate new boundaries for their relationship, finding the right balance between autonomy and relatedness (Allen et al., 2002). Conflicts typically increase, as young people interpret parental control as an infringement on their independence (Smetana, 1989). Renegotiating parent–child relationships not only is a goal for the transition to adult life, but it also predicts healthy individual and family adjustment in adult life (Bell & Bell, 2005).

Ego psychologist Karen Horney (1939) proposed a theory that can be helpful to understanding conflicted relationships. Horney theorized that people have competing needs to move toward, to move away from, and to move against others. *Moving toward* others fulfills needs for love and acceptance. *Moving away* from others is a way of establishing independence and efficacy. *Moving against* others meets the individual’s need for power and dominance. According to Horney, relationship difficulties come from conflicts among these three basic needs. Young adults want their parents’ support; they also want their own independence; and at the same time, they may also want to outdo their parents.

Conflicts often increase in peer relationships during the transition to adult life. Young adults become less certain about their friends as they become less certain about themselves. In fact, a sense of certainty about personal identity is associated with both greater intimacy and less conflict in peer relationships, including loving relationships (Fitch & Adams, 1983). Intimate relationships also can take on new meanings during the transition to adult life. Young adults seriously consider the possibility of making a lifelong commitment, a prospect that puts new pressures on love relationships.

The number of changing roles and relationships suggests that the search for self during the transition to adulthood may be less of an attempt to define a single “me” and more of a struggle to integrate new role identities with old ones. Given all the real and practical changes, it is not surprising that many young adults ask: “Who am I?”

**Emotional Turmoil** Emotional conflicts also mark the transition to adult life (Paikoff & Brooks-Gunn, 1991). Research shows that young people experience intense and volatile emotions. In a clever series of studies, psychologists used “beepers” to signal adolescents and adults at various times during the day and night in order to assess their activities and emotional states. In comparison to adults, young people between the ages of 13 and 18 reported emotions that were more intense, shorter lived, and more subject to change (Csikszentmihalyi & Larson, 1984; Larson, Csikszentmihalyi, & Graef, 1980).

Many emotional conflicts during the adult transition stem from uncertainty about relationships. Young people often



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experience the conflicting feelings of love, sadness, and anger in close relationships (Sbarra & Emery, 2005). Thus, emotional struggles stem both from competing feelings and from the intensity of these emotions.

## DIAGNOSIS OF IDENTITY CONFLICTS

Believe it or not, DSM-III-R listed “identity disorder” as a mental disorder(!). DSM-IV-TR wisely relabeled identity problems as “other conditions that may be a focus of clinical attention.” The manual includes a one-sentence description: “This category can be used when the focus of clinical attention is uncertainty about multiple issues relating to identity such as long-term goals, career choice, friendship patterns, sexual orientation and behavior, moral values, and group loyalties” (DSM-IV-TR, 2000).

Alternative classifications of identity conflicts are based on Erikson’s concepts. For example, Marcia (1966) proposed several categories:

- **Identity diffusion:** Young people who have questioned their childhood identities but who are not actively searching for new adult roles.
- **Identity foreclosure:** Young adults who never questioned themselves or their goals but who instead proceed along the predetermined course of their childhood commitments.
- **Identity moratorium:** People who are in the middle of an identity crisis and who are actively searching for adult roles.
- **Identity achievement:** Young people who have questioned their identities and who have successfully decided on their own long-term goals.

Some research supports the validity of these categories (Marcia, 1994). For example, the percentage of students classified as identity achievers increases between the first and last

years of college (Waterman, Geary, & Waterman, 1974), and the percentage continues to increase in the years after college graduation (Waterman & Goldman, 1976). Consistent with Erikson’s theory, identity achievers also are less conforming and more confident in social interaction than others are (Adams et al., 1985; Adams, Abraham, & Markstrom, 1987). Moreover, some exciting research on *racial identity* (ethnic identity specifically among African Americans) supports both the four group model and the better adjustment of identity achievers (Seaton, Scottham, & Sellers, 2006). Still, the expected developmental progression from identity diffusion to identity achievement may not accurately describe many people’s growth. Instead, the different identity statuses can reflect differences in personality and cultural expectations (Bosma & Kunnen, 2001; Seaton et al., 2006).

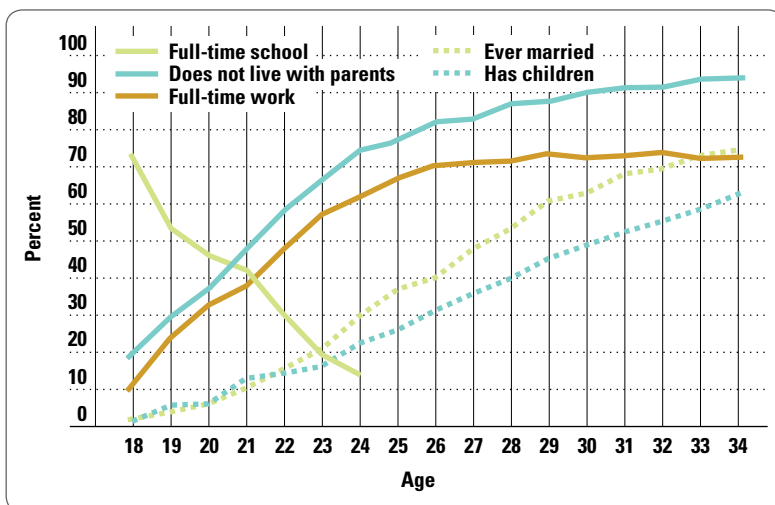
## FREQUENCY OF IDENTITY CONFLICTS

In many industrialized countries, young people wait longer in assuming adult roles today, even in comparison to a few decades ago. As one commentator put it, “Most young people now spend the period from their late teens to their mid-20s not settling into long-term adult roles but trying out different experiences and gradually making their way toward enduring choices in love and work (Arnett, 2007, p. 69). The extended period of “emerging adulthood” is documented by the longer times that young people live at home, spend in school, delay marriage, and delay childbearing (Settersten & Ray, 2010; see Figure 17.1). It also is reflected in the popular media, for example, in the movie *Failure to Launch*.

How many people experience significant distress during the transition to adult life? How many people never fully assume the responsibility of adult roles? To what extent are identity conflicts influenced by cultural expectations? Unfortunately, psychologists have few empirical answers to these crucial questions. Perhaps the most solid evidence pertains to cultural influences on identity formation. For example, research conducted during the 1960s, a time of social and political strife, particularly for college students, suggested that a new identity status was common during this historical period: *alienated identity achievement*. Young people with this status assumed an adult identity (they were identity achievers), but their definition of self was alienated; it conflicted with many values held by the larger society (Marcia, 1994). These people chose new adult roles that differed from traditional ones.

College students may be less alienated today, but demographic data suggest more reasons for alienation among a different group of young adults: young people with a high school education or less (Hendry & Kloep, 2007). In 2008, large numbers of young people aged 16 to 24 in the United States were neither in school nor employed, including 12 percent of white males (13 percent of white females), 21 percent of black males (21 percent of black females), and 15 percent of Hispanic males (26 percent of Hispanic females) (Danziger & Ratner, 2010). These young people, and others working in low-paying jobs, face extremely limited prospects not only for work but also in family life. Nonmarital childbearing and cohabitation (that is unlikely to endure) have become the norm for this group. College-educated young people also live together frequently. However, most college graduates eventually marry, and they generally delay childbearing until after marriage—and until they have completed their education (Furstenberg, 2010). Identity diffusion may be a consequence of unresolved psychological conflicts. But delays in making commitments to work and family can also result from the limited opportunities available to some members of society.





**FIGURE 17.1** Roles That Mark the Adult Transition

Percent of young adults in the United States engaged in roles associated with the transition to adult life. Today, young people assume adult roles at an older age than they did a generation or two earlier—and later than young people still do in many less industrialized societies.

Source: Rumbaut, R. G., & Komaie, G. (2010). Immigration and adult transitions. *The Future of Children*, 20, p. 48.

## CAUSES OF IDENTITY CONFLICTS

The most successful young adults have parents who strike a balance between supporting and supervising their children—and giving them increasing independence (Hill & Holmbeck, 1986; Sartor & Youniss, 2002). Identity achievers often grow up in such families, whereas identity diffusers may have rejecting and distant families. Identity foreclosers often have overprotective families (Adams & Adams, 1989; Marcia, 1994).

Is the absence of an identity crisis a problem that foreshadows struggles later in life? Cross-cultural considerations suggest that the “storm and stress” of the transition to adult life is a consequence of the affluence, education, and independence of young

*Does everyone have to have an “identity crisis”?*

people in Western, industrialized societies. In other cultures, people’s life course may be determined by parental authority or economic necessity, neither of

which allows for an identity crisis (Hendry & Kloep, 2007). In the not too distant past, people also assumed adult roles at much younger ages in the United States. In some families and socioeconomic groups, they still do.

Gender roles also may influence identity formation, or at least they once did. In the 1980s, Erikson’s theories were criticized for focusing on men and work. Women, it was argued, form identities based on relationships (Gilligan, 1982). This difference suggested that men may form an identity *before* entering a lasting relationship, while women define themselves *in terms of* those relationships. Gender roles change, however. For practical and social reasons, women today more typically establish a career before entering a committed relationship. This “quiet revolution” means that women, like men, now are more likely to form their identity in terms of work and outside of relationships (Goldin, 2006).

## TREATMENT DURING THE TRANSITION TO ADULT LIFE

Many young adults seek therapy during the transition to adult life, an observation bolstered by the frequent utilization of college counseling services. However, no research has been conducted on alternative treatments for these young people. Treatment goals often include validating the young person’s distress and helping him or her to understand and clarify difficult

life choices. In addition, it may be helpful to “normalize” the experience of identity conflict, that is, to conceptualize the individual’s struggle as a part of the difficult but normal confusion resulting from the search for self. Finally, many clinicians suggest that supportive, nondirective therapy is a particularly appropriate treatment for young people who are trying to “find themselves.” The following brief case illustrates the approach.

### BRIEF CASE STUDY

#### Samantha’s Birth Mother

Samantha was stunned when she went to see a clinical psychologist. She was a 21-year-old senior in college, and her birth mother had recently contacted her for the first time in Samantha’s life. Samantha had not yet met her biological mother, and she was pretty certain that she did not want to. Samantha had always known that she was adopted, and she deeply loved her parents—parents, not adoptive parents, she insisted. Samantha had never yearned to meet her biological parents, and she did not welcome this unexpected intrusion in her life. She also did not want to do anything that would seem slightly disloyal to her parents, who also were surprised and distraught about the sudden appearance of Samantha’s birth mother.

Apart from this recent shock, Samantha was a happy, well-adjusted, and successful young woman. She reported no history of emotional problems, talked at length about her close friends and boyfriend, seemed thoroughly attached to her parents, and was a successful psychology major who maintained a 3.4 GPA. Yet, she was understandably confused and upset about the appearance of her birth mother. She cried at length, but her overall affect was angry. She half-shouted questions at her therapist like, “What right does this stranger have to intrude in my life?”

The therapist encouraged Samantha to give voice to her many feelings. Samantha was angry—and guilty, frustrated, and confused. She also was afraid to meet her biological mother, in large part because she felt like she might be meeting part of herself. What if this woman were mean? Ugly? Unpleasant? What if Samantha didn’t like her? What if she did? Who would her mother be then? Who would Samantha be?



With the psychologist’s support, Samantha explored her feelings and her options in therapy and on her own. She read about the experiences of other adopted young people who had met their birth parents, and even chatted with some on the Internet. The sharing of their trying experiences “normalized” Samantha’s feelings in a much more direct way than the psychologist’s reassuring comments.

Eventually, Samantha decided that she did want to meet her birth mother after all. Despite her initial apprehension, Samantha was exuberant after the meeting. She *liked* her birth mother, who was apologetic, sad, and eager to get to know Samantha, but understanding of Samantha’s ambivalent feelings and not at all pushy. Moreover, Samantha’s mother, like Samantha herself, was relieved when the known proved to be far less frightening than the unknown. Samantha ended therapy before she had figured out who she was—now. Still, she was confident that she was going to be able to answer that question.

# Family Transitions

Not everyone experiences a midlife crisis, but most adults experience a variety of challenging family transitions during the middle years of adult life. *Family transitions* may involve the addition or loss of members of a family household and include transitions to marriage, parenting, and the *empty nest*—the adjustment that occurs when adult children leave the family home. Divorce and remarriage also are common family transitions in the United States today, an observation that underscores the fact that families extend beyond the boundaries of one household.

Social scientists often conceptualize family change in terms of the **family life cycle**—the developmental course of family relationships throughout life. Table 17.3 outlines one view of the family life cycle. This outline, like most, focuses on how families react to major changes in children’s development. Of course, the tasks are not the same for all families. Childless families, single-parent families, divorced families, remarried families, gay and lesbian families, and extended family groups all face unique obstacles and opportunities, as do families of different ethnic backgrounds.

## SYMPTOMS OF FAMILY TRANSITIONS

All family transitions are characterized by change—changes in time demands, changing expectations, and changes in love and power in family relationships. Early in marriage, newlyweds negotiate expectations about time together, emotional closeness, and who will assume responsibility for various tasks inside and outside the household. The roles that couples assume early in their marriage can set a pattern that lasts a lifetime. Still, roles must be renegotiated when children are born. Children place numerous demands on each partner’s time, energy, and patience. And although it is a joyous event, the birth of the first child also challenges the marital relationship. A spouse’s needs may become a second priority to the demands of parenting, and the birth of children also confronts young adults with the dilemma of competing demands between work and family (Cowan & Cowan, 1992).

As children grow older, parents must gradually change relationships with their children in order to meet the children’s developmental needs. Maintaining warmth while loosening the reins of control is the overriding theme. When children leave the family home, adults must discover or rediscover interests inside their marriage and outside the home. These patterns are

TABLE 17.3 The Family Life Cycle

| Stage                   | Family Developmental Tasks  |
|-------------------------|---|
| 1. Married Couple       | Establishing a mutually satisfying marriage; adjusting to pregnancy and the promise of parenthood; fitting into kin network   |
| 2. Childbearing         | Having, adjusting to, and encouraging the development of infants; establishing a satisfying home for both parents and infants   |
| 3. Preschool Age        | Adapting to the critical needs and interests of preschool children in stimulating, growth-promoting ways; coping with energy depletion and lack of privacy as parents |
| 4. School Age           | Fitting into the community of school-aged families in constructive ways; encouraging children’s educational achievement   |
| 5. Teenage              | Balancing freedom with responsibility as teenagers mature and emancipate themselves; establishing postparental interests and careers                                  |
| 6. Launching Center     | Releasing young adults into work, military service, college, marriage, and so forth with appropriate rituals and assistance; maintaining a supportive home base       |
| 7. Middle-Aged Parents  | Rebuilding the marriage relationship; maintaining kin ties with older and younger generations   |
| 8. Aging Family Members | Coping with bereavement and living alone; closing the family home or adapting to aging; adjusting to retirement   |

Source: Duvall, *Marriage & Family Development*, 6th, © 1984. Printed and Electronically reproduced by permission of Pearson Education, Inc., Upper Saddle River, New Jersey.



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www.cartoonbank.com

again altered by the birth of grandchildren, retirement, and other family transitions of later life.

**Family Conflict** Increased conflict is a common consequence of changing family relationships. The increase in conflict is illustrated by research on the relationship between children's age and parents' marital satisfaction. On average, marital satisfaction declines following the birth of the first child and does not rise again until the family nest begins to empty (Gorchoff, John, & Helson, 2008).

Family members may fight about hundreds of issues. However, psychologists generally have been more concerned with the process than the content of family conflict. One analysis suggests that all disputes during family transitions ultimately involve either power struggles or intimacy struggles. *Power struggles* are attempts to change dominance relations, whereas *intimacy struggles* are attempts to alter the degree of closeness in a relationship (Emery, 1992).

Increased conflict may be a normal part of family transitions, but conflict creates great difficulties for some families. One of the most consistent findings concerns the *reciprocity*, or social exchange, of cooperation and conflict (Bradbury, Fincham, & Beach, 2000; Gottman & Notarius, 2000). Family members who have happy relationships reciprocate each other's positive actions, but they overlook negative behavior. A grouchy remark is dismissed as part of a "bad day," whereas a compliment is readily returned. In contrast, families with troubled relationships get caught in negative cycles of interaction. They ignore positive actions but reciprocate negative ones. An unhappily married wife might ask her husband to stop reading the paper during dinner, and instead of putting the paper down, he puts her down. In far too many families, such conflict can escalate into family violence (Cordova et al., 1993).

A particular problem in intimate relationships is the *demand and withdrawal* pattern, where one partner becomes increasingly demanding and the other withdraws further and further. Conflicts go unresolved, and the couple's relationship grows increasingly distant. Evidence indicates that demand and withdrawal interactions predict future marital dissatisfaction, especially among women (Heavey, Christensen, & Malamuth, 1995). Other evidence shows that conflicts in troubled families are more likely to continue over time and to spill over into other family relationships (Margolin, Christensen, & John, 1996). For example, marital conflicts may lead to fights between parents and children, as the children become another focus of an ongoing marital dispute.

**Emotional Distress** Whether family conflict is expressed through explosive outbursts, constant bickering, or the "silent treatment," fighting often causes emotional distress for all family members. Venting a little anger can be a relief, but ongoing conflict and anger can become all-consuming. Moreover, anger often is an "emotional cover-up," masking deeper hurts including loneliness, pain, longing, and grief (Emery, 2004, 2011; MacDonald & Leary, 2005).

Of course, some conflict is natural, even constructive during family transitions. We solve problems by working through our differences. Interestingly, happily married couples tend to blame their marital disputes on difficult but temporary circumstances. They "get over it." Unhappily married couples blame their partner's personality, however, a recipe for *not* solving problems (Bradbury & Fincham, 1990). In fact, the use of the pronoun "you" in couples' interactions predicts marital unhappiness, while the use of the pronoun "I" predicts greater satisfaction (Simmons, Gordon, & Chambless, 2005).

Unresolved conflicts can cause considerable individual distress (Whisman, Sheldon, & Goering, 2000). Ongoing conflict, particularly in intimate relationships, is closely linked with depression, especially among women (Beach, Sandeen, & O'Leary, 1990) and children (Cummings & Davies, 2010). Emotional turmoil also is a painful part of separation and divorce. The most significant, long-term consequence of divorce for children involves painful feelings and memories, not psychological problems. Even resilient young people report painful feelings many years after their parents' divorce (Laumann-Billings & Emery, 2000).

**Cognitive Conflicts** Family transitions also can set off new identity conflicts. Identity is closely linked with family roles, and changes in those roles can cause us to doubt ourselves in significant ways. The quest for a new sense of self can center on the question, "Who am I—now?" For example, a recently divorced adult no longer is a husband or a wife. He or she also may feel like a failure as a father or mother and question his or her success, or goals, for other life roles. In short, a crisis of identity is not limited to the adult transition, turning 40, or for that matter, divorce. Getting married, becoming a parent, infertility, or the empty nest also may trigger doubts that lead to a new search for a new sense of self.

Family transitions also confront people with a fundamental conflict between *acceptance and change* (Christensen et al., 2006). Our ability to mold children, parents, partners, or ourselves is not limitless. In order to maintain harmony in families, we must learn to accept those things we cannot change in our loved ones.

## DIAGNOSIS OF TROUBLED FAMILY RELATIONSHIPS

Some theorists argue that diagnostic systems need to classify troubled relationships, not just individuals (Beach et al., 2006; Heyman et al., 2009). In fact, one major consideration for revising the DSM is whether to include diagnoses for “relational disorders.” (Heyman & Slep, 2006). According to this reasoning, some psychological problems do not reside within the individual but, rather, in the individual’s relationship with his or her social world.

One example of a dysfunctional relationship is *scapegoating*, where one person is blamed for all of a family’s troubles. Figure 17.2 portrays one boy’s view of his role as a family scapegoat. Scapegoating can allow other family members to avoid their own problems, for example, unhappily married parents might ignore their own troubles by worrying about or blaming a troubled child.

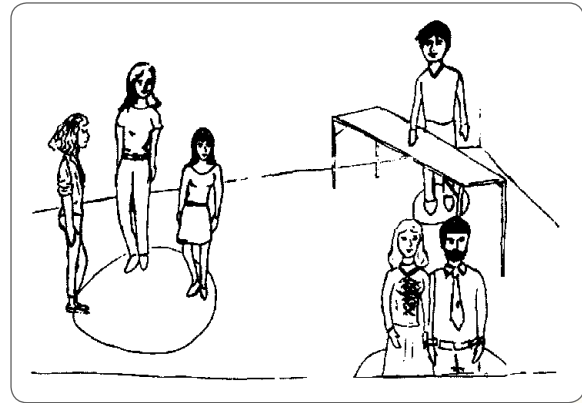
A few theorists have developed listings of interaction patterns like scapegoating or of *interpersonal diagnoses*, classifications of troubled close relationships (Group for the Advancement of Psychiatry, 1995; McLemore & Benjamin, 1979). Conceptually, we find this approach appealing. However, efforts to classify troubled relationships are in their early stages, and we do not anticipate a new diagnostic category to be included in the DSM in the near future. Still, we are encouraged by progress in establishing the reliability and validity of more straightforward interpersonal diagnoses, such as “partner relational problem,” “child physical abuse,” and “parenting problem” (Heyman et al., 2009).

## FREQUENCY OF FAMILY TRANSITIONS

Some family transitions are so important that the U.S. Census Bureau and other federal agencies regularly collect information on their frequency. Surveys indicate that over 90 percent of adults in the United States get married during their adult lives. Age at first marriage has increased, however, rising from the early to the later 20s over the last several decades. The average age at first marriage is 25.9 for women and 28.1 for men (U.S. Bureau of the Census, 2010). And over half of all couples today cohabit before marriage (Cherlin, 2009). About five out of every six women in



Interpersonal conflict and emotional distress often accompany difficult family transitions.



**FIGURE 17.2**

Miguel arranged family members in this way when asked to make a “sculpture” of his family during a family therapy session. Miguel put himself behind the table and apart from his siblings and parents, a clue to his status as the family scapegoat.

Source: Illustration by Gaston Weisz, p. 76, “Miguel’s Sculpture of His Family” from *Handbook of Structured Techniques in Marriage and Family* by R. Sherman and N. Fredman. Copyright © 1986. Reprinted by permission of the author, Dr. Gaston Weisz, NYS Licensed Psychologist, Valley Stream District Thirteen, Adelphi University, University of Phoenix.

the United States bear a child, but childbirth increasingly is taking place outside of marriage. In 2007, almost 40 percent of births were to unmarried mothers, including 69.9 percent of births to African American mothers, 48.0 percent for Hispanic mothers, and 25.3 percent for white mothers. Contrary to popular perception, nonmarital births to teenagers are declining. Births to teens comprised 50 percent of nonmarital births in 1970, but fell to 23 percent in 2007 (Ventura, 2009).

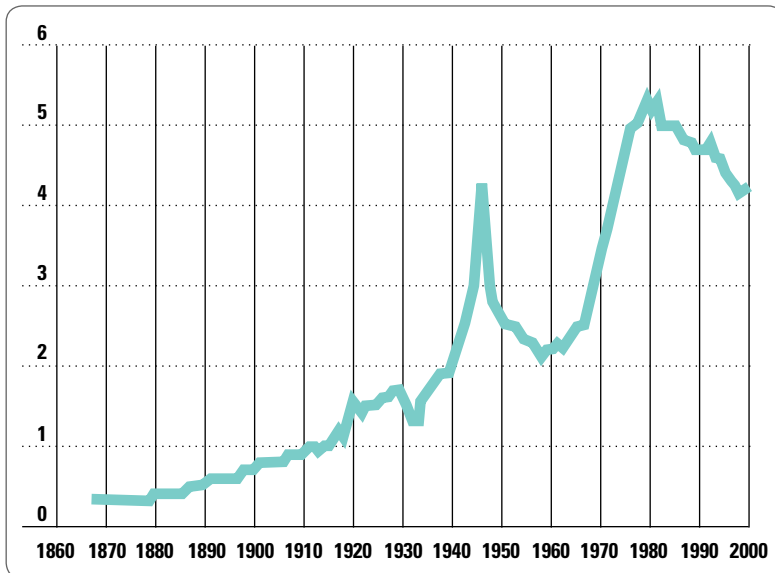
Although “happily ever after” may be the stuff of fairy tales, at any point in time most people report their marriage as happy. Still, one national study found significant marital discord among 31 percent of couples (Whisman, Beach, & Snyder, 2008). The number of couples who are unhappy with their marriage at some point in time is surely much larger as satisfaction fluctuates through the family life cycle.

Divorce rates increased dramatically in the United States from the late 1960s to the early 1980s but stabilized and fell somewhat since then (see Figure 17.3). Some are heartened by the decline in divorce, but most of the drop is due to increases in nonmarital childbearing and cohabitation. Those people who are most prone to divorce are less likely to marry today. And estimates indicate that about 40 percent of all existing marriages will still end in divorce. Divorce is likely to be followed by remarriage. About three out of four whites and one out of two blacks remarry following a divorce. Many divorced adults, including divorced parents, cohabit before remarriage or instead of remarrying (Emery, 1999a).

## CAUSES OF DIFFICULTY IN FAMILY TRANSITIONS

Most theories of the causes of difficulties in family transitions emphasize psychological and social factors. However, individuals





**FIGURE 17.3** U.S. Divorce Rates Have Risen for over 100 Years

Divorce rates have trended upward for over a century. The steep rise in the 1960s and 1970s reached a plateau, but the decline since 1980 is misleading. Divorce is declining because couples who are most likely to divorce are cohabiting and/or having children outside of marriage.

Source: R. E. Emery, 1999, *Marriage, Divorce, and Children's Adjustment*, 2nd ed., p. 13. Thousand Oaks, CA: Sage. Copyright © 1999. Reprinted by permission of Sage Publications, Inc.

also help to make their own environments, which means that environments are partially *heritable* (see Research Methods). Thus, we also must consider biological contributions to family transitions.

**Psychological Factors** Researchers often blame family difficulties on problems with *communication*. Communication includes both intended meaning and nonverbal behaviors that can convey subtle or even contradictory meaning. For example, think of the different meanings you can attach to a simple statement like “You look great today.” Depending on your tone of voice, emphasis, and nonverbal gestures, the same statement might be an honest compliment, a sarcastic insult, a sexual invitation, or a disinterested platitude. Verbal and nonverbal communication difficulties clearly distinguish distressed from nondistressed family relationships (Gottman, 1994).

Based on his extensive studies of marital interaction, John Gottman (1994), a clinical psychologist and noted marital interaction researcher, has identified four basic communication troubles. He observed these patterns in studies of married couples, but these communication problems also occur between other intimate partners, parents and children, and even divorced parents:

- **Criticism** involves attacking someone’s personality rather than his or her actions, for example, “You’re boring!” instead of “Can we do something different?”
- **Contempt** is an insult that may be motivated by anger and is intended to hurt the other person, for example, “I never loved you!”
- **Defensiveness** is a form of self-justification, such as, “I was only trying to help, but I guess my feelings don’t matter!”
- **Stonewalling** is a pattern of isolation and withdrawal, for example, verbally or nonverbally saying, “I don’t want to talk about this anymore!”

**Social Factors** Broader family roles also can contribute to distressed family relationships. Many people believe, for

example, that pressures to fulfill traditional marital roles—the wife as homemaker and the husband as breadwinner—cause difficulties for some marriages. One study found that *androgynous* couples—husbands and wives who both scored high on measures of masculinity *and* femininity—had marriages that were happier and less distressed than more traditional unions (Baucom et al., 1990). Although nontraditional gender roles may lead to better long-term outcomes, androgyny may create more conflict in the short run. Androgynous couples must negotiate the terms of their relationship instead of assuming traditional roles. Doing so takes time, effort, and conflict resolution skills.

Numerous other social and cultural influences may contribute to family distress (Karney & Bradbury, 1995). Poverty, unemployment, crowded living conditions, and limited social support all can challenge family life. In fact, many family problems are societal concerns in the United States today. Teenage pregnancy, nonmarital childbirth, divorce, and family violence are pressing social issues, not just psychological ones.

**Biological Factors** Biological factors also contribute to problems in families (Booth et al., 2000), which brings us to a central debate: Does family conflict cause individual dysfunction, or do troubled individuals cause relationship problems? For example, people who have never been married, are divorced, or have troubled relationships are at risk for depression. But this correlation has several potential explanations. Relationship distress may cause depression, or happiness might protect against it. Or causality may work in the other direction. People who are depressed may be less likely to get, stay, or be happily married (South, Turkheimer, & Oltmanns, 2008).

An important special case of the “correlation does not mean causation” problem is the *gene-environment correlation*, the fact that environmental experience is itself correlated with genetic background (see Critical Thinking Matters). We know from twin studies, for example, that even divorce is partly genetic (D’Onofrio et al., 2006; McGue & Lykken, 1992). This may seem startling—or foolish—when you first consider it, but if you pause to ponder this puzzle, it will begin to make sense. Divorce—or



# RESEARCH METHODS

## GENES AND THE ENVIRONMENT

When researchers find that MZ twins have higher concordance rates than DZ twins, they rightly conclude that genes contribute to the studied problem or characteristic. Yet, twin studies also yield important information about the environment. Concordance rates for MZ twins would be perfect if a disorder were purely genetic. Thus, MZ concordance rates that are less than 100 percent demonstrate the contribution of the environment.

Because twin studies yield information about both genes and environments, behavior geneticists have developed ways of measuring **heritability**, the relative contribution of genes to a characteristic. Researchers often estimate heritability with a statistic called the **heritability ratio**, which can be described according to the following simple formula:

$$\text{Heritability ratio} = \frac{\text{Variance due to genetic factors}}{\text{Total variance}}$$

where Total variance = Variance due to genetic factors + Variance due to environmental factors + Variance due to the interaction of genes and environment<sup>3</sup>

The heritability ratio is a useful summary when it is interpreted correctly, but you should particularly note two cautions. First, any estimate of heritability is necessarily limited to the particular sample. When a researcher finds a heritability of 50 percent, this does not mean that the trait has the same heritability in the population as a whole or that heritability ratios are unchangeable. Consider this. One political goal in the United States is to provide everyone with the same rich

<sup>3</sup>The variance due to environments can be further divided into shared and nonshared environmental components. An example of a shared environment is family income; an example of a nonshared environment is your boyfriend or wife.

environment. But if everyone experienced the identical environment, all differences between people would be genetic. You can see this by setting the variance due to the environment to zero in the preceding equation. In this case, heritability always equals 1.0. Although there are dramatic and frightening exceptions, most contemporary environments vary relatively little from one another compared to what is possible in theory. This increases estimates of heritability (Stoolmiller, 1999).

One practical implication of this theoretical point is that environments may matter more than we are able to detect. The environmental variation found in today's research does not include historical changes that have produced huge increases in life expectancy, education, and material resources. Thus, estimates of heritability in today's samples may be high, in part because there is relatively limited environmental variation—*notwithstanding ongoing social problems like poverty, racism, and sexism.*

Our second caution about the heritability ratio is that genes and environments work together, not separately. Thus, dividing contributions into genetic and environmental components artificially separates them. For example, what is the appropriate heritability for PKU, a cause of mental retardation known to result from the pairing of two recessive genes *combined* with the ingestion of foods containing phenylalanine? PKU is not caused by some percentage of genes and some percentage of the environment. PKU is caused by a critical *gene–environment interaction*.

This brings us to another important point about genes and the environment. Behavior geneticists have emphasized that experience is not random (Scarr & McCartney, 1983). Rather, there is

a **gene–environment correlation**, a nonrandom association between inborn propensities and environmental experience. The gene–environment correlation can be *active*, because different people seek out different environments. For example, risk takers constantly seek thrills, while risk-adverse people seek stable, predictable environments. Gene–environment correlations can also be *passive*, because parents provide children both with genes and a family environment. For example, genetically influenced impulsivity may make people both more likely to divorce and to pass on impulsive traits to their children. Because of gene–environment correlations, family transitions may be partly determined by biology.

Gene–environment correlations can be very important to recognize in trying to interpret the effects of environmental experiences. Because divorce does not occur at random, for example, children from divorced and married families differ in more ways than their parents' marital

### **Why are genes more influential in consistently good environments?**

status. Thus, researchers who compare children from married and divorced families are comparing apples and oranges. Recent, genetically informed research suggests that this concern is more than theoretical. The internalizing problems found among children from divorced families can be explained by correlated genetic influences, while their externalizing problems are more likely to be true divorce consequences (D'Onofrio et al., 2006).

Genes and the environment are treated as separate in calculating the heritability ratio, but in real life they are connected through gene–environment correlations and gene–environment interactions.

teen pregnancy or cohabitation or most any family event—does not occur at random. Research, and common sense, tell us that these experiences are more likely when people differ in their background (for example, education and income), personality (for example, tendency toward risk taking or social conformity),

and physical characteristics (for example, age at first menarche or physical appearance). To the extent that background, personality, or physical characteristics are influenced by genes, the family experience also is correlated with those genes. That is, there is a gene–environment correlation.

# Critical Thinking Matters

## A DIVORCE GENE?

Throughout the text, we have noted genetic contributions to various mental disorders. You may be a bit surprised to hear that experience also is genetic. Divorce is one provocative example. Psychologists Matt McGue and David Lykken (1992) of the University of Minnesota found higher concordance rates for divorce among MZ than among DZ twin pairs in a sample of more than 1,500 twin pairs. In fact, the investigators calculated that the heritability of divorce was .525.

How could divorce be genetic? This is where critical thinking is, well, critical. Clearly, there is no divorce gene. But wait. When you read that mood disorders or eating disorders were genetic, maybe you *did* think there was a gene for depression or bulimia. Just as you must do with

divorce, you should think critically about *what mechanism* might make these mental disorders genetic.

One mechanism that might make divorce genetic is personality, at least that part of personality partially shaped by genetics—for example, a tendency toward thrill seeking or a relative insensitivity to social sanctions. But there are other possibilities. Genes affect physical attractiveness and the age

at menarche (Mendle et al., 2006). Physical appearance and early sexual maturation, in turn, may set a chain of events into motion: attention for something other than your good character, attracting less committed dates and eventual mates, and ultimately the increased risk of divorce. This would make divorce genetic,

but not in the way you typically think “genetic” means.

“Genes” is a common answer to the question, “What causes mental disorders?” But this does not necessarily mean there is a gene for eating disorders, depression, and so on. Rather, the genetic mechanism might be indirect, affecting body type in the case of eating disorders

### How can divorce be genetic?

and perhaps family experience in the case of depression. Critical thinking does not change the fact that mental disorders are influenced by genes. But critical thinking might help us to think more broadly, creatively, and, we hope, more accurately about possible genetic mechanisms.

Consider this example. Jane Mendle and colleagues (2006) tested the well-established finding that girls who grow up with an unrelated male in their household (for example,

### How is family experience partly genetic?

a stepfather) reach menarche at a younger age than other girls. Researchers have struggled to explain this puzzling finding. Some have suggested that this

results from an evolutionary adaptation: Stressful family life causes early menarche because it contributes to the reproductive strategy of having more children (Belsky, Steinberg, & Draper, 1991).

However, Mendle and colleagues (2006) found that a gene–environment correlation is responsible for the puzzling correlation. What is the genetic third variable? The *mother’s* early age at menarche. Mother’s age at menarche strongly determines her daughter’s age at menarche (which makes sense; Meyer et al., 1991). Mother’s age at menarche also contributes to the likelihood that her daughter will grow up with an unrelated man in the household. How? Early maturing girls, in this case the mother, attract older men who are not particularly good long-term prospects. These men are attracted to younger girls because of the girls’ prominent secondary sexual characteristics (early breast and hip development)—and surely for other bad reasons. As a result, young age at menarche is likely to be associated with relationship instability, and ultimately with your daughter growing up with an unrelated man in the household.

Researchers are beginning to untangle gene–environment correlations. Doing so is a challenging and exciting area of research. Biology undeniably contributes to family experience (see Critical Thinking Matters).

## TREATMENT DURING FAMILY TRANSITIONS

Treatments for families include couple and family therapy and various community projects designed to prevent problems. We introduce a few of these many and varied efforts.

**Prevention** Programs designed to prevent relationship distress have a long and informal history. Perhaps the most common efforts involve religious groups. Many religions encourage or require couples to attend counseling sessions. Religious and secular marriage education programs lead to better communication and relationship satisfaction, but demonstrated benefits are limited to middle-income, white samples (Hawkins et al., 2008). Whether such efforts help lower-income and minority group members is an important question for research—and for policy, as the U.S. government has tried to promote marriage in recent years.

An exemplary relationship education program is the Pre-marital Relationship Enhancement Program (PREP). PREP participants meet in small groups, where they freely discuss their expectations for their relationships, including difficult



Many religious groups require couples counseling before marriage, a theme in the comedy movie, *License to Wed*, portrayed here. Premarital counseling has some benefits, and some government agencies now encourage it as well.

topics such as sexuality. Couples also learn specific communication and problem-solving skills. One study found that couples randomly assigned to PREP maintained their relationship satisfaction three years later, while the happiness of control couples declined during this time (Markman et al., 1988). Even five years later, PREP couples maintained improved communication and reported lower rates of violence than control couples (Markman et al., 1993). Researchers report similar benefits for a variation on the program implemented in Germany (Hahlweg et al., 1998). Yet, there is a caveat to these positive findings. In two different studies, a small group of women who became extremely positive after PREP reported *more* marital distress five years later (Baucom et al., 2006). This suggests that, while it is important to be supportive in communication, it is unhealthy to become a “Pollyanna.” Couples invariably face challenges, and maintaining a happy relationship involves recognizing and addressing important issues.

The success of PREP is encouraging, as are efforts to prevent distress at a critical time in the family life cycle: when a couple’s first child is born (Schulz et al., 2006). But the systematic research conducted on these model programs is of broader importance. Prevention programs have been developed to help families at nearly every transition in the family life cycle. There are childbirth programs, parenting programs, and support groups for parents whose children are infants, preschoolers, school-aged, or teenagers. Courts have programs for helping parents cope with separation, divorce, and remarriage. Creativity in developing programs is not lacking. What is often missing, however, is systematic research on the effectiveness of prevention efforts.

**Couple Therapy and Family Therapy** *Couple therapy* and *family therapy* both focus on changing relationships rather than changing individuals (Gurman & Jacobson, 2002). The couple or family therapist acts as an objective outsider who helps family members to identify and voice their disagreements, work on improving communication, solve specific problems, and ultimately change troubled family relationships. This very different approach to therapy is illustrated in the following brief case study.

## BRIEF CASE STUDY

### Learning To Listen

Jan and Bill sought therapy for long-standing troubles in their marriage. Jan, a homemaker, complained that Bill did not help enough with running the household or raising the couple’s three children. More poignantly, Jan felt unloved, because Bill did not seem to enjoy being around her and the children. Bill countered that he loved being with his children, but that Jan was a constant nag who did not appreciate the demands of his job as an insurance salesman. He also said that she was a “bottomless pit” in demanding his love and attention. The couple had been seen for several sessions when the following interaction occurred:

**JAN:** Bill and I were supposed to be working on a schedule so that he would only call on clients two evenings last week. But just like I knew would happen, Bill didn’t follow through. (Jan begins to cry.) I just knew you wouldn’t do it! Is that so much to ask? Couldn’t you be home a few evenings during the week? Couldn’t you at least tell me when you have to go out?

**BILL:** (in a monotone) I got some new clients this week, and there’s a sales push on. I couldn’t reschedule. Next week will be better.

**JAN:** Next week won’t be any different! Or the week after that! You aren’t going to change. Why should you? You have everything your way!

**THERAPIST:** I can see you’re upset, Jan, but let’s give Bill a chance. Do you know your schedule for next week?

**BILL:** Pretty much, but you never know.

**THERAPIST:** Do you want to make a commitment to Jan right now about what nights you will be home in the evening next week?

**BILL:** I suppose I can be home around six or so on Tuesday . . .

**JAN:** You suppose! Go ahead and . . .

**THERAPIST:** One second, Jan. OK, Bill. Tuesday is a start, but do you see what your tone of voice says to Jan?

**BILL:** But she’s always complaining about something! I said that I’d be home, OK? What else do you want me to do?

**JAN:** I want you to want to be home.

**THERAPIST:** Now we’re getting to the real issue. Part of this is about schedules and time together, but part of this is about what these things mean. Jan, when it seems like Bill doesn’t want to be around you and the kids, you feel unloved.

**JAN:** That’s what I just said. You heard me, but he didn’t.

**THERAPIST:** Bill, you feel controlled when Jan asks you about your work schedule. You have a lot to balance between work and home, and maybe you really don’t want to be with Jan when you feel like she’s forcing you to come home.

**BILL:** That’s exactly how I feel.

**THERAPIST:** I want the two of you to talk with each other about these feelings. Then we will get back to work on a schedule that might help to solve some practical problems. Jan, tell Bill how you feel—and Bill, I only want you to listen to her feelings. Try to understand what she says. Don’t worry about rebuttal. In a few minutes, we’ll try this the other way around.



Several aspects of couple therapy are evident in this brief exchange. One goal was to help the couple negotiate tricky work and family schedules. Even an imperfect schedule might reduce some conflict. Another goal was to break the couple's negative cycle of interaction and to encourage Jan and Bill to talk about deeper feelings. The discussion of emotions should allow the couple to develop a schedule in a way that might alleviate some hurt feelings. If they could mutually agree on a plan, Jan would have one less reason to feel rejected, and Bill would have one less reason to feel controlled.

**Cognitive Behavioral Couple Therapy** Most research on couple therapy has examined cognitive behavioral approaches. *Cognitive behavioral couple therapy (CBCT)* emphasizes the couple's moment-to-moment interaction, particularly their exchange of positive and negative behaviors, their style of communication, and their strategies for solving problems (Baucom, Epstein, & LaTaillade, 2002). Systematic research on the effectiveness of CBCT indicates that couple therapy leads to significant improvements (Shadish & Baldwin, 2005). Still, approximately half of couples seen in CBCT do not improve significantly. Relapse at follow-up is also common, and other treatment approaches appear to be about as effective (Alexander, Holtzworth-Munroe, & Jameson, 1994).

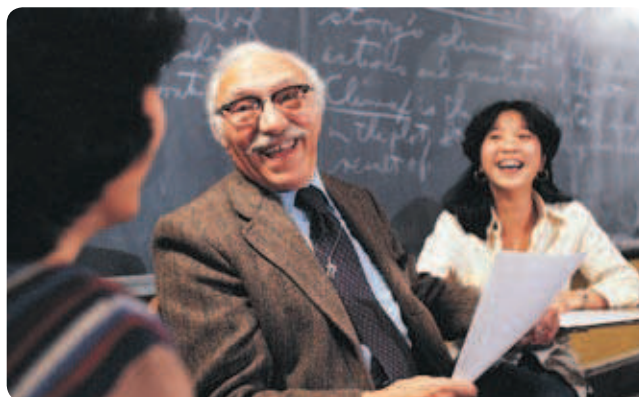
There clearly is a need to expand on CBCT and perhaps integrate it with other approaches. Emerging treatment research demonstrates the long-term importance of helping couples to accept each other's imperfections, not just trying to get each other to change (Christensen et al., 2004, 2006). Other evidence-based approaches to couple therapy focus much more on emotion and emotional understanding (Johnson, 2008). Finally, there is also a need to extend research efforts to include treatments for other difficult family transitions, for example, coping with divorce (Emery, 2011).

Couple therapy increasingly is being used not only to improve relationships, but also as an alternative to individual therapy in treating psychological disorders, including depression, anxiety, alcoholism, and psychological disorders of childhood. Research suggests that an improved relationship helps to alleviate individual disorders, particularly depression (Beach, Sandeen, & O'Leary, 1990; Jacobson, Holtzworth-Munroe, & Schmalings, 1989). These findings again underscore the reciprocal nature of individual and family relationships. In some cases, successful couple therapy removes the cause of individual distress. In other cases, family therapy enables others to understand and cope with one person's psychological troubles.

## The Transition to Later Life

Many people think of "old" as beginning at the age of 65 or 70, but aging and the transition to later life do not begin at any particular age. The transition extends over many years and includes a number of changes in appearance, health, family, friendships, work, and living arrangements. The nature, timing, and meaning of the transition also may differ for men and women.

Adults become increasingly aware of aging in their forties and fifties. Middle-aged men often worry about their physical performance in athletics and sex. Men also become more



The transition to later life is not a time of despair for most people. Older adults who remain physically active and socially involved have better mental and physical health.

concerned about their physical health, especially as they learn of events like a friend's unexpected heart attack. Women also worry about their physical performance and appearance in middle age, but married women often are more concerned with their husbands' than with their own physical health. Men have a notably shorter life expectancy than women—seven years shorter on average. Thus, even as they encourage their husbands to follow good health practices, many middle-aged wives begin a mental "rehearsal for widowhood" (Neugarten, 1990).

Concerns about physical health increase for both men and women in their sixties, seventies, and eighties. Chronic diseases such as hypertension become common (Federal Interagency Forum on Aging-Related Statistics [FIFARS], 2010). All five sensory systems decline in acuity, and many cognitive abilities diminish with advancing age (Salthouse, 2004). All these physical changes occur gradually throughout adult life, but the decline in functioning accelerates, on average, around the age of 75. Major social transitions also take place during the later adult years. Most people retire in their early to late sixties, a transition that is eagerly anticipated by many people but dreaded by some. Whether retirement is seen as the end of a valued career or the beginning of a new life, it requires a redefinition of family roles as people have more time and new expectations for themselves and loved ones. Parents become more of a "friend" to children who are now adults themselves, while many older adults offer children and grandchildren practical support and a sense of continuity in family life. As older adults



move through their seventies and into their eighties, children who are now middle-aged increasingly find themselves worrying about and caring for their parents.

Death is an inevitability that confronts all of us. With advancing age, we must face both the abstraction of our own mortality and specific fears about a painful and prolonged death. Bereavement is a part of life for older adults, as friends fall ill and die. Because of differences in life expectancy, women are particularly likely to become widows in their sixties, seventies, and eighties (see Figure 17.4).

## AGEISM

Older adults often confront a form of social prejudice known as **ageism**, a term that encompasses a number of misconceptions and prejudices about aging (Pasupathi, Carstensen, & Tsai, 1995). Young people, even mental health professionals, sometimes view older adults as stubborn, irritable, bossy, or complaining. Research indicates that adults may become more inwardly focused as they enter later life. Still, the major finding is that personality is consistent throughout adult life (Magai, 2001). Some older adults *are* stubborn and irritable—much like they were as younger adults. Stereotypes based on prejudices or fears about aging are just that.

## SYMPTOMS

Later life encompasses a large age range as well as numerous social and psychological transitions, so we can offer an overview of only a few topics here: changes in physical functioning and health; happiness, work, and relationships; bereavement and grief; and mental health and suicide.

**Physical Functioning and Health** Physical functioning and health decline with age, but the loss of health and vigor is not nearly as rapid as stereotypes suggest. Men and women can and do remain healthy and active well into their seventies and eighties. In fact, physical activity and physical health are among the better predictors of psychological well-being among older adults.

**Menopause**, the cessation of menstruation, is an important physical focus for middle-aged women. (Men do not

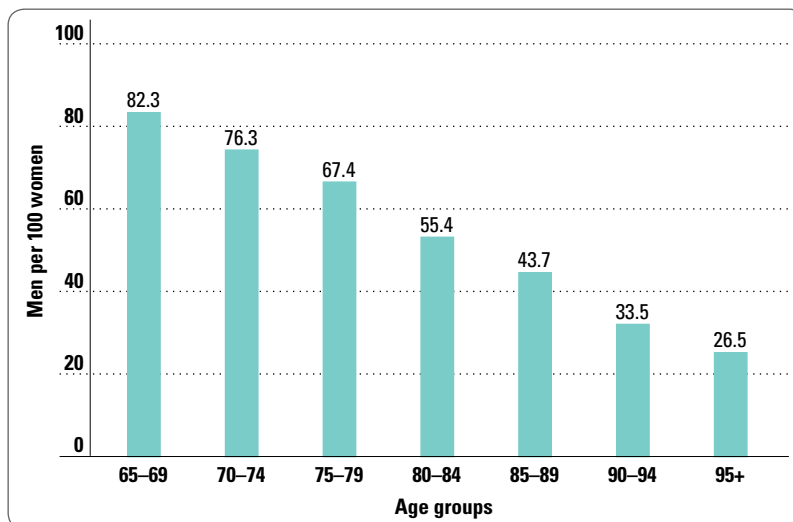
experience a similar change in reproductive functioning.) Women in the United States have their last period at an average age of 51 years, although menstruation typically is erratic for at least two or three years prior to its complete cessation. Many women experience physical symptoms such as “hot flashes” during menopause, and some experience emotional swings as well, for example, crying for no apparent reason. Episodes of depression also increase during menopause.

Psychological adjustments contribute to emotional volatility during menopause, but so do fluctuations in the female sex hormone *estrogen*. In fact, *hormone replacement therapy*, the administration of artificial estrogen, alleviates many physical and psychological symptoms of menopause. However, it has no direct effect on depression, which is unrelated to estrogen levels during menopause (Rutter & Rutter, 1993). Hormone replacement therapy also reduces the risk for heart and bone disease, but it is a controversial treatment because it increases the risk for cancer.

Some women struggle to redefine their identity as they face changes in their bodies, appearance, and family lives around the time of menopause. For others, menopause is *not* a trying time. They find the freedom from fear of pregnancy liberating and enjoy the “empty nest.” They value the time they now have for themselves and for their partners (Gorchoff et al., 2008).

Menopause is a rather “sudden” event in comparison to other physical changes that occur with age. For example, the functioning of all sensory systems declines gradually throughout adult life. Visual acuity declines slowly with age, as does the ability of the lens to accommodate from focusing on an object that is near to one that is far away. The eye also adapts to darkness or to light more slowly with age. Hearing loss also is gradual throughout adult life, particularly the ability to hear high tones. Sensitivity to taste, smell, and touch also decreases with advancing age. As with vision and hearing, however, declines in these senses typically are gradual until the seventies, when loss of sensitivity may accelerate notably (Fozard & Gordon-Salant, 2001).

Muscle mass also declines with age, but, like sensory function, the loss is gradual until advanced age. A 70-year-old retains 80 percent of his or her young adult muscle strength, but the loss may double in the next 10 years. Bone loss also occurs with advancing age, with women experiencing bone loss



**FIGURE 17.4** The Number of Men per 100 Women Among Older Adults

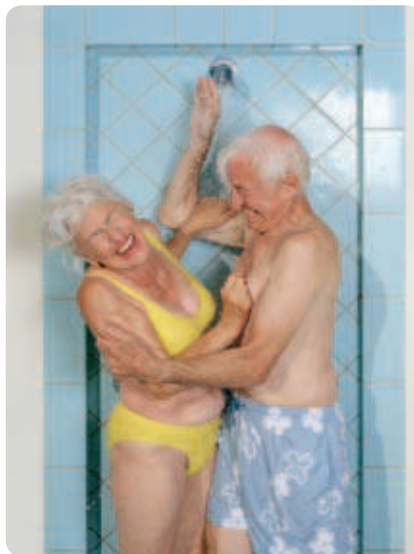
Women live longer than men; therefore, the ratio of men to women shrinks with increasing age.

Source: U.S. Bureau of the Census, 1996, “65+ in the United States,” *Current Population Reports*, Series P23-190, pp. 2–10. Washington, DC: U.S. Government Printing Office.

at twice the rate of men. After menopause, women are especially susceptible to the development of *osteoporosis*, a condition in which bones become honeycombed and can be broken easily. Many older adults develop other chronic illnesses, especially arthritis, cardiovascular diseases, cancer, and diabetes (FIFARS, 2010). It is often assumed that sleep disorders are epidemic among older adults. After controlling for health and other indirect influences on sleep, however, sleep is generally not a problem for older adults. When it is, evidence shows that “sleep hygiene” interventions are effective in improving sleeping problems among the aged (Vitiello, 2009).

### Happiness, Work, Relationships, and Sex

The fact that aging is accompanied by gradual declines in physical health does *not* mean that older adults experience similar declines in psychological well-being. In fact, older adults report more positive relationships and a greater sense of mastery over their environment than do adults who are young or in midlife (Fingerman & Charles, 2010). On the other hand, older adults have less of a sense of purpose in life and less



Contrary to stereotypes, sex often remains an important part of intimate relationships for older adults.

may accompany the changes that come from becoming a grandparent or retiring from a long-term occupation (Kaufman & Elder, 2003). Unfortunately, little research has been conducted on Erikson’s conceptualization (see Reliving the Past).

satisfaction with personal growth (Ryff, Kwan, & Singer, 2001).

Older adults also report greater job satisfaction than younger people, but this may be a result of self-selection. Older adults tend to remain in a satisfying occupation, while many younger adults struggle to find the right job. Most older adults view retirement positively, even though it can be a mixed blessing. Retirement leads to a loss of income and perhaps of status, and this can make retirement difficult for some older adults. On average, however, these costs are outweighed by the added benefits of increased leisure and freedom, especially for people with adequate financial resources (Kim & Moen, 2001).

Erik Erikson theorized that the conflict between integrity and despair is the central psychological struggle of later life. Many older adults do wonder about the meaning of their lives when they look back from the perspective of their later years. Identity conflicts also

## RELIVING THE PAST

Researchers have begun to study a common phenomenon among older adults: *reminiscence*—the recounting of personal memories of the distant past. Reminiscence, sometimes called *life-review* or *nostalgia*, may be helpful in facilitating adjustment during later life, and many senior centers offer life history discussion groups as a part of their services (Coleman, 2005; Sedikides et al., 2008).

All memories of the past are not equal, as suggested by Erikson’s conflict between integrity and despair. Older adults may recall their journey through life with pride and acceptance or with disappointment and regret. As a way of studying how memories of the past can mark adjustment, the Canadian psychologists Paul Wong and Lisa Watt outlined six categories of reminiscence.

*Integrative reminiscence* is an attempt to achieve a sense of self-worth, coherence, and reconciliation with the

past. It includes a discussion of past conflicts and losses, but it is characterized by an overriding acceptance of events. *Instrumental reminiscence* involves the review of goal-directed activities and attainments. It reflects a sense of control and success in overcoming life’s obstacles. *Transitive reminiscence* serves the function of passing on cultural heritage and personal legacy, and it includes both direct moral instruction and storytelling that has clear moral implications. *Escapist reminiscence* is full of glorification of the past and deprecation of the present, a yearning for the “good old days.” *Obsessive reminiscence* includes preoccupation with failure and is full of guilt, bitterness, and despair. Finally, *narrative reminiscence* is descriptive rather than interpretive. It involves “sticking to the facts” and does not serve clear intrapsychic or interpersonal functions.

Evidence indicates that integrative reminiscence and instrumental reminiscence are related to successful aging, whereas obsessive reminiscence is associated with less successful adjustment in later life (Wong & Watt, 1991). Other research similarly finds that reminiscence can be positively (focusing on communication or preparing for death) or negatively (reviving

### Is it unhealthy for older adults to relive the past?

old problems, filling the void, or trying to maintain connections with the departed) related to better mental health (Cappeliez, O’Rourke, & Chaudhury, 2005). The next step is to study whether reminiscence can be structured or guided in such a way that it helps older adults review and come to terms with their lives.

People have more friendships as young adults than during later life, but the quality of relationships is more important than the number (Antonucci, 2001). And one reason why older adults have fewer friendships is because they become more selective. Older adults actively choose to spend their time with the people they care for most, perhaps because their time is limited and more valuable (Carstensen, Isaacowitz, & Charles, 1999).

Family relationships strongly influence psychological well-being throughout the life span. Later in life, relationships with children become especially important. Sibling relationships also may take on renewed practical and emotional importance (Cohler & Nakamura, 1996). Satisfaction with an enduring intimate relationship increases in later life, and conflicts may become less embedded or intense. This, too, may be related to the foreshortened sense of time. The belief that “this may be the last time” encourages older adults to focus on the positive and overlook or forgive the negative (Fingerman & Charles, 2010).

Sexuality remains important to many older adults. A recent national survey found that 73 percent of adults aged 57 to 64 were sexually active, as were 53 percent of 65- to 74-year-olds and 26 percent of adults aged 75 to 85 (Lindau et al., 2007). In fact, almost one-quarter of the oldest group of sexually active adults reported having sex once a week or more! Many older people had sexual difficulties such as problems with lubrication or erection. For example, 14 percent of men took medication for erectile dysfunction. Good health predicted more sexual activity, as did, not surprisingly, the presence of a spouse or other intimate partner.

Unfortunately, the loss of loved ones, including the loss of a spouse, is a fact of life for older adults, as illustrated in the following case study.

## BRIEF CASE STUDY

### Mrs. J.'s Loss

Mrs. J. was 78 years old when she consulted a clinical psychologist for the first time in her life. Mrs. J. was physically fit, intellectually sharp, and emotionally vital. However, she remained terribly distressed by her husband's death. Eighteen months earlier, the 83-year-old Mr. J. had suffered a stroke. After a few weeks in the hospital, he was transferred to a nursing home, where his recuperation progressed slowly over the course of several months. According to his wife, Mr. J.'s care in the nursing home bordered on malpractice. He died as a result of infections from pervasive bedsores that he developed lying in the same position for hours on end. The staff was supposed to shift his position frequently in order to prevent bedsores from developing, but according to Mrs. J., they simply ignored her husband.

Mrs. J. was uncertain about how to handle her grief, because she was stricken by many conflicting emotions. She had literally waited a lifetime to find the right man—she had married for the first time at the age of 71 after a long and successful career as a schoolteacher. She had been content throughout her life, but her marriage was bliss. She felt intensely sad over

the loss of her husband, and she continued to make him part of her life. She would talk aloud to his picture when she awoke in the morning, and she visited his grave daily except when the weather was very bad.

Mrs. J. cried freely when discussing her loss, but she also chastised herself for not doing better in “getting on with her life.” She had several female friends with whom she played bridge several times a week. Mrs. J. enjoyed the company of her friends, who also were widowed and who seemed more accepting of their losses.

A greater problem than acceptance was the intense anger Mrs. J. often felt but rarely acknowledged. She was furious at the nursing home, and she was vaguely considering legal action against the institution. During her career as a teacher, she had never tolerated incompetence, and the failures of the nursing home had robbed her of happiness. She was confused, however, because her minister said that her anger was wrong. He said that she should forgive the nursing home and be happy to know that her husband was in heaven. Mrs. J. wanted to follow her minister's advice, but her emotions would not allow it. She wanted the psychologist to tell her if her feelings were wrong.

Clearly, it was not wrong for Mrs. J. to be distraught over her husband's death, but were some of her other reactions abnormal? Having constant thoughts of another person might seem obsessive in some circumstances, and talking out loud to a picture might indicate delusions or hallucinations. Mrs. J. was showing normal reactions to grief, however, as similar responses are common among other grief-stricken older people. Frequent thoughts of a loved one are a normal part of grief, and it also is normal for intense grief to continue for a year or two, or perhaps longer. But what about Mrs. J.'s anger? Whether she should forgive the nursing home or sue depends on many factors, of course, but she was not wrong—abnormal—for feeling angry. Evidence indicates that anger, too, is a common part of grief (Sbarra & Emery, 2005).

**Grief and Bereavement** Grief is the emotional and social process of coping with a separation or a loss. **Bereavement** is a specific form of grieving in response to the death of a loved one. Grief in bereavement is commonly described as proceeding in a series of stages. For example, Elisabeth Kübler-Ross (1969), who developed a popular model of bereavement from her work with the terminally ill, described grief as occurring in five stages: (1) denial, (2) anger, (3) bargaining, (4) depression, and (5) acceptance.

Kübler-Ross's model is similar to Bowlby's (1979) four-stage outline of children's responses to separation or loss (see Chapter 16). Importantly, Bowlby's attachment theory offers an explanation for why someone might feel angry in the middle of intense sadness over a loss. Yearning and searching (his second stage of grief) is a pursuit of, and a signal to, the missing attachment figure—an attempt to bring about reunion. A child who is separated from a parent cries, screams angrily, and searches for the parent in order to get her or him back. Of course, a reunion is impossible following the death of a loved one, as bereaved people understand intellectually. But emotions are not rational, particularly at a time of loss.





Grief is a part of life for older adults.

Stage theories of grief have intuitive appeal, but research shows that few people grieve in a fixed sequence of stages. Rather, mourners vacillate among different emotions—for example, moving back and forth between longing, sadness, and anger (Sbarra & Emery, 2005). Many people do not experience the stages described by Kübler-Ross, and others show few observable reactions—they “suffer in silence.” In short, there is no one “right” way to grieve, and people should not be forced to express grief. In fact, research generally indicates that *less* intense bereavement predicts *better* long-term adjustment to loss (Bonanno et al., 2005; Stroebe et al., 2002; Wortman & Silver, 2001). Another predictor of better long-term adjustment is expressing grief selectively de-

### Is there only one way to grieve?

pending on whether it is appropriate to the context (Coifman & Bonanno, 2010).

In general, bereavement is more intense when a loss is “off time”—for example, when the loss of a mate occurs early in adult life or when a child dies before a parent (Cohler & Nakamura, 1996). There is no “good” time to lose a loved one, of course, but we are more prepared for the death of aged family members, and we often can find some solace in their long life.

Mrs. J.’s grief *was* a normal reaction to the loss of her husband, but there are cases where grief becomes problematic. “Complicated grief” has even been proposed as a new diagnostic category, as perhaps 10 to 15 percent of bereaved people experience especially intense or prolonged grief (Bonanno et al., 2007; Neimeyer & Currier, 2009). Yet, the proposed diagnosis is controversial. Grief is an undeniably important emotional process. However, some experts are concerned about labeling a normal experience as abnormal, fearing that “medicalizing” grief will undermine existing social and cultural supports for bereavement.

**Mental Health and Suicide** With the exception of the cognitive disorders, mood and anxiety disorders are the most common emotional problems among older adults. Contrary to some stereotypes, however, later life is not a time of fear, disappointment, dejection, and despair. Affective disorders are less than half as common among older as among younger adults, and anxiety disorders also are less prevalent (Gatz & Smyer, 2001; Magai, 2001).

Despite the lower prevalence rates, psychological disorders are an important concern among older adults. This is especially true of depression, which may be more profound, lasting, and debilitating among older than younger adults. Suicide risk is a particular concern; adults over the age of 65 have the highest rate of completed suicide of any age group. The risk for completed suicide is notably higher among older white males, and, in fact, suicide is one of the top 10 causes of death among older adults (FIFARS, 2010). Many experts view the increase in suicide as a consequence not only of emotional problems, but also as a result of chronic pain, physical disease, and the prospect of a long terminal illness (Wrosch, Schulz, & Heckhausen, 2004). In fact, *rational suicide* is a controversial term for the decision some severely ill older adults make in ending their lives (Gallagher-Thompson & Osgood, 1997).

Even more controversial is *assisted suicide*, a hotly debated procedure where a medical professional helps terminally ill people to end their own lives. In the late 1990s, Oregon became the first state where physicians can legally assist patients to hasten their death. (Assisted suicide is now also legal in Washington and Montana.) In Oregon, assisted suicide is legal provided the patient is (1) over 18 years old; (2) a resident of Oregon; (3) diagnosed with a terminal illness with a life expectancy of six months or less; and (4) capable of making a reasonable decision (Rosenfeld, 2004). To date, the small number of legally assisted suicides in Oregon involved patients who were older, white, well educated, and dying of cancer (see Table 17.4).

## DIAGNOSIS OF AGING

Experts often classify adults in later life based on their age and health status. In **gerontology**, the multidisciplinary study of



The headquarters of Dignitas, an assisted suicide clinic in Switzerland. Assisted suicide for those suffering from a painful, terminal illness is controversial. Some see assisted suicide as humane; others view it as a crime or a sin.



**TABLE 17.4 Assisted Suicides in Oregon**

|                             | 1998 | 1999 | 2000 | 2001 | 2002 |
|-----------------------------|------|------|------|------|------|
| Number of assisted suicides | 16   | 27   | 27   | 23   | 36   |
| Average age                 | 70   | 71   | 70   | 68   | 69   |
| Percent female              | 50   | 41   | 56   | 62   | 29   |
| Percent white               | 100  | 96   | 96   | 95   | 97   |
| Percent cancer              | 88   | 63   | 78   | 86   | 84   |

Oregon is one of three states in the United States where assisted suicide is legal. Most assisted suicides involve older whites who are dying of cancer.

Source: Adapted from B. Rosenfeld, 2004, *Assisted Suicide and the Right to Die*, Washington: American Psychological Association, p. 157. Copyright © 2004, American Psychological Association.

aging, it is common to distinguish among the young-old, the old-old, and the oldest-old.

The *young-old* are adults roughly between the ages of 65 and 75. However, the category is defined less by age than by health and vigor. Notwithstanding the normal physical problems of aging, the young-old are in good health and are active members of their communities. The majority of older adults belong to this group.

The *old-old* are adults between the ages of approximately 75 and 85 who suffer from major physical, psychological, or social (largely economic) problems. They require some routine assistance in living, although only about 6 percent of Americans in this age group live in a nursing home. Despite advanced age, a healthy and active 80-year-old adult would be considered to be young-old instead of old-old.

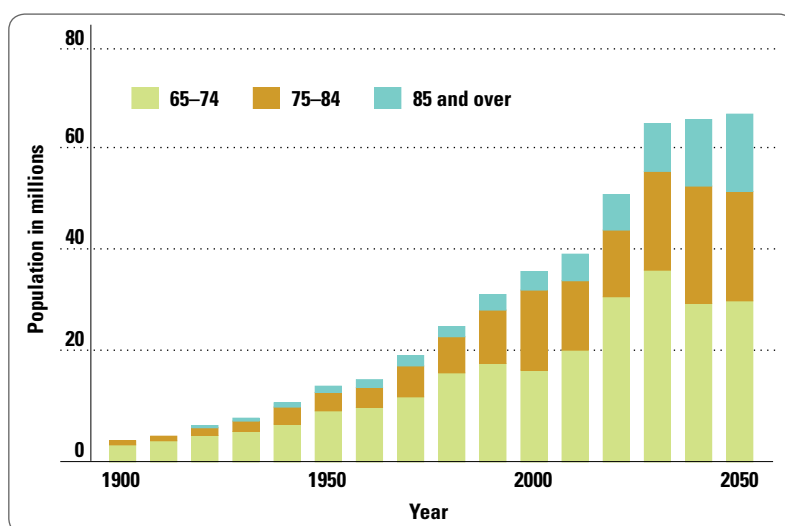
Finally, the *oldest-old* are adults 85 years old or older, a group that as a result of male mortality and financial strains, including health care costs, is comprised of a disproportionate number of widowed women and low-income groups. Still, the

oldest-old is a diverse group. Some people maintain their vigor; others need constant assistance. Fifteen percent live in nursing homes (FIFARS, 2010).

## FREQUENCY OF AGING

In 2008, 13 percent of the U.S. population—39 million people—were 65 years of age or older. Approximately 15 percent are the oldest-old—people 85 years old or older—the fastest growing segment of the population (FIFARS, 2010). Both the proportion and the absolute number of older Americans will increase through the middle of the twenty-first century. The increase is partly as a result of medical advances but primarily due to the aging of the post–World War II “baby boom” generation (see Figure 17.5).

The proportion of the U.S. population 65 years of age or older should peak around the year 2030. At that time, one out of every five Americans will be at least 65 years old. The number of the oldest-old will increase most dramatically. In



**FIGURE 17.5 The Growing Number of Older Adults**

The actual and projected number of older adults in the United States aged 65 or older. Note the particularly dramatic increase in the oldest-old population.

Source: U.S. Bureau of the Census, 1983, “America in Transition: An Aging Society,” *Current Population Reports*, Series P23-128. Washington, DC: U.S. Government Printing Office.

fact, the proportion and absolute number of the oldest-old will continue to rise until halfway through the twenty-first century. By the year 2050, the oldest-old should comprise one-fourth of the population of older adults (U.S. Census Bureau, 1996).

Most older Americans are women, and the ratio of women to men increases at older ages (see Figure 17.4). One important consequence of gender differences in longevity is that the majority of older men (72 percent) live with a spouse, while only a minority of older women do (42 percent) (FIFARS, 2010). Census data also indicate that poverty rates are higher among older Americans than among younger age groups (except children), and the percentage of older Americans living in poverty increases with advancing age (FIFARS, 2010). This is due, in part, to the lower economic status of widowed women.

## CAUSES OF PSYCHOLOGICAL PROBLEMS IN LATER LIFE

There is little doubt that the most important biological contribution to psychological well-being in later life is good physical health (Cohler & Nakamura, 1996). In fact, a study of adults over the age of 70 found that both men and women listed poor health as the most common contribution to a negative quality of life (Flanagan, 1982). We should note, however, that the relationship between psychological well-being and health also operates in the opposite direction. The experience of positive emotion in later life predicts more successful coping with stress and improved health behavior (Ong, 2010).

*Health behavior* is particularly important to the physical well-being of older adults. Increased vigor and good health are associated with proper diet, continued exercise, weight control, and the avoidance of cigarette smoking and excessive alcohol use (Leventhal et al., 2001). Many of these health behaviors also are tied to better cognitive functioning among older people (Colcombe & Kramer, 2003; Hess, 2005). It even has been suggested that the overriding goal

**How is physical health critical to successful aging?**



Relationships and physical activity are two keys to healthy adjustment in later life.

of gerontology should be to promote healthy and active lifestyles among older adults, because in industrialized societies, current life expectancies probably are very close to the biological limits of the human species (Fries, 1990). Increasing longevity may be unrealistic, but it is possible to extend the number of vigorous and healthy years of life.

Psychological contributions to adjustment in later life include close relationships and loss. Bereavement and living alone are more strongly related to depression among men than among women (Siegel & Kuykendall, 1990). Among men over the age of 70, the most frequent positive contributions to quality of life include relationships with spouses, friends, and children. Because so many women over the age of 70 are widowed, they list relationships with friends and children, as well as general socializing, as most important to their well-being (Flanagan, 1982).

Numerous social factors are linked with a happier transition to later life, especially material well-being and participation in recreational activities. Religion is also very important to many older adults, and religious affiliations have been found to moderate the ill effects of bereavement, particularly among men (Siegel & Kuykendall, 1990). Other research indicates that integration into the community is a major contribution to adjustment to later life.

## TREATMENT OF PSYCHOLOGICAL PROBLEMS IN LATER LIFE

Good medical care is of great importance to older adults, not only for treating disease but also for promoting physical health and psychological well-being. Because health behavior is critical to the quality of life, experts view health psychology and behavioral medicine as central components of medical care. In fact, a new field called *behavioral gerontology* specifically studies and treats the behavioral components of health among older adults (Bromley, 1990).

The same psychological and biological therapies used to treat emotional disorders among younger adults can be used to treat these problems among the aged. An exception is that certain biological treatments may be more effective among older than among younger adults, particularly electroconvulsive therapy in the treatment of unremitting depression (Delano-Wood & Abeles, 2005). Older adults may have misconceptions about psychotherapy. Thus, education about the process can be critical to its success. Some treatments have been developed specifically to help people through their grief. These treatments offer some small, short-term benefit, but over longer periods the effects are essentially the same as produced by the passage of time. One exception is that therapy is more helpful to people whose grief is complicated, that is, more intense or long lasting than expected (Currier, Neimeyer, & Berman, 2008; Neimeyer & Currier, 2009).

Health care professionals must focus not only on improving quality of life among older adults, but on maintaining integrity in death. *Living wills* are legal documents that direct health care professionals not to perform certain procedures in order to keep a terminally ill or severely disabled patient alive. Older adults often are much better at accepting death than are younger people, and living wills and other efforts to humanize dying allow dignity to be maintained through the end of life (Lawton, 2001; Rosenfeld, 2004).

# Getting Help

The wide range of life-cycle transitions considered in this chapter makes it impossible to offer many generalizations about getting help. But we can make two broad suggestions. First, self-help and self-education are particularly important and effective in helping yourself, a friend, or family member cope with life-cycle transitions. We suggest that you find out more about the transition you or a loved one may be facing, how other people feel in similar circumstances, what coping strategies others have found helpful, what you can expect might happen as time passes, and where you might end up when you are through this phase of your life. Second, we also urge you—or your friends or family members—not to be shy about seeking professional help if you are stuck, suffering greatly, or just want the support of a caring expert to help you through this time. As we noted at the outset of the chapter, a quarter of the people who see mental health professionals do not have a diagnosable mental disorder,

so you will be far from alone in seeking out a therapist.

Reading, writing, and talking to friends are three helpful activities when struggling with coming to terms with your goals, relationships, and identity. Erik Erikson's *Childhood and Society* and *Identity and the Life Cycle* are classics that you should find helpful even though they were written half a century ago. Another type of reading may also help—reading literature. Coming of age is a common theme in great (and not-so-great) books, and great writers are also insightful psychologists. Besides reading, keeping a journal is always a good idea, particularly when you are confused. Finally, we urge you to talk about your doubts and uncertainties with fellow students, even with your professors!

There are plentiful resources available in bookstores, on the Internet, or in therapy if you or someone you know is struggling through a family transition. In fact, the biggest problem may not be finding a resource,

but finding a *credible* resource. We urge you to look for self-help resources and therapists that offer advice based on psychological science, not just “pop” psychology. As a good start, many of the psychological scientists whose research we have used in this chapter also have written books for the general public. Among the many books we recommend are Carolyn Cowan and Philip Cowan's *When Partners Become Parents*; John Gottman's *The Seven Principles for Making Marriage Work*; and Robert Emery's *The Truth About Children and Divorce*.

An excellent book on aging is George Vaillant's *Aging Well: Surprising Guideposts to a Happier Life*. Mitch Albom's *Tuesdays with Morrie* is another superb book on aging that is partly a self-help book, partly a journal, and partly a work of literature. As with coming of age, coming to grips with aging is another common theme in literature, and it is a genre you may want to explore yourself or recommend to a friend.

## SUMMARY

- One out of two people who seek psychological treatment do not have a mental disorder. DSM-IV-TR categorizes their problems either as **adjustment disorders**, clinically significant symptoms in response to stress, or as “other conditions that may be a focus of clinical attention.” We prefer to view life problems in terms of **life-cycle transitions**, struggles in moving from one stage of adult development into a new one.
- The experiences associated with life-cycle transitions differ greatly, but conflict is one common theme, including interpersonal, emotional, and cognitive (identity) conflict.
- The transition to adult life begins late in the teen years and may continue through the twenties. The **identity crisis** is a central psychological conflict at this time, as are making major decisions about love and work.
- Family transitions in midlife often involve the addition or loss of members of a family household. Ongoing family conflict is closely linked with individual psychological problems, especially among women and children.
- Gradual declines in physical health do not mean that older adults experience similar declines in psychological well-being. The prevalence of most mental disorders is lower, not higher, among adults 65 years of age and older.
- Most adults view retirement positively, and relationships with children, siblings, and partners take on renewed importance.
- The loss of loved ones, including the loss of a spouse, is a fact of life for older adults, particularly for older women, and leads to **bereavement**, a specific form of **grief**.
- Well-being in later life is linked to good physical health, close relationships, the absence of loss, material well-being, recreation, religion, and community.

# The Big Picture

## CRITICAL THINKING REVIEW

- **Why do people seek treatment if they don't have a DSM disorder?**

People frequently seek guidance from a mental health professional for problems in living or what DSM-IV-TR calls adjustment disorders . . . (see p. 449)

- **What is adult development?**

Erik Erikson (1959/1980) highlighted that development continues throughout adult life . . . (see p. 452)

- **Is the "midlife crisis" a myth?**

Not everyone experiences an identity crisis during the transition to adult life, nor do all people have a midlife crisis when they turn 40 . . . (see p. 453)

- **Do all young adults have an identity crisis?**

How many people experience significant distress during the transition to adult life? . . . (see p. 455)

- **How are family relationships critical to psychological well-being?**

Increased conflict may be a normal part of family transitions, but conflict creates great difficulties for some families . . . (see p. 458)

- **Is the transition to later life depressing?**

The fact that aging is accompanied by gradual declines in physical health does *not* mean that older adults experience similar declines in psychological well-being . . . (see p. 466)

## KEY TERMS

adjustment disorders  
ageism  
bereavement

family life cycle  
gene–environment  
correlation

gerontology  
grief  
heritability

heritability ratio  
identity crisis  
life-cycle transitions

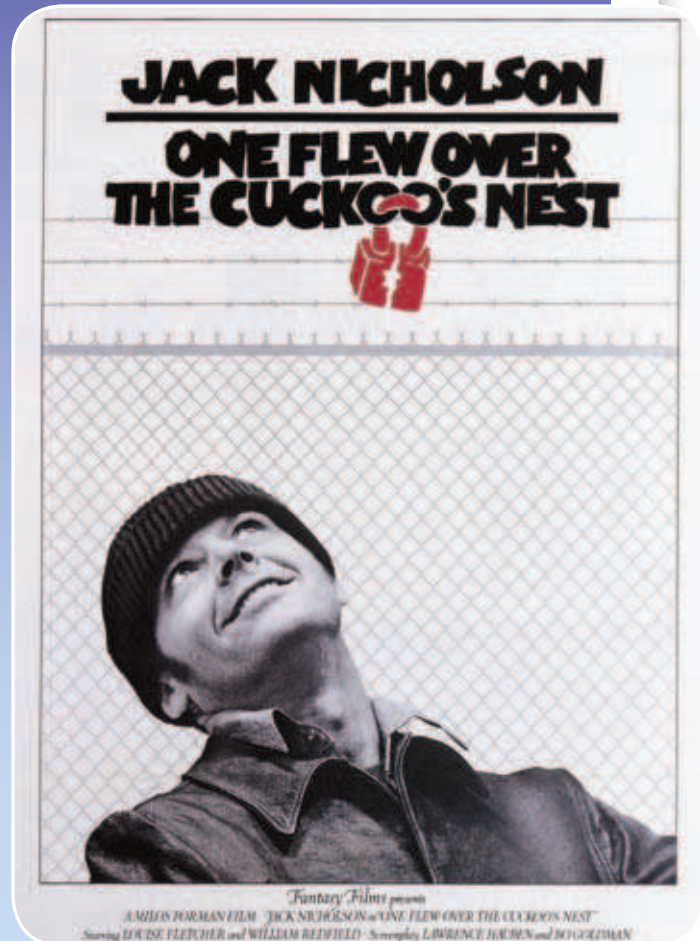
menopause  
moratorium  
social clocks



# Mental Health and the Law

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| Professional Responsibilities and the Law  | 494 |

► *One Flew Over the Cuckoo's Nest* is a vivid, engaging, and sometimes exaggerated portrayal of the patients and conditions in mental hospitals in the 1950s.



The legal definition of insanity is *not* the same as the psychological definition of mental illness. Bizarre acting Jeffrey Dahmer, who killed at least 17 people, chopped them up, and stored the body parts, was sane in the eyes of the law. So was 17-year-old Lee Malvo, who some claim was “brainwashed” by his fellow Beltway sniper, 42-year-old John Muhammad. Psychotically depressed and schizophrenic Andrea Yates, who systematically drowned her five children in a bathtub,

was found sane and guilty of murder. That verdict was overturned on appeal, and a retrial jury concluded that Yates was not guilty by reason of insanity. Lorena Bobbitt, infamous for cutting off her husband’s penis following an alleged rape, was found not guilty by reason of insanity—in the absence of any major mental illness. The paranoid schizophrenic “unabomber” Ted Kaczynski, who mailed exploding packages to unsuspecting victims, gained fame for *refusing* to use the insanity defense.

## The Big Picture

- How does the law define “insanity”?
- How do we justify hospitalizing someone against his or her will?
- How can being wrong two times out of three beat a coin flip?
- Do hospitalized mental patients have basic rights?
- What is deinstitutionalization, and how has it worked?
- What custody arrangements are in children’s “best interests”?
- When must therapists break confidentiality?

## OVERVIEW

In this chapter we consider a number of topics at the intersection of mental health and the law, including controversies that underscore the different concepts, goals, and values of the two professions. We begin with a discussion of mental health in criminal law, focusing on the insanity defense.

Next, we consider mental health issues in civil law, particularly the rights of mental patients. The confinement of the mentally ill against their will is a serious action. At best, it protects patients and society; at worst, it strips people of their human rights. Many political dissidents in the former Soviet Union were confined under the guise of “treating” their “mental illnesses.” At the other extreme, many seriously mentally ill people in the United States today receive no therapy because they have the right to refuse treatment—a right they may exercise due to mental illness, not philosophical objections.

Later in the chapter, we discuss legal intervention in families, with an emphasis on child abuse and custody disputes after divorce. Concerns about serious mental illness are the exception, not the rule, in custody and abuse cases. However, predictions about children’s emotional well-being often are vital, and the legal decisions have far-reaching implications for children and their families.

Finally, we consider some of the legal responsibilities of mental health professionals, especially professional negligence and confidentiality. These issues, and all the topics in this chapter, are not only of interest to professionals; they also have broad implications for society. Our most basic legal rights and responsibilities are reflected and defined by the manner in which we treat the mentally ill.

We begin with a case study of an infamous and successful use of the insanity defense: the acquittal of John Hinckley. In 1981, Hinckley attempted to assassinate Ronald Reagan, the president of the United States.

## CASE STUDY John Hinckley and the Insanity Defense

On March 30, 1981, John Hinckley stood outside the Washington Hilton hotel, drew a revolver from his raincoat pocket, and fired six shots at President Ronald Reagan. The president and three other men were wounded. The president rapidly recovered from his potentially fatal wound, but the presidential press secretary, James Brady, was permanently crippled by a shot that struck him just above the left eye. Hinckley was charged with attempted assassination, but his trial resulted in a verdict of “not guilty by reason of insanity.”

Hinckley, who came from a wealthy family, had never been convicted of a crime. He had a history of unusual behavior, however, and had expressed violent intentions. Hinckley had read several books on famous assassinations and had joined the American Nazi Party. In fact, he was expelled from the Nazi Party in 1979 because of his continual advocacy of violence. A particular oddity

was Hinckley’s obsession with the actress Jodie Foster, whom he had seen play the role of a child prostitute in the movie *Taxi Driver*. In an attempt to win her favor, Hinckley adopted much of the style of Foster’s movie rescuer, Travis Bickle. This included acquiring weapons and stalking the president, much as the movie character had stalked a political candidate. Hinckley repeatedly tried to contact Foster in real life and succeeded a few times, but his approaches were consistently rejected. He came to believe that the only way to win her over was through dramatic action. Less than two hours before he shot the president, he completed a letter to Foster, which said:

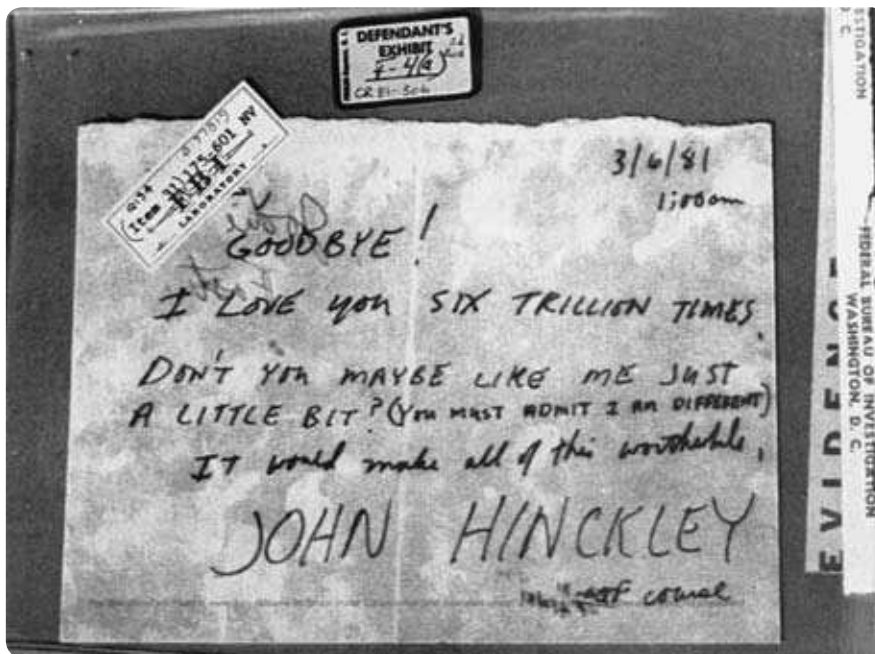
Jodie, I would abandon this idea of getting Reagan in a second if I

could only win your heart and live out the rest of my life with you, whether it be in total obscurity or whatever.

I will admit to you that the reason I’m going ahead with this attempt now is because I just cannot wait any longer to impress you. I’ve got to do something now to make you understand, in no uncertain terms, that I am

***All the prosecution’s experts concluded that Hinckley was sane; all the defense’s experts concluded that Hinckley was insane.***

doing all of this for your sake! By sacrificing my freedom and possibly my life, I hope to change your mind about me. This letter is being written only an hour before I leave for the Hilton Hotel. Jodie, I’m asking you to please look into your heart and at least give



One of several notes that John Hinckley wrote to actress Jodie Foster. Hinckley believed that he could win Foster's love by gaining notoriety, a delusion that apparently motivated him to attempt to assassinate former president Ronald Reagan.

me the chance, with this historical deed, to gain your respect and love.

Hinckley's trial centered on the question of his sanity, or as one author put it, whether he was "mad" or merely angry (Clarke, 1990). Both the defense and the prosecution called numerous expert witnesses to determine whether Hinckley was legally sane or insane. All the prosecution's experts

concluded that Hinckley was sane; all the defense's experts concluded that Hinckley was insane.

According to the federal law in effect at the time, the prosecution had to prove "beyond a reasonable doubt" that Hinckley was indeed sane. That is, the prosecution had to establish that mental disease had not either (1) created an irresistible impulse that made it impossible for

Hinckley to resist attempting to kill the president or (2) so impaired Hinckley's thinking that he did not appreciate the wrongfulness of his actions. (The burden of proof and the definition of insanity in the federal law were changed because of Hinckley's acquittal.)

The prosecution's experts called attention to the fact that Hinckley's actions were planned in advance and to Hinckley's awareness that his actions would have consequences, including possible imprisonment or death. He chose six deadly "devastator" bullets from an abundance of ammunition, and he fired them all accurately in less than 3 seconds. Defense experts emphasized his erratic behavior, particularly his obsession with Jodie Foster. One psychiatrist suggested, for example, that the president and other victims were merely "bit players" in Hinckley's delusion that through his "historic deed" he would be united with Foster in death.

Hinckley was found not guilty by reason of insanity. The verdict meant that Hinckley received no prison sentence. Instead, he was ordered into a mental hospital to be treated in confinement for an unspecified period of time. As of now, Hinckley remains confined in St. Elizabeth's Hospital, outside Washington, D.C. However, he is allowed to have nine-day, unsupervised visits with his mother outside the hospital. Hinckley could be released permanently if hospital staff concluded that he is no longer dangerous to himself or to others (and the court approves). On the other hand, Hinckley could remain in the hospital for the rest of his life.

John Hinckley obviously was emotionally disturbed, and legally he was determined to be insane. But in other cases, a mentally ill defendant is found legally sane (e.g., Jeffrey Dahmer). In still others, a mentally healthy defendant is legally insane (e.g., Lorena Bobbitt). What is the basis for such conflicts between psychology and the law?

## EXPERT WITNESSES

One conflict between mental health and the law concerns the role of **expert witnesses**, specialists whom the law allows to testify about specific matters of opinion (not just fact) that lie within their area of expertise. As they did in the Hinckley case, mental health experts often present conflicting testimony, creating a confusing and sometimes professionally embarrassing "battle of the experts" (Low, Jeffries, & Bonnie, 1986). In fact, some critics believe that mental health professionals should not serve as expert witnesses, because the mental health questions posed by the legal system cannot be answered reliably or validly (Emery, Otto, & O'Donohue, 2005; Faust & Ziskin, 1988).

The law does limit expert testimony to opinion based on established science (Faigman & Monahan, 2005). In *Daubert v. Merrell Dow Pharmaceuticals* (1993), the United States Supreme Court ruled that expert opinion must be based on an ". . . inference or assertion . . . derived by the scientific method," and courts must determine "whether the reasoning or methodology underlying the testimony is scientifically valid and . . . whether that reasoning or methodology can be applied to the facts in issue" (p. 2796). As you know, however, experts can and do interpret the same information in different ways. And lawyers "shop" for friendly experts who have a history of interpreting evidence in a way that will help their case.

"Shopping for experts" illustrates how the legal system and science differ in defining "truth." Lawyers are duty-bound to present the most convincing case for their side, not the most objective case. As such, it is often said that the law is more concerned with justice than truth. Lawyers expect challenges to their expert witnesses' testimony, and they anticipate that experts for the opposing side will present conflicting testimony (Fitch, Petrella, & Wallace, 1987). One trend to limit conflict, and hopefully improve expert testimony, is for



courts to appoint neutral experts rather than having each side employ its own “hired gun” (Faigman & Monahan, 2005).

## FREE WILL VERSUS DETERMINISM

A more fundamental conflict between the legal and mental health systems involves assumptions about the causes of and responsibility for human behavior. Criminal law assumes that human behavior is the product of *free will*, the capacity to make choices and freely act on them. The assumption of free will makes people responsible for their actions in the eyes of the law. The legal concept of **criminal responsibility** holds that, because people act out of free will, they are accountable for their actions when they violate the law.

In contrast, mental health professionals make an assumption of *determinism*, the view that human behavior is determined by biological, psychological, and social forces. The assumption of determinism is essential to science. Scientists cannot study the causes of human behavior without assuming that it is determined by factors that can be measured and perhaps controlled. Free will is an unscientific concept, which raises the question: Are people responsible for their behavior if they have no “free will”?

Assumptions about free will and determinism collide in the insanity defense. In U.S. law, **insanity** is an exception to criminal responsibility. The legally insane are assumed not to be acting out of free will. As a result, defendants like John Hinckley are not criminally responsible for their actions. By calling attention to the rare exceptions to criminal responsibility, the insanity defense reaffirms the view that people are accountable for their actions.

Thus, debates about the insanity defense involve a broad conflict of philosophies, not just differences about a given case. Is human behavior a product of free will, or is it determined by biological, psychological, and social forces? Are people with mental disorders responsible for their actions, or are they not responsible?

## RIGHTS AND RESPONSIBILITIES

In the law, rights and responsibilities go hand in hand. When responsibilities are lost, rights are lost, too. When responsibilities are assumed, rights are gained. The profound implications of this simple relationship are evident in the provocative views of the American psychiatrist Thomas Szasz (1963, 1970). Szasz asserted that all people—even people with emotional disorders—are responsible for their actions. Consistent with this position, Szasz argued that the insanity defense should be abolished (1963). It also follows from Szasz’s view that other exceptions made for mentally disturbed people in the legal system should be eliminated—for example, commitment to mental hospitals against their will (Moore, 1975).

In arguing for a broader concept of responsibility, Szasz also argued for a broader recognition of human dignity and individual rights of the mentally ill. Since rights and responsibilities go hand in hand, one avenue to gaining rights might be to assume more responsibility through the abolition of the insanity defense.

Not surprisingly, Szasz’s views generally are seen as extreme (Appelbaum, 1994). Nevertheless, they illustrate a fundamental conflict in mental health and the law: how to reconcile concepts of individual rights and responsibilities, which follow from an assumption of free will, with the deterministic view that is at the core of a scientific approach to understanding human behavior.

# Mental Illness and Criminal Responsibility

There are three ways in which the law assumes that mental disorders may affect an individual’s ability to exercise his or her rights and responsibilities. Defendants who are not guilty by reason of insanity are not criminally responsible for their actions. Defendants who are incompetent to stand trial are unable to exercise their right to participate in their own defense. Finally, mental illness may be a mitigating factor that can lead to a less harsh sentence—or a harsher one.

## THE INSANITY DEFENSE

The idea behind the **insanity defense**—that mental disability should limit criminal responsibility—dates to ancient Greek and Hebrew traditions. Early English records similarly include cases where kings or judges pardoned murderers because of



Serial killer Jeffrey Dahmer, who chopped up and stored his victims’ bodies, was held to be legally sane. Lorena Bobbitt, who cut off her husband’s penis following an alleged rape, was judged to be legally insane. The legal definition of insanity is *not* the same as the psychological definition of mental illness.



“madness” or “idiocy” (Slobogin, Rai, & Reisner, 2009). The rationale for these acquittals was not whether the perpetrator suffered from a mental illness. Instead, the issue was whether the defendant lacked the capacity to distinguish “good from evil,” the ability to distinguish right from wrong. This ground for the insanity defense was codified in 1843, after Daniel M’Naghten was found not guilty of murder by reason of insanity.

**M’Naghten Test** M’Naghten was a British subject who claimed that the “voice of God” ordered him to kill Prime Minister Robert Peel, but who mistakenly murdered Peel’s private secretary instead. His insanity acquittal raised considerable controversy and caused the House of Lords to devise the following insanity test:

To establish a defense on the ground of insanity, it must be clearly proved that, at the time of the committing of the act, the party accused was laboring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing; or, if he did know it, that he did not know he was doing what was wrong. [*Regina v. M’Naghten*, 8 Eng. Rep. 718, 722 (1843)]

Subsequently known as the *M’Naghten test*, this rule clearly articulated the “right from wrong” principle for determining insanity. If, at the time a criminal act is committed, a mental disease or defect prevents a criminal from knowing the wrongfulness of his or her actions, the criminal can be found to be *not guilty by reason of insanity (NGRI)*. The “right from wrong” ground established in the *M’Naghten* case continues to be the major focus of the insanity defense in U.S. law today. However, subsequent developments first broadened and later narrowed the grounds for determining insanity.

**Irresistible Impulse** Later in the nineteenth century, the insanity defense was broadened in the United States. The so-called *irresistible impulse test* said that defendants were insane if they were unable to control their actions because of mental disease. *Parsons v. State* was one of the first cases in which the irresistible impulse test was adopted [81 Ala. 577, 596, 2 So. 854 (1886)]. In this 1886 case, an Alabama court ruled that defendants could be judged insane if they could not “avoid doing the act in question” because of mental disease. The rationale for the irresistible impulse test was that when people are unable to control their behavior, the law can have no effect on deterring crimes. *Deterrence*, the idea that people will avoid committing crimes because they fear being punished for them, is a major public policy goal of criminal law. In the *Parsons* case, however, the court reasoned that convicting people for acts that they could not control would serve no deterrence purpose. In such cases, a finding of NGRI was justified.

**Product Test** A 1954 ruling by the Washington, D.C., federal circuit court in *Durham v. United States* further broadened the insanity defense [214 F.2d 862 (D.C. Cir. 1954)]. Known as the *product test*, the Durham opinion indicated that an accused is not criminally responsible if his or her unlawful act was the product of mental disease or defect. The ruling made no attempt to define either *product* or *mental disease*. In fact, the terms were designed to be very broad to allow mental health professionals wide discretion in determining insanity and testifying in court.

*Durham* tried to align the definition of insanity more closely with the definition of mental illness, a seemingly reasonable goal. But problems quickly arose with the product test. Some mental health professionals considered psychopathy (antisocial personality disorder in DSM-IV-TR) to be one of the “mental diseases” that justified the insanity defense. This created a circular problem: Antisocial personality disorder is defined primarily by a pattern of criminal behavior, yet the same criminal behavior could be used to substantiate that the perpetrator was insane (Campbell, 1990). The problem came to a halt when the *Durham* decision was overruled in 1972 (Slobogin et al., 2009).

**Legislative Actions** In 1955, a year after the original *Durham* decision, the American Law Institute drafted model legislation designed to address problems with the previous insanity rules. The model is important, because it subsequently was adopted by the majority of states. The rule indicates that

A person is not responsible for criminal conduct if at the time of such conduct as a result of mental disease or defect he lacks substantial capacity either to appreciate the criminality [wrongfulness] of his conduct or to conform his conduct to the requirements of the law.

This definition of insanity combines the M’Naghten rule and the irresistible impulse test, although it softens the requirements somewhat with the term *substantial capacity*. (Compare this with the language used in the M’Naghten rule.) The American Law Institute’s model statute also excluded a history of criminal behavior from the definition of “mental disease or defect.” This provision, which also has been enacted by many states, eliminates the problem of circularity in the antisocial personality disorder diagnosis.

The most recent major developments in the law governing the insanity defense occurred as a result of the acquittal of John Hinckley. Following the controversy over this case, both the American Bar Association and the American Psychiatric Association recommended eliminating the irresistible impulse component of the insanity defense. These organizations judged this strand of the insanity defense to be more controversial and unreliable than the right from wrong standard (Mackay, 1988). Consistent with these recommendations, the federal Insanity Defense Reform Act was passed in 1984 and defined the insanity defense as follows:

*How does the law define “insanity”?*

It is an affirmative defense to a prosecution under any federal statute that, at the time of the commission of acts constituting the offense, the defendant, as a result of severe mental disease or defect, was unable to appreciate the nature and quality or the wrongfulness of his acts. Mental disease or defect does not otherwise constitute a defense. (Title 18 of the United States Code)

Several states echoed this change in federal law by enacting similar, more restrictive legislation. Texas was one of these states. Thus, John Hinckley’s assassination attempt is one reason why Andrea Yates initially was found sane and therefore guilty of drowning her five children in Texas (*New York Times*, March 13, 2002). The states of Montana, Idaho, Utah, Kansas,



A jury declared Andrea Yates (in orange prison garb) legally sane, despite her psychosis. They found her guilty of murdering her five children. A prosecuting attorney argues that case (top). The Texas Court of Appeals overturned the verdict, and a retrial jury found Yates not guilty by reason of insanity.

and Nevada went even further than Texas and completely abolished the insanity defense.

**Guilty but Mentally Ill** The verdict *guilty but mentally ill* (GBMI) is another attempt to reform the insanity defense (American Bar Association, 1995). Defendants are GBMI if they are guilty of the crime, were mentally ill at the time it was committed, but were not legally insane at that time (see Table 18.1). A defendant found GBMI is sentenced in the same manner as any criminal, but the court can order treatment for the mental disorder as well. The GBMI verdict was designed as a compromise that would reduce NGRI verdicts, hold defendants criminally responsible, but acknowledge mental disorders and the need for treatment (Mackay, 1988). However, the GBMI verdict has not replaced NGRI. Instead, it is most often used in cases in which defendants simply would have been found guilty in the past (Smith & Hall, 1982). Others criticize GBMI for confusing the issues

and suggest that interest in GBMI is rightfully declining (Melton et al., 2007).

Recent developments clearly led to a more restrictive insanity defense. The furor surrounding the high-profile *Hinckley* case was not unlike the controversy that surrounded the high profile *M'Naghten* case more than 100 years earlier. Ironically, the *Hinckley* case also caused the insanity defense to be revised to resemble the original M'Naghten test (Mackay, 1988). As it was for a time after 1843, the most common contemporary standard for determining legal insanity is the inability to distinguish right from wrong.

**Burden of Proof** Under U.S. criminal law, a defendant is innocent until proven guilty “beyond a reasonable doubt.” The *burden of proof* thus rests with the prosecution, and the *standard of proof* is very high—beyond a reasonable doubt. Who has the burden of proof in insanity cases?

In the *Hinckley* trial, the prosecution was obliged to prove that *Hinckley* was sane beyond a reasonable doubt, a case it failed to make. The Insanity Defense Reform Act changed federal law. In federal courts the defense now must prove defendants’ insanity rather than the prosecution having to prove their sanity. Insanity must be proven by “clear and convincing evidence,” a stringent standard but not as exacting as “beyond a reasonable doubt.”

About two-thirds of states also now place the burden of proof on the defense, but the standard of proof typically is less restrictive—“the preponderance of the evidence.” Thus, the insanity defense has been narrowed further by shifting the burden of proof from the prosecution to the defense (American Bar Association, 1995).

**Defining “Mental Disease or Defect”** An issue of obvious importance to the mental health professions is the precise meaning of the term *mental disease or defect*. The American Law Institute’s proposal specifically excluded antisocial personality disorder, but would any other diagnosis listed in DSM qualify? The 1984 federal legislation indicates that the mental disease must be “severe,” but what does this mean?

The question of which mental disorders qualify for the “mental disease or defect” component of the insanity defense is unresolved. Some legal and mental health professionals would allow any disorder listed in DSM to qualify. Others have argued that especially difficult circumstances—for example, being a victim of repeated violence—should qualify, even if the problems are *not* mental disorders (see The Battered Woman Syndrome as a Defense). Still other commentators would sharply restrict the diagnoses. One suggestion is to confine the insanity defense to mental retardation, schizophrenia, mood disorders, and cognitive disorders, excluding cognitive disorders induced by substance use or abuse (Appelbaum, 1994).

**Use of the Insanity Defense** Given the intensive media coverage of high-profile cases, you might be surprised to learn that the insanity defense is used in only about 1 percent of all criminal cases in the United States. Only about 25 percent of defendants who offer the defense are actually found to be NGRI (Callahan et al., 1991; Steadman, Pantle, & Pasewark, 1983). Furthermore, over 90 percent of these acquittals result from plea bargains rather than jury trials (Callahan et al., 1991). In addition, the post-*Hinckley* shift in the burden

TABLE 18.1 Developments in the Insanity Defense

| Grounds for NGRI                  | Mental Incapacity at Time of Crime                                     | How Broad?  | Brief History of Rule  |
|-----------------------------------|--|-------------|--|
| Right from wrong                  | Inability to distinguish right from wrong                              | Narrow      | Formalized in 1843 <i>M’Naghten</i> case, many states again made this the only ground for NGRI following Hinckley. |
| Irresistible impulse              | Unable to control actions  | Broader     | Dating to 1886, this broader rule remains in effect in some states.  |
| Product test                      | Mental disease or defect   | Broadest    | Established in 1954 <i>Durham</i> case, this very broad rule was eliminated in 1972.                               |
| American Law Institute definition | Inability to distinguish right from wrong or unable to control actions | Broader     | Combination of right from wrong and irresistible impulse tests, this hybrid model law was common before Hinckley.  |
| Guilty but mentally ill           | Legally responsible for crime but also mentally ill                    | Alternative | Recent alternative to NGRI. Defendant is not legally insane but may get treatment for mental illness.              |

of proof from the prosecution to the defense has reduced both the frequency and the success rate (Steadman et al., 1993). In England, where the *M’Naghten* rule still stands, the insanity defense is virtually nonexistent. It is used in only a handful of cases each year (Mackay, 1988).

Do defendants “walk” if they are found NGRI? Some are incarcerated in mental institutions for much shorter periods of time than if they had been sentenced to prison. (Lorena Bobbitt was hospitalized for 45 days.) Others actually are incarcerated for much longer periods of time—yet another reminder that rights are lost when responsibilities are not assumed. On average, NGRI acquittees spend approximately the same amount of time in mental institutions as they would have served in prison (Pantle, Pasewark, & Steadman, 1980). Some state laws actually limit the length of confinement following an NGRI verdict to the maximum sentence the acquittee would have served if convicted. However, the U.S. Supreme Court has ruled that longer confinements are permitted because treatment,

not punishment, is the goal of an NGRI verdict (American Bar Association, 1995).

## COMPETENCE TO STAND TRIAL

Many more people are institutionalized because of findings of incompetence than because of insanity rulings. **Competence** is a defendant’s ability to understand the legal proceedings that are taking place against them and to participate in their own defense. Competence was defined as follows by the U.S. Supreme Court in *Dusky v. United States* [363 U.S. 402, 80 S. Ct. 788, 4 L. Ed.2d. 824 (1960)]:

The test must be whether he [the defendant] has sufficient present ability to consult with his attorney with a reasonable degree of rational understanding and a rational as well as factual understanding of proceedings against him.

You should note several features of the legal definition of competence. First, competence refers to the defendant’s current mental state, whereas insanity refers to the defendant’s state of mind at the time of the crime. Second, as with insanity, the legal definition of incompetence is not the same as the psychologist’s definition of mental illness. Even a psychotic individual may possess enough rational understanding to be deemed competent in the eyes of the law. Third, competence refers to the defendant’s ability to understand criminal proceedings, not willingness to participate in them. For example, a defendant who simply refuses to consult with a court-appointed lawyer is not incompetent. Finally, the “reasonable degree” of understanding needed to establish competence is fairly low. Only those who

*What is “competence” in the eyes of the law?*

## MyPsychLab

### VIDEO CASE

#### Battered Women Who Kill

##### SHANNON

*“He started laughing and said, ‘Bitch. What do you think you’re going to do? Shoot me?’”*

As you watch this video, listen to Shannon’s recounting of her history of chronic abuse. What was her state of mind? Did she suffer from feelings of helplessness, of being trapped by her abuser? Is this the battered woman syndrome? Or do you think Shannon acted in self-defense? Or did she commit murder?



## THE “BATTERED WOMAN SYNDROME” DEFENSE

**B**attered women often remain in an abusive relationship for incomprehensibly long periods of time. To outsiders, their reluctance to leave the relationship can seem foolish, even masochistic. To the battered woman, however, leaving the relationship often seems impossible. She may feel trapped by finances or by concern for her children; chronic abuse may cause her to lose all perspective. Some women eventually escape only by killing their tormentors. According to a report of the American Psychological Association (1995), approximately 1,000 women kill their current or former batterer each year. Is this violence in response to violence ever justified?

The killing of an abuser clearly is justified in U.S. law when the victim's life is in immediate danger. In this case, the action is committed in self-defense. In many cases, however, the killing takes place when the threat of abuse looms in the future but is not immediate. In this situation, a woman still might plead self-defense. According to contemporary trial practice, the defense may depend heavily on the battered woman syndrome.



A member of the “Framingham Eight,” eight women imprisoned for killing their abusers. The women petitioned for early release from prison, claiming they acted in self-defense. The governor of Massachusetts eventually commuted their sentences.

The *battered woman syndrome* is a term coined by psychologist Lenore Walker (1979) to describe her observations about the psychological effects of chronic abuse on victims. Two aspects of the syndrome are crucial to its use as a defense. First, Walker postulates a “cycle of violence,” that includes three stages: (1) a tension-building phase leading up to violence; (2) the battering incident itself; and (3) a stage of loving contrition, during which the batterer apologizes and attempts to make amends. Second, Walker asserts that the abused woman is prevented from leaving the relationship by learned helplessness. This implies that the battered woman expects to be beaten repeatedly but is immobilized and unable to leave the relationship.

The battered woman syndrome has been used successfully to acquit many battered women or, in other cases, to reduce their sentences. In fact, at least five states enacted statutes explicitly allowing the battered woman syndrome defense (Toffel, 1996). However, a similar defense arising when an abused child kills a parent or stepparent has met with much more resistance (Ryan, 1996).

Not surprisingly, the battered woman defense is controversial. Criminal lawyer Alan Dershowitz (1994) is a notably vocal critic. He writes:

On the surface, the abuse excuse affects only a few handfuls of defendants. But at a deeper level, the abuse excuse is a symptom of a general abdication of responsibility. It also endangers our collective safety by legitimating a sense of vigilantism. (p. 4)

Some courts have ruled that expert testimony on the battered woman syndrome is inadmissible, but the trend

is toward increasing acceptance (Brown, 1990; Faigman et al., 1997). Given the growing use of the defense, it may surprise you to learn that commentators generally agree about one point: The scientific evidence supporting the battered woman syndrome is weak to nonexistent (Faigman et al., 1997; Schopp, Sturgis, & Sullivan, 1994). One question that has been asked, for example, is: How can someone who is suffering from learned helplessness bring herself to kill?

An alternative defense is *temporary insanity*, which may be more easily proved in court. (The legal definition of insanity refers to a defendant's mental state at the time of committing the criminal act; thus it is possible for a defendant

### *Is it self-defense when a battered woman kills her abuser?*

to suffer from “temporary insanity.”) An argument for temporary insanity based on the battered woman syndrome would stress that the physical abuse so impaired the battered woman's thinking that either she was unable to appreciate the consequences of her actions, or she was driven to the point where she could no longer control her behavior (Cipparone, 1987).

In cases where women have killed their batterers, temporary insanity pleas are used less frequently than self-defense. Perhaps this is because the temporary insanity defense carries the stigma of an insanity determination, as well as the possibility of confinement in a mental institution. More broadly, a successful insanity defense relieves one woman of criminal responsibility for her actions. A successful self-defense defense makes a broader political statement. Women have a right to take extreme action in the face of chronic battering (Walker, 1989).

suffer from severe emotional disorders are likely to be found incompetent (Melton et al., 2007).

The legal definition of competence contains no reference to “mental disease or defect.” The role of expert witnesses in determining competency is therefore quite different from their

role in determining sanity. The evaluation focuses much more on specific behaviors and capacities than on DSM disorders. Table 18.2 summarizes the areas of legal understanding and reasoning necessary for competence as formulated by a distinguished group of experts.





Zacarias Moussaoui, the “twentieth terrorist,” pleaded guilty to conspiring in the September 11 attacks. His lawyers objected that he was not competent to plead guilty, but he eventually was found competent and his plea was accepted.

Incompetence to stand trial is the most common finding of incompetence, but the issue may arise around other aspects of the legal process. Defendants must be competent to understand the *Miranda warning* issued during their arrest. (The *Miranda warning* details the suspect’s rights to remain silent and to have an attorney present during police questioning.) Defendants also must be competent at the time of their sentencing, which takes place after they have been convicted of a crime. Finally, recent rulings indicate that defendants sentenced to death must be competent at the time of their execution, or the death sentence cannot be carried out. One issue that is currently working its way through the courts is whether a psychotic death-row inmate retains the right to refuse treatment (discussed shortly) or can be medicated against his wishes for the sole purpose of making him competent to be executed (Slobogin et al., 2009).

Competency hearings generally do not make front-page stories. Typically, a competency finding is accepted by agreement or reached in a relatively informal hearing. An exception arose in the trial of Zacarias Moussaoui, the so-called “twentieth terrorist” who was arrested before September 11 but

**TABLE 18.2 Measuring Legal Competence**

**A. Legal Understanding**

1. Understanding the roles of defense attorney and prosecutor.
2. Understanding both the act and mental elements of a serious offense.
3. Understanding the elements of a less serious offense.
4. Understanding the role of a jury.
5. Understanding the responsibilities of a judge at a jury trial.
6. Understanding sentencing as a function of the severity of the offense.
7. Understanding the process of a guilty plea.
8. Understanding the rights waived in pleading guilty.

**B. Legal Reasoning**

9. Reasoning about evidence suggesting self-defense.
10. Reasoning about evidence related to criminal intent.
11. Reasoning about evidence of provocation.
12. Reasoning about motivation for one’s behavior.
13. Reasoning about the potential impact of alcohol on one’s behavior.
14. Capacity to identify information that might inform the decision to plead guilty versus plead not guilty.
15. Capacity to identify both potential costs and potential benefits of a legal decision (e.g., pleading guilty).
16. Capacity to compare one legal option (e.g., accepting a plea bargain) with another legal option (e.g., going to trial) in terms of advantages and disadvantages.

**C. Legal Appreciation**

17. Plausibility of defendant’s beliefs about the likelihood of being treated fairly by the legal system.
18. Plausibility of defendant’s beliefs about likelihood of being helped by his/her lawyer.
19. Plausibility of defendant’s beliefs about whether to disclose case information to his/her attorney.
20. Plausibility of defendant’s beliefs about likelihood of being found guilty.
21. Plausibility of defendant’s beliefs about likelihood of being punished if found guilty.
22. Plausibility of defendant’s beliefs about whether to accept a plea bargain.

Source: Items reprinted from the MacCAT-CA. Reprinted by permission of Professor R. Otto, University of South Florida.

was accused of being a conspirator in the attacks. Moussaoui first pleaded guilty to the charges against him, but his court-appointed lawyers objected that he was not competent to enter the guilty plea. Although the judge later found Moussaoui competent, she gave him a week to change his plea, which he did. After years of back and forth, a legally competent Moussaoui was found guilty by a jury on May 3, 2006, and sentenced to life in prison.

If defendants are determined to be incompetent, legal proceedings must be suspended until they can be understood by the defendant. The goal is to ensure fairness, but unfortunately, this has produced some very unfair results. Many defendants have been confined for periods of time much greater than they would have served if convicted. Although there is little doubt that they have severe mental disorders, incompetent defendants do not always receive the same protections as those hospitalized through civil commitment procedures, which we discuss shortly.

## SENTENCING AND MENTAL HEALTH

Mental health also is a consideration in sentencing. Mental disorders are one of several potential *mitigating factors* that judges are required to consider before sentencing a guilty party (Slobogin et al., 2009). The presence of a mental illness may justify a less harsh sentence, particularly in death penalty cases. Yet mental illness also can be used to justify longer periods of confinement, particularly for sex offenders.

Because death is the ultimate punishment, judicial scrutiny is particularly intense in death penalty cases. A thorough review of potential mitigating factors, including mental illness and duress at the time of the crime, is a major part of the scrutiny required by the court (Slobogin et al., 2009). *Mitigation evaluations*, which include an assessment for mental disorders, are required in all death penalty cases.

**Mental Retardation** In the landmark case of *Atkins v. Virginia* (2002), the U.S. Supreme Court ruled—consistent with laws already in effect in many states—that mental retardation is a mitigating factor that makes the death penalty unconstitutional. In this case, Daryl Atkins, a man with an IQ of 59, was found guilty of robbing a 21-year-old man for beer money and subsequently shooting and killing him. According to the court, the death penalty would be cruel and unusual punishment in this case—and for all people with mental retardation. Writing for the majority, Justice John Paul Stevens reasoned:

First, there is serious question whether either justification underpinning the death penalty—retribution and deterrence of capital crimes—applies to mentally retarded offenders. . . . Second, mentally retarded defendants in the aggregate face a special risk of wrongful execution because of the possibility that they will unwittingly confess to crimes they did not commit, their lesser ability to give their counsel meaningful assistance, and the facts that they typically are poor witnesses and that their demeanor may create an unwarranted impression of lack of remorse for their crimes. (536 U.S. 321, 2002, pp. 2–3)

As we noted in Chapter 16, a firestorm of debate about the precise definition of mental retardation is one practical consequence of the Supreme Court ruling. Whether a defendant



A surveillance camera captures Daryl Atkins (left) with Eric Nesbitt (center) and an accomplice (right). Atkins and his accomplice later shot Nesbitt for beer money. Atkins was sentenced to death, but in 2002 the U.S. Supreme Court ruled the death penalty is cruel and unusual punishment for someone, like Atkins, who suffers from mental retardation.

has mental retardation literally may be a life-or-death question. In fact, a Virginia jury ruled that Daryl Atkins does *not* suffer from mental retardation in a 2005 retrial. The prosecution argued that, among other things, Atkins' constant contact with his lawyers raised his IQ. He was again sentenced to death, but his sentence was commuted to life in prison because of prosecutorial misconduct during his first trial.

Yet, a similar debate ended in the death penalty for Teresa Lewis on September 30, 2010, the first woman executed in Virginia since 1912. Lewis had an IQ of 72. She was convicted of being the “mastermind” behind a conspiracy in which she hired two men to kill her husband. Her defenders pointed to the likelihood that she was manipulated, not a mastermind, noting her borderline IQ. The difference between 69 and 72 can indeed be a matter of life or death.

Although the issue of mental illness or mental retardation was not involved, the Supreme Court has ruled that the death penalty is cruel and unusual punishment for another category of defendants: anyone who commits a capital crime when under the age of 18 [*Roper v. Simmons*, (03-633) (2005)]. The Supreme Court went one step further in 2010, ruling that a life sentence without the possibility of parole is cruel and unusual punishment for juveniles who commit crimes in which no one was killed [*Graham v. Florida*, 560, U.S. (2010)].

**Sexual Predators** Mental retardation and mental illness may mitigate against harsh sentencing, but a history of and potential for sexual violence may lead to harsher sentencing. Several states have passed *sexual predator laws*, designed to keep sexual offenders confined for indefinite periods of time. These laws were challenged in the U.S. Supreme Court case of *Kansas v. Hendricks* (521 U.S. 346, 1997). In this case, Leroy Hendricks, who had a long and gruesome history of pedophilia, was about to be released from prison after serving a 10-year

term for taking “indecent liberties” with two 13-year-old boys. Before he was released, however, Hendricks was confined indefinitely to a maximum security institution under a new Kansas sexual predator law.

In court, Hendricks admitted that when he “gets stressed out” he “can’t control the urge” to molest children. Still, Hendricks argued against his continued confinement on several grounds, including “double jeopardy,” that is, being punished twice for the same crime. The Supreme Court ruled in favor of the state of Kansas, however, concluding that Hendricks’s indefinite confinement under the sexual predator law did not constitute punishment. Instead, the court viewed Hendricks’s continued detention in a maximum security prison as justified on the basis of his dangerousness to others. A recent Supreme Court ruling upheld the extended detention of potential sexual predators in a similar case [*United States v. Comstock*, 560 U.S. \_\_\_\_ (2010)]. While we may feel safer with someone like Hendricks in jail, the court’s decision can be questioned. Other classes of criminals—for example, burglars (who commit 60 percent of all rapes in the home)—have notably higher rates of recidivism than sex offenders, yet they are not confined for dangerousness beyond their prison sentences (Slobogin et al., 2009). Moreover, confined sex offenders typically get little or no treatment, a justification for civil commitment, our next topic.

## Civil Commitment

Involuntary hospitalization raises three questions of major importance in civil law: (1) civil commitment, the legal process of hospitalizing people against their will; (2) patients’ rights; and (3) deinstitutionalization, treating patients in their communities instead of in mental hospitals. We begin with a brief review of the history of mental hospitals in the United States.

### A BRIEF HISTORY OF U.S. MENTAL HOSPITALS

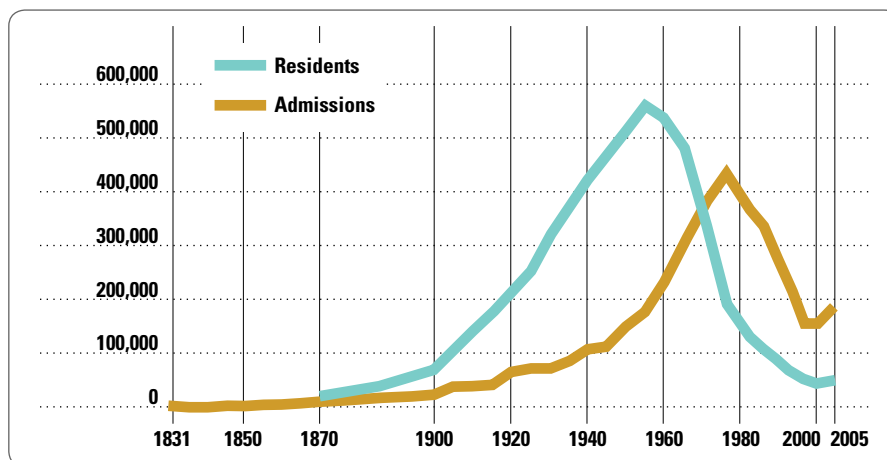
In 1842, the famous British author Charles Dickens toured the United States and visited several mental institutions. In

*American Notes and Pictures from Italy* (1842/1970), he wrote about one of the institutions that he visited:

I cannot say that I derived much comfort from the inspection of this charity. The different wards might have been cleaner and better ordered; I saw nothing of that salutary system which had impressed me so favorably elsewhere; and everything had a lounging, listless, madhouse air, which was very painful. The moping idiot, cowering down with long dishevelled hair; the gibbering maniac, with his hideous laugh and pointed finger; the vacant eye, the fierce wild face, the gloomy picking of the hands and lips, and munching of the nails: there they were all without disguise, in naked ugliness and horror. In the dining-room, a bare, dull, dreary place, with nothing for the eye to rest on but the empty walls, a woman was locked up alone. She was bent, they told me, on committing suicide. If anything could have strengthened her in her resolution, it would certainly have been the insupportable monotony of such an existence. (p. 93)

Such cruel care of the mentally disturbed has been a problem throughout history. Ironically, many of the large mental institutions that still dot the U.S. countryside were built in the nineteenth century to fulfill the philosophy of *moral treatment*, the laudable but failed movement to alleviate mental illnesses by offering respite and humane care. In 1830, only four public mental hospitals with fewer than 200 patients existed in the United States. By 1880, 75 public mental hospitals housed more than 35,000 residents (Torrey, 1988). As the moral treatment movement faded, these institutions simply became larger and more grotesque human warehouses. The squalid conditions in state mental hospitals did not become a concern until shortly after World War II. Conscientious objectors, who worked in mental hospitals instead of serving in the armed forces, brought the terrible conditions to public attention (Torrey, 1988).

As shown in Figure 18.1, the number of patients in state mental hospitals began to shrink dramatically in the 1950s. This was due to the discovery of antipsychotic medications and to the *deinstitutionalization movement*—the attempt to care for the mentally ill in their communities. This laudable movement, which had the same goal but the opposite solution as the moral treatment movement, also suffered from many



**FIGURE 18.1** Residents and Admissions to U.S. Public Mental Hospitals: 1831–2005

The number of patients living in mental hospitals increased from the latter 1800s, when large mental hospitals were built, and declined from the 1950s with the development of antipsychotic medication and deinstitutionalization.

Source: From Ronald W. Manderscheid, Ph.D., Joanne E. Atay, M.A. and Raquel A. Crider, Ph.D., “Changing Trends in State Psychiatric Hospital Use From 2002 to 2005” in *Psychiatric Services*, 60 (1), pp. 29–34. Copyright © 2009 American Psychiatric Association. Reprinted by permission of the American Psychiatric Association.



problems. Many patients were moved out of large mental institutions and into private mental hospitals and psychiatric wards in general hospitals.

The mentally ill continue to suffer. An April 28, 2002, *New York Times* exposé documented inadequate care, poor staff training, and many suspicious deaths in the 100 adult homes housing over 15,000 mentally ill residents in New York City. A state report dubbed one such home “The New Warehouse for the Insane.” Add one more irony: Nineteenth-century reformers hoped to get the mentally disturbed out of jails and into hospitals. Today, more people with mental illness are housed in jails (Ditton, 1999). In fact, four times as many people with mental illnesses are incarcerated in prisons as are held in state mental hospitals (U.S. Department of Justice, 1999). New “mental health courts,” designed to accommodate the mental health needs of the accused and convicted, are one effort to address this problem. Whether they will prove helpful is uncertain (Slobogin et al., 2009).

## LIBERTARIANISM VERSUS PATERNALISM

What are society’s legal and philosophical rationales for hospitalizing people against their will? Debates about involuntary hospitalization highlight the philosophical tension between libertarianism, which emphasizes the protection of individual rights, and paternalism, which emphasizes the state’s duty to protect its citizens. The involuntary hospitalization of someone who appears dangerous serves a protective, paternalistic goal. Yet *preventive detention*—confinement before a crime is committed—can lead to substantial abuse. Our laws prohibit the confinement of someone simply on the suspicion that he or she will commit a crime, with a single exception: **civil commitment**, the involuntary hospitalization of the mentally ill.

The conflict between libertarian and paternalistic philosophies is very much alive. A major swing toward libertarianism began in the 1960s. Since at least 1990, however, the pendulum has swung in the direction of paternalism. Interest is increasing in aggressive, sometimes coercive, interventions with the seriously mentally ill (Appelbaum, 1994).

## INVOLUNTARY HOSPITALIZATION

U.S. law contains two broad rationales for involuntary hospitalization. The first is based on the state’s *parens patriae* authority, the philosophy that the government has a humanitarian responsibility to care for its weaker members. (The literal translation of the Latin phrase *parens patriae* is the “state as parent.”)

### How does the law justify civil commitment?

Under the *parens patriae* authority, civil commitment may be justified when the mentally disturbed are either dangerous to themselves or unable to care for themselves (Myers, 1983–1984). The concept of *parens patriae* also is used to justify the state’s supervision of minors and physically incapacitated adults.

The second rationale is based on the state’s police power—its duty to protect public safety, health, and welfare. Our government restricts individual liberties for the public good in

many ways. We cannot yell “Fire!” in a crowded theater or drive at 100 miles an hour. The civil commitment of people who are dangerous to others is justified by similar rationales.

**Grounds and Procedures** Most states distinguish emergency and formal civil commitment procedures. *Emergency commitment* is when an acutely disturbed individual is temporarily confined, typically for no more than a few days. Physicians, mental health professionals, or even police officers may be allowed to institute emergency commitment. Such actions are taken only when the risk to self or others appears to be very high.

*Formal commitment* can be ordered only by a court. A hearing must be available to patients who object to involuntary hospitalization, in order to protect their due process rights. Following involuntary commitment, cases must be reviewed after a set period of time—for example, every six months.

The specific grounds for involuntary hospitalization vary from state to state. Still, three grounds dominate: (1) inability to care for self, (2) dangerousness to self, and (3) dangerousness to others. *Inability to care for self* is a broad criterion used for people unable to care for themselves or who have no family or friends to care for them. The intention of this standard is benevolent, but it has been abused in some cases, violating patient rights (Appelbaum, 1994; Durham & LaFond, 1988). Debates continue in courtrooms and in state legislatures. Should we be paternalistic and sacrifice some individual rights by involuntarily committing mental patients who do not want, but who clearly need, inpatient treatment? Or do we run the danger of trampling on civil liberties if we hospitalize nondangerous people against their will?

Few civil libertarians object to hospitalizing people against their will when they clearly are either *dangerous to self* or *dangerous to others*, provided that the danger is “imminent.” Thus, a commonly accepted standard for civil commitment is “clear and convincing evidence of imminent danger to oneself or others.” However, a case we discussed earlier,



Seung-Hui Cho showed frightening, erratic behavior long before he shot and killed 32 people and wounded many others on the Virginia Tech campus on April 16, 2007. He had been treated intermittently for mental health problems and declared a danger to himself by a Virginia court two years earlier. Can such horrors be prevented by more aggressive civil commitment and mandated treatment?



*Kansas v. Hendricks* (1997), created controversy about the *imminent* standard. Leroy Hendricks’s risk of sexual molestation of minors was not imminent, but more general. Still, the Supreme Court ruled that civil commitment is justified for individuals “who suffer from a volitional impairment rendering them dangerous beyond their control.” This vague position may signal a new trend, one that some fear will lead to overreaching in civil commitment cases (Falk, 1999).

**Predicting Dangerousness** The stakes are high in predicting a patient’s dangerousness. False positives—wrongly hospitalizing someone who is not dangerous to others or suicidal—unfairly restrict civil rights. False negatives—releasing someone who is dangerous to self or others—put lives at stake. Unfortunately, the prediction of violence is far from perfect. One certainty is that mental health professionals *will* make errors.

**Dangerousness to Others** Research shows that mental illness increases the risk for violence (Douglas, Guy, & Hart, 2009). However, the public greatly overestimates that risk: The vast majority of people with a psychological disorder are *not* violent (see Critical Thinking Matters). If mental illness is a poor predictor of violence, can individual assessments improve prediction? Well, clinical predictions that someone will be violent are *wrong* approximately two out of three times (Monahan, 1981; Yang, Wong, & Coid, 2010). That is, the false-positive rate is about 67 percent. Some argue that it is unethical for mental health experts to offer specific predictions about dangerousness, because prediction is so inaccurate (Melton et al., 2007).

Prediction is better in the short term than in the long run, a key distinction because most research examines long-term outcomes (Monahan, 1981). For example, two out of three people

# Critical Thinking Matters

## VIOLENCE AND MENTAL ILLNESS

Are mentally disturbed people dangerous? To many laypeople, the obvious answer is: “Yes!” In one survey, 61 percent of the respondents agreed that people with schizophrenia were “somewhat” or “very” likely to do something violent to others (Pescosolido et al., 1999). People recall dramatic, frightening, and terribly sad cases like the Virginia Tech shootings or Kendra Webdale, a talented 32-year-old woman who was pushed in front of a subway train and killed in New York City. Her assailant was a complete stranger, a man with schizophrenia whose explanation

for this tragic act was that “an overwhelming force took over him.”

The rate of violence is about five times higher among people diagnosed with a major mental disorder than those with no diagnosis. People who abuse alcohol or drugs are even more likely to engage in violent behavior (see Table 18.3). Substance abuse symptoms actually increase the risk of violence in both former psychiatric inpatients and in the general community (Steadman et al., 1998).

Does this evidence support confining the seriously mentally ill based on

their dangerousness? The answer is no, for several reasons. First, the risk for violence is far lower than publicly perceived. Approximately 90 percent of the mentally disturbed have *no* history of violence (Douglas et al., 2009; Monahan & Steadman, 2009). Second, family and friends, not strangers in the street, are the victims of over 85 percent of violent acts perpetrated by

### Are mental patients as dangerous as many people fear?

the mentally ill (Monahan et al., 2001a). Third, *current* psychotic symptoms predict violence, but a *past* history of psychosis does not (Link, Cullen, & Andrews, 1990).

Most importantly, numerous factors other than mental illness predict an increased risk for violence, but they obviously do not justify preventive detention. For example, people who live in poverty or who have a history of criminal behavior are more likely to be violent. But we would not consider confining the poor or those who have paid their debt to society based on their increased statistical risk. Basic civil liberties are at stake. And except in the extreme circumstances, our society must accord the same rights to the mentally ill.

TABLE 18.3 Mental Illness and Violence

| Diagnosis                  | Percentage Violent |
|----------------------------|--------------------|
| No disorder                | 2.1                |
| Schizophrenia              | 12.7               |
| Major depression           | 11.7               |
| Mania or bipolar disorder  | 11.0               |
| Alcohol abuse/dependence   | 24.6               |
| Substance abuse/dependence | 34.7               |

Source: Adapted from J. Monahan, 1992, “Mental Disorder and Violent Behavior: Perceptions and Evidence,” *American Psychologist*, 47, pp. 516, 518. Copyright © 1992, American Psychological Association.

# RESEARCH METHODS

## BASE RATES AND PREDICTION: JUSTICE BLACKMUN'S ERROR

The prediction of violence seems worse than chance when we learn that clinicians are wrong two-thirds of the time. However, predicting rare events is flawed for mathematical reasons. *Base rates*, population frequencies, strongly contribute to errors (Meehl & Rosen, 1955).

Consider a hypothetical example. Assume that (1) future, serious violence in a population has a base rate of 3 percent; (2) clinicians predict that violence will occur among 6 percent of the population; and (3) the clinical prediction of violence is wrong two-thirds of the time. These assumptions are portrayed in the following table:

|                       | Actually Violent    | Actually Not Violent |
|-----------------------|---------------------|----------------------|
| Predicted Violent     | 2% (true positive)  | 4% (false positive)  |
| Predicted Not Violent | 1% (false negative) | 93% (true negative)  |

A quick check of the table will confirm our assumptions: The base rate of violence is 3 percent, the clinicians predict violence in 6 percent of the cases, and the prediction is wrong two-thirds of the time. But examine the table more closely. Even though the prediction of

violence is wrong two-thirds of the time, it is also true that the clinicians correctly detect 67 percent of violent patients and 96 percent of nonviolent patients in our example.

Now compare these figures with another hypothetical example: U.S. Supreme Court Justice Harry Blackmun's prediction that a coin flip is more accurate. Justice Blackmun assumed that a coin flip would be right half of the time while clinical prediction was right only one-third of the time. But the statistics are not so simple. Assume that (1) the base rate of violence remains at 3 percent, (2) the coin predicts violence (heads) 50 percent of the time, and (3) the coin flip is random. These assumptions are portrayed in the following table:

|                       | Actually Violent | Actually Not Violent |
|-----------------------|------------------|----------------------|
| Predicted Violent     | 1.5%             | 48.5%                |
| Predicted Not Violent | 1.5%             | 48.5%                |

Sorry, Justice Blackmun, but a coin flip does *not* beat clinical prediction. The coin flip correctly detects only 50 percent

of violent patients (versus 67 percent) and 50 percent of nonviolent patients (versus 96 percent). The percentage of false positives using Justice Blackmun's method is 48.5%, but using clinical prediction it is 4%. In our first example, the clinical prediction of violence was wrong 67 percent of the time. Justice Blackmun's coin flip was wrong 97 percent of the time  $[48.5/(48.5 + 1.5)]$ .

A key to understanding Justice Blackmun's error is to recognize the influence of base rates. The base rate of predicting violence using the clinical method (6 percent) was close to the actual base rate (3 percent). However, the base rate

### *How does being wrong two out of three times beat a coin flip?*

of predicting violence using the coin flip (50 percent) was much higher. The statistical potential for accurate prediction is maximized when the predictor and the outcome have more similar base rates (Meehl & Rosen, 1955).

Violence is a low-frequency event, and for statistical reasons alone, this makes it difficult to predict (Meehl & Rosen, 1955). The clinical prediction of violence is far from perfect, but it is better than chance. Justice Blackmun did not understand the influence of base rates. We hope that you do now.

who are hospitalized involuntarily are not violent after they are released. Would these people have been violent without the commitment? We cannot know for certain, but we do know that (1) clinicians commit patients only when they strongly believe that the risk of violence is imminent, and (2) clinicians release the same patients only if they believe that the patient no longer is a risk. Such urgent, real-life decisions confound research. No one will ever do the unequivocal experiment: release or confine potentially violent people at random and compare clinical predictions with actual acts of violence.

U.S. Supreme Court Justice Harry Blackmun wrongly claimed that a coin flip would be more accurate than a clinical prediction that is wrong two out of three times (Slobogin et al., 2009). When predicting a very infrequent event (like violence), however, a false-positive rate of two-thirds is, in fact, much better than chance (Lidz, Mulvey, & Gardner, 1993). This

is because you must take **base rates**—population frequencies—into account (see Research Methods).

**Assessing Suicide Risk** The clinical prediction of suicide risk also involves very high false-positive rates (Pokony, 1983). Yet, concerns about inaccurate prediction are allayed by the fact that suicidal patients typically are committed only when they clearly and directly indicate an imminent likelihood of harming themselves.

In predicting either suicidal risk or dangerousness to others, it is wise and just to include the patient in this process. Many patients freely admit their intention to commit suicide or harm others. Even if they object to involuntary hospitalization, these patients will be more accepting when they are respectfully included in the decision making (Lidz et al., 1995; Monahan et al., 1999).

## Abuses of Civil Commitment

The police power rationales for civil commitment have been invoked throughout history. Even in colonial times the “furiously insane” could be detained in order to prevent them from doing harm to others (Myers, 1983–1984). In contrast, commitment under *parens patriae* rationales have been overused and abused.

You may also be surprised to learn, for example, that a husband once could have his wife committed to a mental hospital, and a father (or a mother) still can. The first circumstance was changed through the efforts of Mrs. Elizabeth Parsons Ware Packard (Myers, 1983–1984). Mrs. Packard was committed to a mental hospital by her husband under an Illinois law that allowed a man to commit his children or his wife to a mental hospital against their will and without the usual evidence of mental illness. The commitment was questionable at best. In presenting evidence in favor of her commitment, for example, one doctor noted that Mrs. Packard was rational but she was a “religious bigot” (Slobogin et al., 2009). An apparent problem was that her religious beliefs differed from those of her preacher husband. After three years in a mental hospital, her suit for freedom was successful. A jury ruled her to be legally sane after only seven minutes of deliberation. Mrs. Packard subsequently campaigned to revise commitment standards to prevent such abuses.

Parents still have the right to commit children to hospitals. According to the 1979 U.S. Supreme Court ruling in *Parham v. J.R.* [442 U.S. 584 (1979)], minors, unlike adults, are not entitled to a full hearing before they can be committed to a mental hospital. State laws may add requirements, but parents can commit minors against their wishes as long as an independent fact finder agrees (Weithorn, 1988). Most children and adolescents in mental hospitals therefore are “voluntary” patients. They were voluntarily committed by their parents.

Libertarians argue that this practice is potentially abusive and want increased recognition of children’s rights. Perhaps their strongest point is that many minors are committed because they are troublesome to their parents (Weithorn, 1988). On the other hand, paternalists are reluctant to interfere with parents’ rights and family autonomy. Many also are concerned that mentally ill adolescents are particularly bad judges about what is best for them. Libertarian and paternalist themes echo throughout debates about civil commitment.

## THE RIGHTS OF MENTAL PATIENTS

Several important court cases clarified the rights of patients committed to a mental hospital. These include the right to treatment, the right to treatment in the least restrictive environment, and the right to refuse treatment. These libertarian developments offer protections against abuses, yet as you will see, some paternalists think they have gone too far.



Elizabeth Parsons Ware Packard was committed to a mental hospital under a nineteenth-century law that allowed a husband to commit a wife against her will. Mrs. Packard later successfully campaigned to change commitment laws to prevent such abuses.

**Right to Treatment** Two significant cases for establishing that hospitalized mental patients have a constitutional right to treatment were *Wyatt v. Stickney* and *O'Connor v. Donaldson*.

**Wyatt v. Stickney** *Wyatt v. Stickney* (1972) began as a dispute over the dismissal of 99 employees from Bryce Hospital in Tuscaloosa, Alabama. The state mental hospital was built in the 1850s and housed nearly 5,000 patients when much-needed staff members were released due to budget cuts. All accounts indicate that conditions in the hospital were very bad even before the layoffs. The buildings were fire hazards, the food was inedible, sanitation was neglected, avoidable sickness was rampant, abuse of patients was frequent, and patients were regularly confined with no apparent therapeutic goal.

Litigation was filed on behalf of Ricky Wyatt, a resident in the institution, as part of a class action suit against the Alabama mental health commissioner, Dr. Stonewall B. Stickney. The suit argued that Bryce Hospi-

tal failed to fulfill institutionalized patients’ right to treatment. The commissioner was in the unusual position of supporting a suit against him. He wanted to improve care but was faced with budget problems. The case was tried and appealed several times. The patients’ suit eventually was upheld.

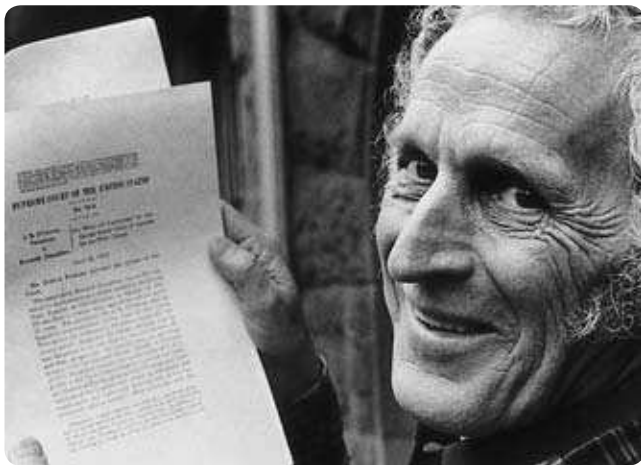
The victory forced the state of Alabama to provide services, but *Wyatt* had a broader impact. The judicial rulings established that hospitalized mental patients have a right to treatment. Specifically, a federal district court ruled that, at a minimum, public mental institutions must provide (1) a humane psychological and physical environment, (2) qualified staff in numbers sufficient to administer adequate treatment, and (3) individualized treatment plans [334 F. Supp. 1341 (M.D. Ala. 1971) at 1343]. The court also ordered that changes needed to fulfill patients’ rights could not be delayed until funding was available.

The *Wyatt* decision helped focus national attention on the treatment of patients in public mental institutions. Numerous “right to treatment” cases were filed. The threat of litigation impelled mental hospitals to improve patient care and helped spur the *deinstitutionalization movement*, which we discuss shortly.

**O'Connor v. Donaldson** The U.S. Supreme Court acknowledged mental patients’ right to treatment in another landmark case, *O'Connor v. Donaldson* [422 U.S. 563 (1975)]. Kenneth Donaldson was confined in a Florida mental hospital

**Why did Dr. Stickney support the suit against him?**

**Why are most adolescents in mental hospitals voluntarily?**



Kenneth Donaldson proudly displays a copy of the U.S. Supreme Court ruling in his case. The Court held that nondangerous mental patients cannot be confined against their will, a decision that freed Donaldson and set an important precedent for other hospitalized mental patients.

for nearly 15 years. He repeatedly requested release, claiming that he was not mentally ill, was not dangerous to himself or others, and was receiving no treatment. Eventually, he sued the hospital's superintendent, Dr. J. B. O'Connor, for release, asserting that he had been deprived of his constitutional right to liberty.

The evidence presented at the trial indicated that Donaldson was not and never had been dangerous to himself or others. Testimony also revealed that reliable individuals and agencies in the community had made several offers to care for Donaldson, but Superintendent O'Connor repeatedly rejected them. O'Connor insisted that Donaldson could be released only to the custody of his parents, who were very old and unable to care for him. O'Connor's position on Donaldson's supposed inability to care for himself was puzzling, because Donaldson was employed and had lived on his own for many years before being committed to the hospital. Other evidence documented that Donaldson had received nothing but custodial care while he was hospitalized.

After a series of trials and appeals, the Supreme Court ruled that Donaldson was not dangerous either to himself or others. It further ruled that a state could not confine him as being in need of treatment and yet fail to provide him with that treatment. Specifically, it ordered that "the State cannot constitutionally confine a nondangerous individual who is capable of surviving safely in freedom by himself or with the help of willing and responsible family members or friends." Thus, O'Connor not only underscored a patient's right to treatment but also set limitations on civil commitment standards. Commitment based on dangerousness to self or others remained unquestioned, but commitment based on inability to care for self became much more controversial, especially if institutionalization offered little treatment or therapeutic benefit.

**Why are many patients not treated in the "least restrictive" environment?**

**Least Restrictive Alternative Environment** The patient's right to be treated in the least restrictive alternative

environment was first developed in the 1966 case of *Lake v. Cameron* [364 F. 2d 657 (D.C. Cir. 1966)]. Catherine Lake was 60 years old when she was committed to St. Elizabeth's Hospital because of "a chronic brain syndrome associated with aging." A particular problem was her tendency to wander away from her home, which posed a threat to her life through exposure to the elements and other dangers.

In contesting the commitment, Mrs. Lake did not object to her need for treatment, but she argued that appropriate treatment was available in a less restrictive setting. The court agreed, suggesting several less restrictive alternatives to institutionalization. These alternatives ranged from having Mrs. Lake carry an identification card to treating her in a public nursing home.

Several cases following *Lake* firmly established the doctrine of the least restrictive alternative. Legislation in numerous states incorporated the right to treatment in the least restrictive alternative environment into their mental health statutes (Hoffman & Foust, 1977). Although the concept was quickly embraced, no one was or is absolutely certain what the expression "least restrictive alternative" means.

In theory, the least restrictive alternative is an attempt to balance paternalistic and libertarian concerns. The state provides mandatory care, but restricts individual liberties to the minimal degree possible. But questions arise about how to implement the theory. Who should determine what alternative is the least restrictive? Should the court monitor the consideration of alternatives? Should an independent party supervise these decisions?

Perhaps the most important issue is the problem that developed in the *Lake* case: Less restrictive alternatives to hospital care are not available. No suitable community care was found for Mrs. Lake, who was returned to the institution. Thus, *Lake* both established patients' right to treatment in the least restrictive alternative environment and foreshadowed the problem of insufficient alternative treatments in the community. The development of community resources has not kept up with the release of patients from mental hospitals. This is especially unfortunate, given that data suggest that community treatment can be more effective than inpatient care (Kiesler, 1982).

**Olmstead v. L.C.** A 1999 U.S. Supreme Court case, *Olmstead v. L.C.* (527 US 581 [1999]), upheld the goals of placement in the least restrictive alternative environment but also accepted that the states face problems in providing community care. The case was brought against Tommy Olmstead, the Georgia commissioner of human resources, on behalf of two women with mental retardation and mental illness, L.C. and E.W., who were confined in a Georgia state hospital. The professionals who treated L.C. and E.W. agreed that the women should be treated in the community; however, no community placements were available. The suit was filed under the 1990 Americans with Disabilities Act (ADA), which, among other things, holds that public agencies must provide services to individuals with disabilities, including mental disabilities, "in the most integrated setting appropriate to the needs of qualified individuals with disabilities."

The Supreme Court upheld the ruling of lower courts indicating that Georgia had failed to comply with the ADA. The ruling held that states must demonstrate their efforts to find appropriate community placements, unless doing so would fundamentally alter the state's services and programs for the mentally disabled. *Olmstead* led to further litigation and some legislative change. As with *Lake's* least restrictive alternative goal,





Many homeless people suffer from serious mental illnesses.

however, progress toward implementing *Olmstead's* mandate has been slow and limited by the narrow interpretation of subsequent cases (Mathis, 2001; Slobogin et al., 2009). For their part, both L.C. and E.W. were placed in their communities and have remained there for several years. According to the Legal Aid Society of Atlanta, which brought the suit on their behalf, their psychological well-being and quality of life improved immeasurably as a result.

**Right to Refuse Treatment** The third and most recent development in the rights of mental patients is the *right to refuse treatment*, particularly the right to refuse psychoactive medication. Several courts and state legislatures have concluded that mental health patients have the right to refuse treatment under certain conditions, although this right is on increasingly shaky ground.

The very concept of a committed patient refusing treatment is problematic. After all, the patient who is committed to a mental hospital has refused inpatient treatment but is receiving it anyway. On what grounds can subsequent treatment decisions be refused? Many experts argue that patients lose their right to refuse treatment once they are involuntarily hospitalized (Appelbaum, 1994; Gutheil, 1986; Torrey, 2008). After all, a mental health professional is in an awkward position if a patient is committed to a hospital for treatment yet retains the right to refuse medication.

The question of the right to refuse treatment often turns on the issue of informed consent (Hermann, 1990). **Informed consent** requires that (1) a clinician tell a patient about a procedure and its associated risks, (2) the patient understands the information and freely consents to the treatment, and (3) the patient is competent to give consent. When the patient's competence is in question, a common approach is to appoint an independent guardian who offers a *substituted judgment*, deciding not what is best for the patient but what the patient would do if he or she were competent (Gutheil, 1986).

The rationales for and parameters of patients' right to refuse treatment are still being debated. Several courts have ruled that patients retain their competence to make treatment decisions even if they have been committed through civil procedures. Half the states have recognized the right to

refuse psychoactive medications provided that patients are not dangerous to themselves or others (Hermann, 1990). The U.S. Supreme Court first ruled on this topic in the 1990 case of *Washington v. Harper* [110 S. Ct. 1028 (1990)]. This case involved a Washington state prison that overrode a patient's refusal of psychoactive medications. The Court decided in favor of the prison, ruling that the prison's review process sufficiently protected the patient's right to refuse treatment. The process stipulated that the patient's wishes could be overruled only after review by a three-member panel consisting of a psychologist, a psychiatrist, and a deputy warden.

In the subsequent case of *Riggins v. Nevada* [504 U.S. 127 (1992)], the Court *upheld* the right of a defendant who was being tried for murder to refuse an extremely high dose of antipsychotic medication. The medication ostensibly was being given to ensure the competence of the defendant to stand trial. In a recent case, *Sell v. United States* [123 U.S. 2174 (2003)], the Supreme Court again upheld the right of a defendant to refuse medication when the purpose was to establish competence to stand trial. However, the court signaled that it might have been permissible to medicate the same patient involuntarily if the purpose had been to reduce dangerous behavior (Slobogin et al., 2009). Thus, a patient's right to refuse treatment may be limited if the rationale is to protect the patient or the public, but the right to refuse treatment trumps the state's interest when the purpose is to move prosecution forward for a nondangerous individual.

**Almost a Revolution** The libertarian cases and legislation of the 1960s, 1970s, and 1980s defined key patients' rights, producing what one commentator called "almost a revolution" (Appelbaum, 1994). The revolution ended in the 1990s, with the rise of paternalistic concerns. This new paternalism focuses especially on two issues: (1) treating severely disturbed patients who lack insight into their condition and (2) protecting the public from the violently mentally ill.

A newer, assertive approach to treating patients who lack insight is **outpatient commitment**, that is, mandatory, court-ordered treatment in the community (e.g., mandated therapy and/or medication). Outpatient commitment orders must be based on the same legal standards as inpatient commitment, that is, dangerousness and, in some states, inability to care for self. Because it involves less infringement on civil liberties, however, outpatient commitment criteria may be applied less stringently (Melton et al., 2007; Monahan et al., 2001a). In practice, for example, outpatient commitment is sometimes used to prevent future as opposed to imminent dangerousness. Other forms of "leverage" also may be used to get the seriously mentally ill to comply with treatment recommendations, including the threat of jail or help with obtaining public assistance (Monahan et al., 2005). Outpatient treatment of sufficient length reduces the rate of subsequent hospitalization; thus, the coercive procedure can help the seriously mentally ill to receive help in a less restrictive environment (Swartz et al., 2001).

An even newer innovation is the use of **advance psychiatric directives**. Patients can use these legal instruments to declare their treatment preferences, or appoint a surrogate to make decisions for them, should they become psychotic or otherwise are unable to make sound decisions. Advance medical

*Is it contradictory to give committed patients a right to refuse treatment?*

directives are used commonly among the aged, particularly for stating preferences about end of life medical treatments. This new use with severely disturbed patients nicely balances paternalist and libertarian concerns, and initial evidence indicates they greatly reduce the need for more coercive interventions (Monahan, 2010).

Concerns about public protection have been fueled by the Virginia Tech shootings. Tech student Seung-Hui Cho had a history of anxiety, depression, and unusual, threatening behavior long before he shot and killed 32 people on April 16, 2007. In fact, a Virginia court declared him to be “an imminent danger to himself as a result of mental illness” in 2005. Unfortunately, the only outcome was an order for Cho to seek outpatient treatment. Could this horror have been prevented by more definitive action? No one knows. But perhaps foreshadowing a new paternalistic trend, Virginia altered its civil commitment law in 2008. The revised statute extends the time frame of potential dangerousness from “imminent” danger to danger “in the near future” (Cohen, Bonnie, & Monahan, 2008).

## DEINSTITUTIONALIZATION

The **deinstitutionalization** movement embraced the philosophy that many patients can be better cared for in their community than in large mental hospitals. In 1963, Congress passed the Community Mental Health Centers (CMHC) Act with the strong support of President John F. Kennedy.<sup>1</sup> The act

### Has deinstitutionalization worked?

provided for the creation of community care facilities for the seriously mentally ill as alternatives to institutional care. This law began a broad change in the way mental health services are delivered in the United States.

Deinstitutionalization occurred in dramatic fashion. In 1955, there were 558,239 beds in public mental hospitals in the United States. By 2005, that number had shrunk to 52,539 beds

<sup>1</sup>President Kennedy had a special interest in mental health because of his sister Rosemary. She was mildly mentally retarded as a child, but she became psychotic as a young adult and underwent a failed lobotomy that left her so impaired that she had to be confined to a nursing home.

(Torrey et al., 2008). The effects of deinstitutionalization are even greater than these numbers suggest because of population growth. Nearly 900,000 people would be in institutions today if the 1955 proportion of inpatients to the total population had remained unchanged (Torrey, 2008).

Unfortunately, CMHCs have not achieved many of their goals. In fact, the needed number of CMHCs were never built, and many in existence do not focus on serious mental illness. Some CMHCs do not even offer emergency treatment or inpatient care, despite the fact that they are mandated to do so by legislation (Torrey, 1997). Other community resources, such as halfway houses, simply have not been implemented in adequate numbers.

Other problems with deinstitutionalization are evident. As public hospitalization has declined, the number of mental patients living in nursing homes and other for-profit institutions has grown. More people with a mental illness also are being confined in jail. In fact, 16 percent of the prison population suffers from a serious mental illness (Ditton, 1999). In addition, a *revolving door* phenomenon has developed in which more patients are admitted to psychiatric hospitals more frequently but for shorter periods of time. For example, one study found that 24 percent of inpatients in New York City had 10 or more previous admissions (Karras & Otis, 1987). Moreover, the deinstitutionalized mentally ill constitute a large part of the homeless population (Torrey, 2008). One study found that 31 percent of the homeless were in need of mental health services (Roth & Bean, 1986).

**More Paternalism?** Some of the problems of deinstitutionalization are compounded by restrictive civil commitment laws. One commentary graphically described the situation as one in which patients are “rotting with their rights on” (Appelbaum & Gutheil, 1980). Torrey (1988) argued, “Freedom to be insane is an illusory freedom, a cruel hoax perpetrated on those who cannot think clearly by those who will not think clearly” (p. 34).

As noted, outpatient commitment can balance some of these paternalistic concerns against the libertarian fears of restricted freedom. Others support more paternalism in civil commitment laws but argue that a broader reorientation is needed. Most mental health professionals treat “worried well.” Perhaps new incentives are needed to direct more of their efforts toward helping the seriously mentally ill (Torrey, 2008).



These contrasting images illustrate how mental patients often are neglected both inside and outside of institutions. The photo on the left, taken several decades ago, shows some of the depressing and dehumanizing conditions that characterized many institutions for the mentally ill. The photo on the right depicts the contemporary problem of homelessness. Many homeless people are deinstitutionalized mental patients.



# Mental Health and Family Law

Family law issues typically involve people whose problems are far less severe than we find in mental health law. This is evident in the major issues that form the focus of family law: divorce, spousal abuse, foster care, adoption, juvenile delinquency, child custody disputes, and child abuse and neglect. These problems can involve serious psychopathology, but they more commonly affect family members who are only mildly disturbed or are functioning normally.

We consider family law and mental health law together in this chapter, because mental health professionals frequently play a role in both areas. However, family and mental health law are distinct in the legal system and have different historical roots. Much of mental health law is based on the state's police power; virtually all of family law is premised on *parens patriae* duties. Attorneys may specialize in one or the other area, but rarely both. In fact, family law cases typically are tried in separate courts, known variously as “juvenile courts,” “domestic relations courts,” or “family courts.”

According to *parens patriae* theory, family courts are supposed to help and protect children and families, a goal that is psychological as well as legal. Psychological issues carry great weight in family court because of this philosophy—and because family law often is vague. For example, the guiding principle in custody and abuse cases is that judges must make decisions according to the “child’s best interest.” This may sound laudable, but the law does not clearly define “best.” This leaves family court judges in a position of making very difficult decisions with very little legal guidance. As law professor Robert Mnookin (1975) has pointed out:

Deciding what is best for a child poses a question no less ultimate than the purposes and values of life itself. Should the judge be primarily concerned with the child’s happiness? Or with the child’s spiritual and religious training? Should the judge be concerned with the economic “productivity” of the child when he grows up? Are the primary values of life in warm interpersonal relationships, or in discipline and self-sacrifice? Is stability and security for a child more desirable than intellectual stimulation? These questions could be elaborated endlessly. And yet, where is the judge to look for the set of values that should inform the choice of what is best for the child? (pp. 260–261)

Judges look to the law to outline the values that define “best,” but few answers can be found there. As a result, courts frequently turn to mental health professionals for guidance in trying to decide what might be best for a given child in a custody dispute or an abuse/neglect proceeding, the two issues we briefly consider.

## CHILD CUSTODY DISPUTES

About 40 percent of children in the United States today will experience their parents’ divorce, a circumstance that can lead to a custody dispute (Emery, 1999a, 2011). Child custody disputes also may occur between cohabiting couples and even between extended family members. For example, the case of



Two of Michael Jackson’s three children. The dispute about custody of the children following Jackson’s death was settled amicably out of court, with his mother receiving custody and the children’s mother having meaningful visitation rights.

Elian Gonzalez involved a Cuban boy whose mother died while trying to come to the United States. A national debate focused on whether Elian should be returned to live with his father in Cuba (the parents were divorced) or stay in the United States with distant relatives. He eventually was returned to live with his father.

Although the legal terminology differs from state to state, **child custody** involves two issues: *physical custody*, or where the children will live at what times; and *legal custody*, or how the parents will make decisions about their children’s lives. *Sole custody* refers to a situation in which only one parent retains physical or legal custody of the children; in *joint custody* both parents retain legal or physical custody or both.

Parents make the majority of custody decisions outside of court, often with the assistance of attorneys. A growing number of parents are making decisions themselves, often with the help of a *mediator*—a neutral third party who facilitates the parents’ discussions. Only a small percentage of custody disputes are decided in court by a judge (Maccoby & Mnookin, 1992). Mental

**What does “children’s best interests” mean?**

health professionals may provide recommendations during attorney negotiations, they may offer expert testimony in court, or they may act as mediators.

**Expert Witnesses in Custody Disputes** The law directs judges to consider only very general factors in evaluating a child's best interests, including the quality of the child's relationship with each parent, the family environment provided by each parent, each parent's mental health, the relationship between the parents, and the child's expressed wishes, if any (Emery, Sbarra, & Grover, 2005). Evaluating these broad family circumstances and drawing implications for child custody is a precarious task. In fact, some commentators have argued that, because of inexact scientific knowledge, mental health professionals should refrain from ever conducting custody evaluations (O'Donohue & Bradley, 1999).

Others suggest that the problem lies in the system for determining child custody (Emery et al., 2005). The "child's best interests" standard can increase conflict between parents, because the directive is so vague. Virtually any information that makes one parent look bad and the other look good may be construed as helping a parent's case—and people who have been married have much private and potentially damaging information about each other. This is a problem, because conflict between parents is strongly related to maladjustment among children following divorce (Cummings & Davies, 2010; Emery, 1982, 1999b; Grych & Fincham, 1990). Many mental health and legal experts believe they serve children and the legal system better if they help settle custody disputes outside of court (Emery et al., 2005).

**Divorce Mediation** In *divorce mediation*, parents meet with a neutral third party, who may be a mental health or legal professional, who helps them to identify, negotiate, and ultimately resolve their disputes. The role of mediator is very different from the evaluation role of mental health professionals, and mediation also is a major change in the practice of the law. Mediators adopt a cooperative approach to dispute resolution, treating separated parents as parents rather than as legal adversaries (Emery, 1994, 2011).

Mediation reduces custody hearings, helps parents reach decisions more quickly, and is viewed more favorably by parents than litigation (Emery, 1994; Emery, Matthews, & Kitzmann, 1994; Emery et al., 2005). One randomized trial found that five to six hours of mediation causes nonresidential parents to remain far more involved in their children's lives and work together better 12 years later (Emery et al., 2001; Sbarra & Emery, 2008). Many states now require mediation as a more "family friendly" forum for dispute resolution. Consider the following brief case study.

## BRIEF CASE STUDY

### Not Fighting for Your Children

Jim and Suzanne had been divorced for two years when they first came to a mediator. The parents were disputing custody of their 8-year-old daughter, Ellen, and 10-year-old son, Will. The parents had maintained an uneasy joint physical custody arrangement. Every other week the children alternated between

each of their parents' homes. However, Suzanne recently decided to sue for sole custody. She said she was worried about Will's increasingly difficult behavior and Ellen's lack of activities with her father. Jim argued that Ellen's real concern was his recent remarriage. He said that he was eager to get on with his life with his new wife, Adriana, but Suzanne would not accept her.

Suzanne and Jim were referred to mediation by their lawyers, who urged their clients to avoid renewing the long and contentious negotiations that had surrounded their divorce. Suzanne and Jim had decided on joint custody as a last-minute compromise. They reached this decision literally on the courthouse steps.

The mediator urged Suzanne and Jim to take their children's perspective and, for the children's sake, to try to cooperate as parents even though they were not "friends." In private, the mediator also encouraged Suzanne to face her fears of losing her children to Jim's new family. Speaking to Jim alone, the mediator bluntly told him that, while he may have "moved on," Suzanne would always be a part of his life as the children's mother.

Following several frank discussions about their feelings, preferences, and past problems with joint custody, Suzanne and Jim reached a settlement. They would return to the week-to-week joint physical custody schedule but with a new commitment to communicate better, to support each other's efforts in parenting, and to make the children's routines more consistent across their homes. Adriana came for one of the last mediation sessions. All the adults agreed that Adriana would be an important part of raising Will and Ellen. Still, no one could or wanted to replace Suzanne or Jim as the children's parents.

## CHILD ABUSE

**Child abuse** involves the accidental or intentional infliction of harm to a child due to acts or omissions on the part of an adult responsible for the child's care. Such abuse of children was "discovered" to be a problem only relatively recently. The first child protection efforts in the United States did not begin until 1875. A much publicized case of foster parents who physically beat a young girl in their care led to the founding of the New York Society for the Prevention of Cruelty to Children. The society was given the power to police child abuse, and other states rapidly established similar organizations and legislation (Lazoritz, 1990).

Still, public attention did not consistently focus on child abuse until 1962, when the physician Henry Kempe wrote about the "battered child syndrome." Kempe documented tragic cases of child abuse in which children suffered repeated injuries, fractured bones, and, in a substantial number of cases, death (Kempe et al., 1962). Kempe's influential article prompted legislation that defined child abuse and required physicians to report suspected cases. This reporting requirement continues today, and in most states it extends to include mental health professionals, schoolteachers, and others who have regular contact with children. In fact, mental health professionals not only can, but they must also, break the confidentiality if they suspect child abuse (Melton & Limber, 1989).



Four forms of child abuse generally are distinguished: physical abuse, sexual abuse, neglect, and psychological abuse (American Psychological Association, 1995). *Physical child abuse* involves the intentional use of physically painful and harmful actions. The definition of physical abuse is complicated by the fact that corporal punishments like spanking are widely accepted discipline practices (Emery & Laumann-Billings, 1998; Gershoff, 2002).

*Child sexual abuse* involves sexual contact between an adult and a child. Reports of child sexual abuse have increased astronomically in recent years, as the problem has been fully recognized only since the 1980s (Glaser, 2002; Haugaard & Reppucci, 1988). Although exact estimates are difficult to make, the sexual abuse of children is now known to be far more prevalent than would have been believed a short time ago.

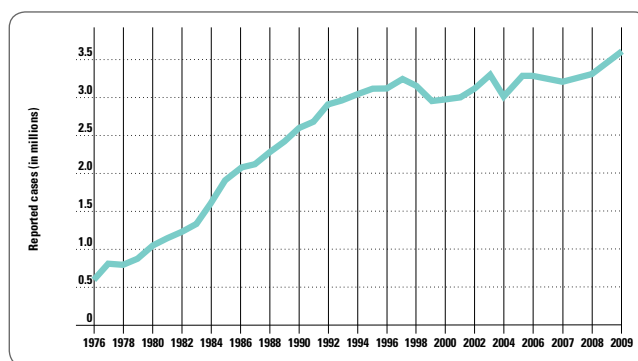
*Child neglect*, the most commonly reported form of child abuse, places children at risk for serious physical or psychological harm by failing to provide basic and expected care. Some children are severely neglected, and they experience extreme failure in their growth and development as a result (Wolfe, 1987). Some children also suffer *psychological abuse*—repeated denigration in the absence of physical harm.

*Munchausen-by-proxy syndrome (MBPS)* is a unique, rare, but potentially very harmful form of physical child abuse that merits special note. In MBPS, a parent feigns, exaggerates, or induces illness in a child. In benign cases, the parent simply fabricates the child's illness; in more serious cases, the parent actually induces illness. One study used covert video surveillance to monitor parents suspected of MBPS (Southall et al., 1997). Of 39 children, video recordings captured 30 parents trying to harm their children through such extreme acts as attempting suffocation, trying to break a child's arm, and attempted poisoning with a disinfectant. Alarming, of the 41 siblings of the children, 12 had previously died suddenly and unexpectedly. These results clearly illustrate that MBPS can be a severe and ultimately deadly form of child abuse.

The number of reported cases of child abuse has increased dramatically in the United States since the 1970s and through today. As indicated in Figure 18.2, the number of reports of child abuse made to social service agencies climbed from 669,000 in 1976 to over 3,600,000 in 2009. However, over two-thirds of all reports of abuse are found to be unsubstantiated. One reason for this, according to some critics, is that the concept of abuse and neglect is applied too broadly by primarily white, middle-class social workers who are evaluating primarily black, low-income families (Besharov, 1992).

When an allegation of abuse is substantiated, one of the major questions is whether to remove the child from the home. Each year over 100,000 maltreated children are placed in *foster care*, where they live temporarily with another family. Foster care protects children who are in physical danger, but as many as half of all children placed in foster care are in no immediate danger of physical injury (Besharov, 1988). Stable foster care may offer psychological benefits, as well as physical protection (Wald, Carlsmith, & Leiderman, 1988). However, half the children placed in foster care remain there for at least two years, almost one-third are separated from their parents for over six years, and a substantial proportion live in many different foster homes during this time (Besharov, 1998).

Recent federal legislation encourages the adoption of children who are likely to be placed in foster care for long periods of time. However, this raises an even more controversial issue,



**FIGURE 18.2**

Reports of child abuse made to social service agencies have increased sharply. Experts disagree about what has increased—actual abuse or the awareness and reporting of abuse.

Source: C. T. Wang and K. Harding, 1999, *Current Trends in Child Abuse Reporting and Fatalities: The Results of the 1998 Annual Fifty State Survey*. Chicago: National Center on Child Abuse Prevention and Research. website: [www.acf.hhs.gov/programs/cb/stats\\_research/index.htm](http://www.acf.hhs.gov/programs/cb/stats_research/index.htm).

the *termination of parental rights*, that is, the removal of any right a parent has to care for and supervise his or her child. Obviously, this is an extreme step, and one that the courts take only with great reluctance.

As with child custody, judicial determinations about the disposition of child abuse cases are guided by the child's best interest standard. Psychologists frequently play a role in these legal proceedings by investigating allegations of abuse, making recommendations to the court, and providing treatment to children and families (Becker et al., 1995).

Some have argued that too much effort is devoted to identifying families as abusive, while not enough resources are available to help these families in need (Huntington, 2007). The definition of abuse is applied broadly; consequently, the child protective service system is overwhelmed with investigating report after report (Emery & Laumann-Billings, 2002). In order to allow child protection agencies to offer more support to stressed families, many states are dividing reports of suspected abuse into more and less serious cases. More serious cases are investigated as usual, but social workers offer troubled parents support, counseling, and referral in less serious cases (Emery & Laumann-Billings, 1998). This more family-friendly approach does *not* increase the risk for future abuse. In fact, it reduces recurrence, is liked better by parents, and saves agencies time and money (Loman & Siegel, 2005).

Other evidence shows that multisystemic therapy (see Chapter 16) for child abuse and neglect leads to better child mental health, improved parenting, and fewer out-of-home placements when compared to outpatient treatment (Swenson et al., 2010). Structured interventions that leave maltreated children in the home while supporting effective parenting also show promise for helping families and reducing subsequent abuse (Jouriles et al., 2010). Unless abuse or neglect is serious, we do much better if we try to help distraught families, instead of just policing, labeling, and judging them.

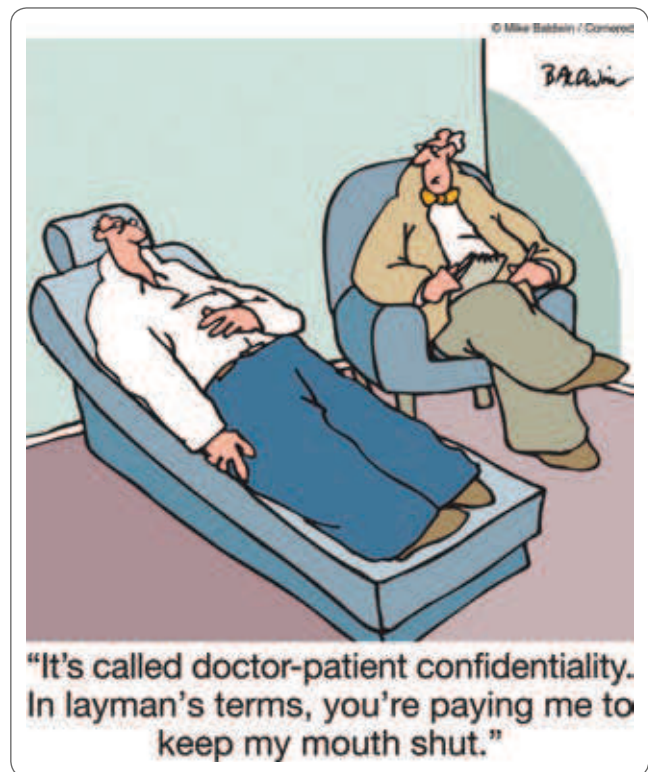
# Professional Responsibilities and the Law

Psychiatrists, clinical psychologists, and social workers all have **professional responsibilities**, obligations to meet the ethical standards of their profession and to uphold the laws of the states in which they practice. The duties of mental health professionals are numerous and varied. Here we focus on two important and examples: negligence and confidentiality.

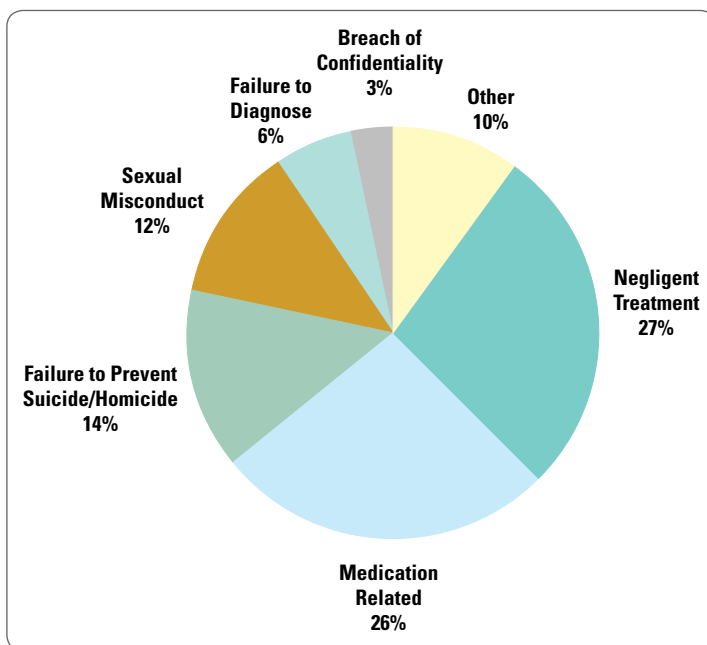
## PROFESSIONAL NEGLIGENCE AND MALPRACTICE

Negligence occurs when a professional fails to perform in a manner that is consistent with the level of skill exercised by other professionals in the field. Simply put, negligence is sub-standard professional service. Malpractice refers to situations in which professional negligence results in harm to clients or patients. In the law, malpractice is demonstrated when (1) a professional has a duty to conform to a standard of conduct, (2) the professional is negligent in that duty, (3) the professional's client experiences damages or loss, and (4) it is reasonably certain that the negligence caused the damages (Slobogin et al., 2009). When professionals are found to be guilty of malpractice, they are subject to disciplinary action both from their professional organizations and through state licensing boards, as well as to civil suits and possibly criminal actions.

The inappropriate use of medication and negligent treatment are two of the more common reasons for malpractice claims against mental health professionals (see Figure 18.3). Another is the existence of a sexual relationship between therapists and their



clients. The ethical codes of the American Psychological Association and the American Psychiatric Association both prohibit sexual relationships between therapists and their clients. Other claims of professional negligence stem from the failure to prevent suicide, failure to prevent violence against others, and violations of confidentiality. In the future, a new area of professional



**FIGURE 18.3** Frequency of Different Kinds of Mental Health Malpractice Claims

Categories of closed malpractice claims against psychiatrists among a sample of 188 closed cases from 1996–2005.

Source: From "Psychiatry Malpractice and Administrative Inquiries of Alleged Physician Misconduct" by D. L. Meyer, *Psychiatric Clinics of North America*, 29 (2006), 616. Copyright © 2006, Elsevier. Reprinted by permission of Elsevier.

negligence may become more important: the failure to inform clients about effective treatment alternatives.

**Informed Consent on Alternative Treatments** Patients may be given a wide range of alternative treatments for the same mental disorder. Unfortunately, the choice of treatment hinges, in part, on chance factors such as the professional's "theoretical orientation" (see Chapter 3). Should mental health professionals be required to reduce this element of chance by informing their patients about alternative treatments and research on their effectiveness?

This issue was raised in *Osheroff v. Chestnut Lodge* [62 Md. App. 519, 490 A. 2d. 720 (Md. App. 1985)]. In 1979, Dr. Rafael Osheroff, an internist, admitted himself to Chestnut Lodge, a private psychiatric hospital in Maryland that had long been famous as a center for psychoanalytic psychotherapy. Dr. Osheroff had a history of depression and anxiety, problems that previously had been treated on an outpatient basis with some success using tricyclic antidepressant medication. Apparently, Dr. Osheroff had not been taking his medication prior to his admission to Chestnut Lodge, and his condition had worsened. He was diagnosed by hospital staff as suffering primarily from a narcissistic personality disorder and secondarily from manic-depressive illness (Klerman, 1990b; Malcolm, 1987).

Hospital staff did not offer medication to Dr. Osheroff during his hospitalization. They hoped that, through therapy, he could achieve what they viewed as "more basic" changes in his personality. Dr. Osheroff was seen in individual psychoanalytic psychotherapy four times a week, and he participated in group therapy as well. During Dr. Osheroff's seven months of hospitalization, his condition did not improve and actually may have deteriorated somewhat. After this time, his family discharged him from Chestnut Lodge and admitted him to another private psychiatric hospital, Silver Hill in Connecticut. At Silver Hill, Dr. Osheroff was diagnosed as suffering from a psychotic depressive reaction, and he was treated with phenothiazines and tricyclic antidepressants. He began to improve within three weeks after treatment began, and he was discharged from the hospital within three months. Although he continued to experience some problems following his discharge, Dr. Osheroff was able to resume his medical practice with the help of outpatient psychotherapy and antidepressants (Klerman, 1990b; Malcolm, 1987).

In 1982, Dr. Osheroff sued Chestnut Lodge for negligence. His claim stated that Chestnut Lodge had misdiagnosed his condition, failed to offer appropriate treatment, and failed to offer him informed consent about treatment alternatives (Malcolm, 1987). He argued that research available in 1979 provided clear support for the use of medication in the treatment of severe depression but offered no support for the use of psychoanalytic psychotherapy in the treatment of either depression or narcissistic personality disorder. As required by state law in Maryland, the matter was first heard by an arbitration panel. The panel initially awarded Dr. Osheroff \$250,000 in damages, but it later reduced the amount of the award. Both sides appealed the decision of the arbitration board, but the matter was eventually settled out of court (Klerman, 1990b).

The private settlement of this case limits its precedent-setting value. Nevertheless, it suggests that mental health professionals will be held to increasingly higher standards in offering alternative treatments, or at least in informing patients about the risks and benefits of various treatments. As

researchers demonstrate that certain approaches are more or less effective in treating particular disorders, offering informed consent about treatment alternatives is likely to become a routine practice for mental health professionals. *Informed consent* includes providing accurate information about risks and benefits in an understandable and noncoercive manner.

**Is informing patients about alternative, effective treatments a professional responsibility?**

## CONFIDENTIALITY

**Confidentiality**—the ethical obligation not to reveal private communications—is basic to psychotherapy. The therapist's guarantee of privacy is essential to encouraging clients to disclose difficult information, and the maintenance of confidentiality with past clients is essential to gaining the trust of future clients. For these reasons, confidentiality standards are a part of the professional ethics of all of the major mental health professions.

Despite the overriding importance of confidentiality, mental health professionals sometimes may be compelled by law to reveal confidential information. For example, all states require mental health professionals to break confidentiality and report suspected cases of child abuse. This requirement can create dilemmas for therapists (Smith & Meyer, 1985). Must a therapist make the limits on confidentiality clear before beginning therapy? If therapists tell their clients that their disclosures of child abuse will be reported, does this encourage clients to be something less than honest? Does reporting child abuse undermine the therapeutic relationship that might benefit an abused child?

Confidentiality also must be broken when clients are dangerous to themselves or others, so that civil commitment can proceed. The influential case of *Tarasoff v. Regents of the University of California* [551 P.2d 334 (1976)] identified another obligation that therapists may assume when a client expresses violent intentions: the duty to warn the potential victim.

**When must therapists break confidentiality?**

**The Duty to Protect** On October 27, 1969, a young woman named Tatiana Tarasoff was killed by Prosenjit Poddar, a foreign student at the University of California at Berkeley. Poddar had pursued a romantic relationship with Tarasoff, but after having been repeatedly rejected by her, he sought treatment at the Berkeley student health facility. Poddar was diagnosed as suffering from paranoid schizophrenia, and the clinical psychologist who treated Poddar concluded that he was dangerous to himself and others. After consulting with two psychiatrists, the psychologist decided to pursue civil commitment. He notified the campus police of his concerns and asked them to detain Poddar for the purpose of an emergency commitment. The police concluded that Poddar was not dangerous, however, and released him after he agreed to stay away from Tarasoff. Poddar subsequently discontinued therapy, and no one notified Tarasoff that Poddar posed a threat to her life. Poddar had never mentioned Tatiana Tarasoff by name, but the information he relayed to the psychologist was sufficient to deduce her identity. Two



Tatiana Tarasoff and Prosenjit Poddar, the man who killed her. The California Supreme Court ruled that Poddar's therapist should have warned Tarasoff that her life might be in danger.

months after the police had questioned him, Poddar murdered Tarasoff after being rejected by her once more.

Tarasoff's parents sued the university, the therapists, and the police for negligence. The California Supreme Court ruled that the defendants were liable for failing to warn the woman of the impending danger. Subsequent California cases and legislation altered the *duty to warn* potential victims to a more general *duty to protect*, which may involve warning but alternatively might involve protective actions like hospitalizing the potentially dangerous patient (Weinstock et al., 2006).

The *Tarasoff* case prompted many states to enact laws outlining therapists' duty to protect potential victims of violence (Appelbaum, 1994). Still, the issues raised by *Tarasoff* are far from resolved. If he or she has a client with AIDS, must a psychologist warn unwitting sexual partners about the risk? In the case of the duty to protect, as with other issues in psychology and the law, psychologists sometimes must walk a thin line between their professional responsibilities and their legal obligations.

## Getting Help

Getting help for people with emotional disorders sometimes involves challenging societal and legal obstacles. Advocacy can be a way of giving help as well as ensuring that you and those you care for can get help when it is needed. For serious mental illness, the National Alliance for the Mentally Ill (NAMI) is the largest and most effective national advocacy organization. In addition to its national efforts, you may be able to find a local chapter of NAMI in your community. Another advocacy group is the Judge David L. Bazelon Center for Mental Health Law. The Bazelon Center focuses more specifically on legal issues in the treatment of psychological disorders. The center tracks funding, legislation, and litigation, and it offers legal advice

and assistance in selected cases. The center's website gives information on a number of their pressing priorities such as improving mental health treatment systems, increasing the availability of services for underserved populations (children, the aged), and addressing homelessness and housing needs. The American Bar Association's Commission on Mental and Physical Disability Law also collects and offers a wealth of information on mental health law and the rights of people disabled by mental illness.

An excellent book on these topics is *The Rights of People with Mental Disabilities: The Authoritative ACLU Guide to the Rights of People with Mental Illness and Mental Retardation*, by Robert Levy and Leonard Rubenstein.

Another book (and author) that we highly recommend is E. Fuller Torrey's *Out of the Shadows: Confronting America's Mental Illness Crisis*.

Mental health advocacy involves individual as well as organized efforts. We encourage you to advocate directly in any number of small ways. You can educate yourself and others about the needs of the mentally ill. In everyday interactions, you can help by standing up for what you believe is right and just in our society's response to the immense problem of mental illness. Even more simply, you can respond receptively to agencies and individuals in your community. Advocacy, like therapy, begins by recognizing that the person with a psychological disorder is, first and foremost, a person.

## SUMMARY

- The **insanity defense** says that you are not legally responsible for your actions, usually based on one of two grounds: A mental disease or defect either (a) prevents you from knowing the wrongfulness of your actions or (b) an irresistible impulse makes it impossible to control your actions.
- **Competence** is the defendant's ability to understand legal proceedings and to participate in his or her own defense.
- **Civil commitment** generally is based on three grounds: (1) inability to care for self, (2) dangerous to self, and (3) dangerous to others.
- The right to treatment indicates that hospitalized patients must receive therapy and not just custodial care.
- The right to treatment in the least restrictive environment indicates that therapy should be provided in community settings when it is possible and appropriate.
- The right to refuse treatment indicates that patients cannot be forced to receive certain treatments without **informed consent** or a careful substituted judgment.



- **Deinstitutionalization** involves caring for many of the mentally ill and intellectually disabled in their community rather than in large mental hospitals.
- **Outpatient commitment** may help to balance concerns about requiring treatment while protecting liberties.
- **Advance psychiatric directives** are legal instruments where patients declare their treatment preferences, or appoint a surrogate to make decisions for them, should they become psychotic or otherwise are unable to make sound decisions.
- **Child custody** decisions involve determinations about both physical custody, where children will live, and legal custody, how parents will make childrearing decisions.
- **Child abuse** may involve physical abuse, sexual abuse, neglect, or psychological abuse.
- **Confidentiality** is a key **professional responsibility** for mental health professionals, who must meet the ethical standards of their profession and to uphold the law.

## The Big Picture

### CRITICAL THINKING REVIEW

- **How does the law define “insanity”?**  
The idea behind the insanity defense—that mental disability should limit criminal responsibility—dates to ancient Greek and Hebrew traditions . . . (see p. 476)
- **How do we justify hospitalizing someone against his or her will?**  
U.S. law contains two broad rationales for involuntary hospitalization. The first is based on . . . the philosophy that the government has a humanitarian responsibility to care for its weaker members . . . The second rationale is based on the state’s police power . . . (see p. 484)
- **How can being wrong two times out of three beat a coin flip?**  
U.S. Supreme Court Justice Harry Blackmun wrongly claimed that a coin flip would be more accurate than a clinical prediction that is wrong two out of three times . . . (see p. 486)
- **Do hospitalized mental patients have basic rights?**  
Several important court cases clarified to “the rights of patients committed” to a mental hospital. These include the right to treatment, the right to treatment in the least restrictive environment, and the right to refuse treatment . . . (see p. 487)
- **What is deinstitutionalization, and how has it worked?**  
The deinstitutionalization movement embraced the philosophy that many patients can be better cared for in their community than in large mental hospitals . . . (see p. 490)
- **What custody arrangements are in children’s “best interests”?**  
The guiding principle in custody and abuse cases is that judges must make decisions according to the “child’s best interest.” This may sound laudable, but the law does not clearly define “best” . . . (see p. 491)
- **When must therapists break confidentiality?**  
Despite the overriding importance of confidentiality, mental health professionals sometimes may be compelled by law to reveal confidential information . . . (see p. 495)

## KEY TERMS

advance psychiatric directives  
base rates  
child abuse

child custody  
civil commitment  
competence  
confidentiality

criminal responsibility  
deinstitutionalization  
expert witness  
informed consent

insanity  
insanity defense  
outpatient  
commitment

professional responsibilities

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# Glossary

**Abnormal psychology** The application of psychological science to the study of mental disorders. Includes investigation of the causes and treatment of psychopathological conditions.

**Acquired immune deficiency syndrome (AIDS)** A disease caused by the human immunodeficiency virus (HIV) that attacks the immune system and leaves the patient susceptible to unusual infections.

**Actuarial interpretation** Analysis of test results based on an explicit set of rules derived from empirical research.

**Acute stress disorder (ASD)** A category of mental disorder in DSM-IV that is defined as a reaction occurring within four weeks of a traumatic event and is characterized by dissociative symptoms, reexperiencing, avoidance, and marked anxiety or arousal. Contrasts with posttraumatic stress disorder, which either lasts longer or has a delayed onset.

**Adjustment disorder** A DSM-IV classification designating the development of clinically significant symptoms in response to stress in which the symptoms are not severe enough to warrant classification as another mental disorder.

**Advance psychiatric directives** A legal instrument that can be used by someone suffering from a mental illness to declare their treatment preferences, or to appoint a surrogate to make decisions for them, should they become psychotic or otherwise are unable to make sound decisions.

**Affect** The pattern of observable behaviors that are associated with subjective feelings. People express affect through changes in their facial expressions, the pitch of their voices, and their hand and body movements.

**Ageism** A number of misconceptions and prejudices about aging and older adults.

**Agnosia** (“perception without meaning”) The inability to identify objects. The person’s sensory functions are unimpaired, but he or she is unable to recognize the source of stimulation.

**Agoraphobia** An exaggerated fear of being in situations from which escape might be difficult. Literally means “fear of the marketplace” and is sometimes described as fear of public spaces.

**Allegiance effect** A characterization of psychotherapy outcome research such that investigators commonly find the most effective treatment is the one to which they hold a theoretical allegiance.

**Alzheimer’s disease** A form of dementia in which cognitive impairment appears gradually and deterioration is progressive. A definite diagnosis of Alzheimer’s disease requires the observation of two specific types of brain lesions: neurofibrillary tangles and senile plaques.

**Amnesic disorder** A form of cognitive disorder characterized by memory impairments that are more limited or circumscribed than those seen in dementia or delirium.

**Amyloid plaques** A central core of homogeneous protein material known as beta-amyloid found in large numbers in the cerebral cortex of patients with Alzheimer’s disease, but they are not unique to that condition.

**Analogue study** A research procedure in which the investigator studies behaviors that resemble mental disorders or isolated features of mental disorders. Usually employed in situations in which the investigator hopes to gain greater experimental control over the independent variable.

**Anhedonia** The inability to experience pleasure. In contrast to blunted affect, which refers to the lack of outward expression, anhedonia is a lack of positive subjective feelings.

**Anorexia nervosa** A type of eating disorder characterized by the refusal to maintain a minimally normal body weight along with other symptoms related to body image.

**Anterograde amnesia** The inability to learn or remember new material after a particular point in time.

**Antipsychotic drugs** Various forms of medication that have a beneficial effect on positive symptoms (hallucinations and delusions) of psychosis and psychotic disorganization (e.g., disorganized speech). The effect of first generation antipsychotic drugs depends largely on the blockade of receptors in dopamine pathways in the brain. Second-generation antipsychotics have a much broader effect on different neurotransmitters. All antipsychotic drugs have negative side effects, including motor side effects such as tardive dyskinesia.

**Antisocial personality disorder** A pervasive and persistent disregard for, and frequent violation of, the rights of other people. Also known as *psychopathy*. In DSM-IV, it is defined in terms of a persistent pattern of irresponsible and antisocial behavior that begins during childhood or adolescence and continues into the adult years.

**Anxiety** A diffuse emotional reaction that is out of proportion to threats from the environment. Rather than being directed

toward the person's present problems, anxiety is typically associated with the anticipation of future problems.

**Anxious attachment** An insecure relationship in which an infant or child shows ambivalence about seeking reassurance or security from an attachment figure.

**Aphasia** The loss or impairment of previously acquired abilities in language comprehension or production that cannot be explained by sensory or motor defects or by diffuse brain dysfunction.

**Apraxia** The loss of a previously acquired ability to perform purposeful movements in response to verbal commands. The problem cannot be explained by muscle weakness or simple incoordination.

**Asperger's disorder** A subtype of pervasive developmental disorder that is identical to autism (oddities in social interaction, stereotyped behavior) with the exception that there is no clinically significant delay in language.

**Assessment** The process of gathering and organizing information about a person's behavior.

**Attachments** Selective bonds that develop between infants and their caregivers, usually their parents, and are theorized to be related to later development. Analogous to the process of imprinting, which has been observed in many animals.

**Attention deficit** Inattention characterized by distractibility, frequent shifts from one uncompleted activity to another, careless mistakes, and/or poor organization or effort. A key symptom of attention-deficit/hyperactivity disorder.

**Attention-deficit/hyperactivity disorder (ADHD)** A psychological disorder of childhood characterized by hyperactivity, inattention, and impulsivity. Typically has an onset by the early school years.

**Attribution** Perceived causes; people's beliefs about cause-effect relations.

**Authoritative parenting** A style of parenting that is both loving and firm and is often used by parents of well-adjusted children.

**Autism** Literally, "absorption in one's own mental activity." Formally, a severe pervasive developmental disorder characterized by profound problems in social interaction, communication, and stereotyped behavior, interests, and activities (see also *Autistic spectrum disorder*).

**Autistic spectrum disorder (ASD)** A range of psychological problems that share characteristics with autism, including problems in social relationships, communication, and unusual preferences and behaviors. Autistic spectrum disorders, called Pervasive Developmental Disorders in DSM-IV-TR, have an onset at birth or very early in life.

**Autonomic nervous system** The division of the peripheral nervous system that regulates the functions of various bodily organs such as the heart and stomach. The actions of the autonomic nervous system are largely involuntary, and it has two branches, the sympathetic and parasympathetic nervous systems.

**Avoidant personality disorder** An enduring pattern of thinking and behavior that is characterized by pervasive social discomfort, fear of negative evaluation, and timidity. People with this disorder tend to be socially isolated outside of family circles. They want to be liked by others, but they are easily hurt by even minimal signs of disapproval from other people.

**Barbiturates** Drugs that depress activities of the central nervous system; mostly for sedation.

**Base rates** Population frequencies. Relative base rates set statistical limits on the degree to which two variables can be associated with each other.

**Behavior genetics** The study of broad genetic influences on individual differences in normal and abnormal behavior, usually by studying twins or other family members who differ in terms of shared genes and/or experience. Behavior genetic studies also provide information on environmental contributions to behavior.

**Behavioral medicine** A multidisciplinary field concerned with studying and treating the behavioral components of physical illness.

**Behaviorism** The belief within scientific psychology that observable behaviors, not unobservable cognitive or emotional states, are the appropriate focus of psychological study.

**Benzodiazepines** Group of drugs that have potent hypnotic, sedative, and anxiolytic action (also called *anti-anxiety drugs*).

**Bereavement** Grieving in response to the death of a loved one.

**Beta-amyloid** Protein material that forms the core of senile plaques, a type of brain lesion found in patients with Alzheimer's disease.

**Binge eating** Eating an amount of food in a fixed period of time that is clearly larger than most people would eat under similar circumstances. One part of the eating disorder of bulimia nervosa.

**Binge eating disorder** A controversial diagnosis defined by repeated episodes of binge eating but in the absence of compensatory behavior; included in an appendix of DSM-IV.

**Biofeedback** Behavioral medicine treatment that uses laboratory equipment to monitor physiological processes



(that generally occur outside of conscious awareness) and provide feedback about them. Hypothesized to help patients to gain conscious control over problematic physiological processes such as hypertension.

**Biopsychosocial model** A view of the etiology of mental disorders that assumes that disorders can best be understood in terms of the interaction of biological, psychological, and social systems.

**Bipolar mood disorder** A form of mood disorder in which the person experiences episodes of mania as well as episodes of depression.

**Blunted affect** A flattening or restriction of the person's nonverbal display of emotional responses. Blunted patients fail to exhibit signs of emotion or feeling.

**Body dysmorphic disorder** A type of somatoform disorder characterized by constant preoccupation with some imagined defect in physical appearance.

**Body image** A cognitive and affective evaluation of one's weight and shape, often a critical one.

**Borderline personality disorder** An enduring pattern of thinking and behavior whose essential feature is a pervasive instability in mood, self-image, and interpersonal relationships. Manifestations of this disorder include frantic efforts to avoid real or imagined abandonment. People who fit this description frequently hold opinions of significant others that vacillate between unrealistically positive and negative extremes.

**Brief psychotic disorder** A diagnostic category in DSM-IV that includes people who exhibit psychotic symptoms for at least one day but no more than one month. After the symptoms are resolved, the person returns to the same level of functioning that had been achieved prior to the psychotic episode.

**Bulimia nervosa** A type of eating disorder characterized by repeated episodes of binge eating followed by inappropriate compensatory behaviors (such as self-induced vomiting) together with other symptoms related to eating and body image.

**Cardiovascular disease (CVD)** A group of disorders that affect the heart and circulatory system. Hypertension (high blood pressure) and coronary heart disease are the most important forms of CVD.

**Case study** A careful description and analysis of the problems experienced by one person.

**Catatonia** Motor symptoms that can include either immobility and marked muscular rigidity or excitement and overactivity.

**Catatonic type** A subtype of schizophrenia that is characterized by symptoms of motor immobility (including rigidity and posturing) or excessive and purposeless motor activity.

**Categorical approach to classification** A view of classification based on the assumption that there are qualitative differences between normal and abnormal behavior as well as between one form of abnormal behavior and other forms of abnormal behavior.

**Cerebral cortex** The uneven surface of the brain that lies just underneath the skull and controls and integrates sophisticated memory, sensory, and motor functions.

**Cerebral hemispheres** The two major structures of the forebrain and the site of most sensory, emotional, and cognitive processes. The functions of the cerebral hemispheres are lateralized. In general, the left cerebral hemisphere is involved in language and related functions, and the right side is involved in spatial organization and analysis.

**Child abuse** A legal decision that a parent or other responsible adult has inflicted damage or offered inadequate care to a child; may include physical abuse, sexual abuse, neglect, and psychological abuse.

**Child custody** A legal decision, especially common in separation and divorce, that involves determining where children will reside and how parents will share legal rights and responsibilities for child rearing.

**Chorea** Unusual, involuntary muscle movements associated with disorders such as Huntington's disease.

**Chromosomes** Chainlike structures found in the nucleus of cells that carry genes and information about heredity. Humans normally have 23 pairs of chromosomes.

**Civil commitment** The involuntary hospitalization of the mentally ill; the decision typically is justified based on dangerousness to self or others (or inability to care for self).

**Classical conditioning** Pavlov's form of learning through association. A conditioned response eventually is elicited by a conditioned stimulus after repeated pairings with an unconditioned stimulus (which produces an unconditioned response).

**Classification system** A system for grouping together objects or organisms that share certain properties in common. In psychopathology, the set of categories in DSM-IV that describes mental disorders.

**Client-centered therapy** Carl Rogers's humanistic therapy that follows the client's lead. Therapists offer warmth, empathy, and genuineness, but clients solve their own problems.

- Clinical depression** A syndrome of depression in which a depressed mood is accompanied by several other symptoms, such as fatigue, loss of energy, difficulty in sleeping, and changes in appetite. Clinical depression also involves a variety of changes in thinking and overt behavior.
- Clinical psychology** The profession and academic discipline that is concerned with the application of psychological science to the assessment and treatment of mental disorders.
- Coercion** A pattern of interaction in which unwitting parents positively reinforce children's misbehavior (by giving in to their demands), and children negatively reinforce parents' capitulation (by ending their obnoxious behavior).
- Cognitive behavior therapy** The expansion of the scope of behavior therapy to include cognition and research on human information processing. Includes various general techniques, such as Beck's cognitive therapy and Ellis's RET.
- Cognitive behavioral couple therapy** A variation on couple therapy that emphasizes the partners' moment-to-moment interaction, particularly their exchange of positive and negative behaviors, their style of communication, and their strategies for solving problems.
- Cognitive therapy** A psychotherapy technique and important part of cognitive behavior therapy that was developed by Aaron Beck specifically as a treatment. Beck's cognitive therapy involves challenging negative cognitive distortions through a technique called *collaborative empiricism*.
- Cohort** A group whose members share some feature in common, particularly their date of birth.
- Cohort effects** Differences that distinguish one cohort from another. Cohorts share some feature in common, especially their date of birth, and cohort effects often distinguish people born in one time period (e.g., the 1960s) from those born in another.
- Comorbidity** The simultaneous manifestation of more than one disorder.
- Competence** Defendants' ability to understand legal proceedings and act rationally in relation to them. Competence evaluations can take place at different points in the legal process, but competence to stand trial (the ability to participate in one's own defense) is particularly important.
- Compulsion** A repetitive, ritualistic behavior that is aimed at the reduction of anxiety and distress or the prevention of some dreaded event. Compulsions are considered by the person to be senseless or irrational. The person feels compelled to perform the compulsion; he or she attempts to resist but cannot.
- Concordance rate** The rate, often a percentage, at which two related individuals are found to both have a disorder or problem or neither has a disorder or problem, i.e., they are concordant. In discordant pairs, only one individual is disordered. Concordance rates often are computed for twin pairs.
- Conduct disorder (CD)** A psychological disorder of childhood that is defined primarily by behavior that is illegal as well as antisocial.
- Confidentiality** The ethical obligation not to reveal private communications in psychotherapy and in other professional contacts between mental health professionals and their clients.
- Construct validity** The overall strength of the network of relations that have been observed among variables that are used to define a construct. The extent to which the construct possesses some systematic meaning.
- Control group** The group of participants in an experiment that receives no treatment or perhaps a placebo treatment. Participants in the control group are compared with participants in the experimental group (who are given an active treatment).
- Conversion disorder** A type of somatoform disorder characterized by physical symptoms that often mimic those found in neurological diseases, such as blindness, numbing, or paralysis. The symptoms often make no anatomic sense.
- Coping** An attempt to adapt to stress by changing the stressor or by altering one's thinking or emotional response.
- Coronary heart disease (CHD)** A group of diseases of the heart that includes angina pectoris (chest pains) and myocardial infarction (heart attack).
- Correlation coefficient** A number that always ranges between  $-1.00$  and  $+1.00$  and indicates the strength and direction of the relation between two variables. A higher absolute value indicates a stronger relation, while a correlation coefficient of  $0$  indicates no relation. The sign indicates the direction of the correlation.
- Correlational study** A scientific research method in which the relation between two factors (their co-relation) is studied in a systematic fashion. Has the advantage of practicality, as correlations between many variables can be studied in the real world, but also has the disadvantage that "correlation does not mean causation."
- Cortisol** A corticosteroid secreted by the adrenal cortex. Cortisol is known as the "stress hormone" because its release is so closely linked with stress.

- Couple therapy** Partners who are involved in an intimate relationship are seen together in psychotherapy; sometimes called *marital therapy* or *marriage counseling*. Improving communication and negotiation are common goals.
- Creutzfeldt-Jakob disease** A type of dementia caused by a specific viral infection.
- Criminal responsibility** A legal concept that holds a person responsible for committing a crime if he or she (a) has been proven to have committed the act and (b) was legally sane at the time.
- Cross-cultural psychology** The scientific study of ways that human behavior and mental processes are influenced by social and cultural factors.
- Cross-sectional study** A research design in which subjects are studied only at one point in time. (Contrast with *longitudinal study*.)
- Culture** The shared way of life of a group of people; a complex system of accumulated knowledge that helps the people in a particular society adapt to their environment.
- Cultural-familial retardation** Typically, mild mental retardation that runs in families and is linked with poverty. Thought to be the most common cause of mental retardation. There is controversy about the relative roles of genes or psychosocial disadvantage.
- Culture-bound syndrome** Patterns of erratic or unusual thinking and behavior that have been identified in diverse societies around the world and do not fit easily into the other diagnostic categories that are listed in the main body of DSM-IV-TR.
- Cyclothymia** A chronic, less severe form of bipolar disorder. The bipolar equivalent of dysthymia.
- Defense mechanisms** Unconscious processes that service the ego and reduce conscious anxiety by distorting anxiety-producing memories, emotions, and impulses—for example, projection, displacement, or rationalization.
- Deinstitutionalization** The movement to treat the mentally ill and mentally retarded in communities rather than in large mental hospitals.
- Delirium** A confusional state that develops over a short period of time and is often associated with agitation and hyperactivity. The primary symptom is clouding of consciousness or reduced awareness of one's surroundings.
- Delusion** An obviously false and idiosyncratic belief that is rigidly held in spite of its preposterous nature.
- Delusional disorder** Describes persons who do not meet the full symptomatic criteria for schizophrenia, but who are preoccupied for at least one month with delusions that are not bizarre.
- Dementia** A gradually worsening loss of memory and related cognitive functions, including the use of language as well as reasoning and decision making.
- Dementia with Lewy bodies (DLB)** A form of progressive dementia in which the central feature is progressive cognitive decline, combined with three additional defining features: (1) pronounced “fluctuations” in alertness and attention, such as frequent drowsiness, lethargy, lengthy periods of time spent staring into space, or disorganized speech; (2) recurrent visual hallucinations; and (3) parkinsonian motor symptoms, such as rigidity and the loss of spontaneous movement.
- Dependent personality disorder** An enduring pattern of dependent and submissive behavior. These people are exceedingly dependent on other people for advice and reassurance. Often unable to make everyday decisions on their own, they feel anxious and helpless when they are alone.
- Dependent variable** The outcome that is hypothesized to vary according to manipulations in the independent variable in an experiment.
- Depersonalization disorder** A type of dissociative disorder characterized by severe and persistent feelings of being detached from oneself (depersonalization experiences). For example, the repeated and profound sensation of floating above your body and observing yourself act.
- Depressed mood** Depressed feelings such as of disappointment and despair, but which are not yet necessarily part of a clinical syndrome.
- Depression** Can refer to a *symptom* (subjective feelings of sadness), a *mood* (sustained and pervasive feelings of despair), or to a clinical *syndrome* (in which the presence of a depressed mood is accompanied by several additional symptoms, such as fatigue, loss of energy, sleeping difficulties, and appetite changes).
- Detoxification** The process of short-term medical care (medication, rest, diets, fluids, and so on) during removal of a drug upon which a person has become dependent. The aim is to minimize withdrawal symptoms.
- Developmental deviation** Significant departures from age-appropriate norms in some specific area of functioning. Some developmental deviations are considered disorders in their own right.

**Developmental norms** Behavior that is typical for children of a given age.

**Developmental psychopathology** An approach to abnormal psychology that emphasizes the importance of normal development to understanding abnormal behavior.

**Developmental stage** A distinct period of development focused on certain central “tasks” and marked by boundaries defined by changing age or social expectations.

**Diagnosis** The process of determining the nature of a person’s disorder. In the case of psychopathology, deciding that a person fits into a particular diagnostic category, such as schizophrenia or major depressive disorder.

**Diathesis** A predisposition to disorder. Also known as *vulnerability*. A diathesis only causes abnormal behavior when it is combined with stress or a challenging experience.

**Dimensional approach to classification** A view of classification based on the assumption that behavior is distributed on a continuum from normal to abnormal. Also includes the assumption that differences between one type of behavior and another are quantitative rather than qualitative in nature.

**Disorganized speech** (also known as *formal thought disorder*) Severe disruptions of verbal communication, involving the form of the person’s speech.

**Disorganized type of schizophrenia** A subtype of schizophrenia (formerly known as *hebephrenia*) that is characterized by disorganized speech, disorganized behavior, and flat or inappropriate affect. If delusions or hallucinations are present, their content is not well organized.

**Dissociation** The separation of mental processes such as memory or consciousness that normally are integrated. Normal dissociative experiences include fleeting feelings of unreality and *déjà vu* experiences—the feeling that an event has happened before. Extreme dissociative experiences characterize dissociative disorders.

**Dissociative amnesia** A type of dissociative disorder characterized by the sudden inability to recall extensive and important personal information. The onset often is sudden and may occur in response to trauma or extreme stress.

**Dissociative disorders** A category of psychological disorders characterized by persistent, maladaptive disruptions in the integration of memory, consciousness, or identity. Examples include dissociative fugue and dissociative identity disorder (multiple personality).

**Dissociative fugue** A rare dissociative disorder characterized by sudden, unplanned travel, the inability to remember details about the past, and confusion about

identity or the assumption of a new identity. The onset typically follows a traumatic event.

**Dissociative identity disorder (DID)** An unusual dissociative disorder characterized by the existence of two or more distinct personalities in a single individual (also known as *multiple personality disorder*). At least two personalities repeatedly take control over the person’s behavior, and some personalities have limited or no memory of the other.

**Distorted body image** A perceptual inaccuracy in evaluating body size and shape that sometimes is found in anorexia nervosa.

**Diversions** A practice of directing problem youth away from the juvenile justice system and into some alternative treatment or program. For example, a juvenile offender may be referred to counseling instead of having a hearing held in court.

**Dizygotic (DZ) twins** Fraternal twins produced from separate fertilized eggs. Like all siblings, DZ twins share an average of 50 percent of their genes.

**Dominance** The hierarchical ordering of a social group into more and less powerful members. Dominance rankings are indexed by the availability of uncontested privileges.

**Down syndrome** A chromosomal disorder that is the most common known biological cause of mental retardation. It is caused by an extra chromosome (usually on the 21st pair) and associated with a characteristic physical appearance.

**Drug of abuse** (also called a *psychoactive substance*) A chemical substance that alters a person’s mood, level of perception, or brain functioning.

**Dualism** The philosophical view that the mind and body are separate. Dates to the writings of the philosopher René Descartes, who attempted to balance the dominant religious views of his times with emerging scientific reasoning. Descartes argued that many human functions have biological explanations, but some human experiences have no somatic representation. Thus, he argued for a distinction—a dualism—between mind and body.

**Dyskinesia** Involuntary movements, such as tics, chorea, or tremors, that are often associated with certain types of dementia.

**Dyspareunia** Persistent genital pain during or after sexual intercourse. The problem can occur in either men or women.

**Dysphoric** An unpleasant or uncomfortable mood, often associated with disorders such as major depression, dysthymia, and various forms of anxiety disorders. The opposite of euphoric.



**Dysthymia** One of the mood disorders; a form of mild depression characterized by a chronic course (the person is seldom without symptoms).

**Eating disorders** A category of psychological disorders characterized by severe disturbances in eating behavior, specifically anorexia nervosa and bulimia nervosa.

**Ego** One of Freud's three central personality structures. In Freudian theory, the ego must deal with reality as it attempts to fulfill id impulses as well as superego demands. The ego operates on the reality principle, and much of the ego resides in conscious awareness.

**Electroconvulsive therapy (ECT)** A treatment that involves the deliberate induction of a convulsion by passing electricity through one or both hemispheres of the brain. Modern ECT uses restraints, medication, and carefully controlled electrical stimulation to minimize adverse consequences. Can be an effective treatment for severe depression, especially following the failure of other approaches.

**Emotion** A state of arousal that is defined by subjective feeling states, such as sadness, anger, and disgust. Emotions are often accompanied by physiological changes, such as in heart rate and respiration rate.

**Emotion regulation** The process of learning to control powerful emotions according to the demands of a situation. Children learn to regulate their emotions initially through interactions with their parents and others in their social world, and eventually learn to regulate emotions on their own.

**Emotion-focused coping** Internally oriented coping in an attempt to alter one's emotional or cognitive responses to a stressor.

**Empathy** Emotional understanding. Empathy involves understanding others' unique feelings and perspectives. Highlighted by Rogers but basic to most forms of psychotherapy.

**Endocrine system** A collection of glands found at various locations throughout the body, including the ovaries or testes and the pituitary, thyroid, and adrenal glands. Releases hormones that sometimes act as neuromodulators and affect responses to stress. Also important in physical growth and development.

**Endorphins** The term is a contraction formed from the words *endogenous* (meaning "within") and *morphine*. Endorphins are relatively short chains of amino acids, or neuropeptides, that are naturally synthesized in the brain and are closely related to morphine (an opioid) in terms of their pharmacological properties.

**Enuresis** Inappropriately controlled urination (during sleep or while awake) among children old enough to maintain control of their bladder.

**Epidemiology** The scientific study of the frequency and distribution of disorders within a population.

**Etiology** The causes or origins of a disorder.

**Eugenics** The very controversial and widely discredited movement to improve the human stock by selectively breeding "desirable" characteristics (or individuals or races) and preventing "undesirable" characteristics (or individuals or races) from reproducing.

**Euphoria** An exaggerated feeling of physical and emotional well-being, typically associated with manic episodes in bipolar mood disorder.

**Evolutionary psychology** The application of the principles of evolution to understanding the mind and behavior and identifying species-typical characteristics, that is, genetically influenced traits that people or animals share as a part of their nature. Evolutionary psychologists assume that animal and human psychology, like animal and human anatomy, have evolved and share similarities.

**Exhibitionism** One of the paraphilias, characterized by distress over, or acting on, urges to expose one's genitals to an unsuspecting stranger.

**Experiment** A powerful scientific method that allows researchers to determine cause-and-effect relations. Key elements include random assignment, the manipulation of the independent variable, and careful measurement of the dependent variable.

**Experimental group** The group of participants in an experiment that receives a treatment that is hypothesized to cause some measured effect. Participants in the experimental group are compared with untreated participants in a control group.

**Experimental method** The powerful scientific method that allows researchers to determine cause and effect by randomly assigning participants to experimental and control groups. In an experiment, researchers systematically manipulate independent variables and observe their effects on dependent variables.

**Expert witness** An individual stipulated as an expert on some subject matter who, because of his or her expertise, is allowed to testify about matters of opinion and not just matters of fact. For example, mental health professionals may serve as expert witnesses concerning a defendant's sanity.

**Expressed emotion (EE)** A concept that refers to a collection of negative or intrusive attitudes sometimes displayed by

relatives of patients who are being treated for a disorder. If at least one of a patient's relatives is hostile, critical, or emotionally overinvolved, the family environment typically is considered high in expressed emotion.

**External validity** Whether the findings of an experiment generalize to other people, places, and circumstances, particularly real-life situations.

**Externalizing disorders** An empirically derived category of disruptive child behavior problems that create problems for the external world (for example, attention-deficit/hyperactivity disorder).

**Extinction** The gradual elimination of a response when learning conditions change. In classical conditioning, extinction occurs when a conditioned stimulus no longer is paired with an unconditioned stimulus. In operant conditioning, extinction occurs when the contingent is removed between behavior and its consequences.

**Factitious disorder** A feigned condition that, unlike malingering, is motivated by a desire to assume the sick role, not by a desire for external gain.

**Family life cycle** The developmental course of family relationships throughout life; most family life cycle theories mark stages and transitions with major changes in family relationships and membership.

**Family therapy** Treatment that might include two, three, or more family members in the psychotherapy sessions. Improving communication and negotiation are common goals, although family therapy also may be used to help well members adjust to a family member's illness.

**Fear** An unpleasant emotional reaction experienced in the face of real, immediate danger. It builds quickly in intensity and helps to organize the person's responses to threats from the environment.

**Fetal alcohol syndrome** A disorder caused by heavy maternal alcohol consumption and repeated exposure of the developing fetus to alcohol. Infants have retarded physical development, a small head, narrow eyes, cardiac defects, and cognitive impairments. Intellectual functioning ranges from mild mental retardation to intelligence with learning disabilities.

**Fetishism** The use of nonliving objects as a focus of sexual arousal.

**Fight-or-flight response** A response to a threat in which psychophysiological reactions mobilize the body to take action against danger.

**Flashbacks** Reexperienced memories of past events, particularly as occurs in posttraumatic stress disorder or following use of hallucinogenic drugs.

**Fragile-X syndrome** The second most common known biological cause of mental retardation. Transmitted genetically and indicated by a weakening or break on one arm of the X sex chromosome.

**Frotteurism** One of the paraphilias, characterized by recurrent, intense sexual urges involving touching and rubbing against a nonconsenting person; it often takes place in crowded trains, buses, and elevators.

**Gender identity** A person's sense of himself or herself as being either male or female.

**Gender identity disorder** A strong and persistent identification with the opposite sex coupled with a sense of discomfort with one's anatomic sex.

**Gender roles** Roles associated with social expectations about gendered behavior, for example, "masculine" or "feminine" activities.

**General adaptation syndrome (GAS)** Selye's three stages in reaction to stress: alarm, resistance, and exhaustion.

**Generalization** Making accurate statements that extend beyond a specific sample to a larger population.

**Generalized anxiety disorder (GAD)** One of the anxiety disorders, which is characterized by excessive and uncontrollable worry about a number of events or activities (such as work or school performance) and associated with symptoms of arousal (such as restlessness, muscle tension, and sleep disturbance).

**Genes** Ultramicroscopic units of DNA that carry information about heredity. Located on the chromosomes.

**Genetic linkage** A close association between two genes, typically the genetic locus associated with a disorder or a trait and the locus for a known gene. Two loci are said to be linked when they are sufficiently close together on the same chromosome.

**Gene-environment correlation** The empirical and theoretical observation that experience often, perhaps always, is correlated with genetic makeup. Genes influence personality and other characteristics, and these traits affect the environment parents provide children and the environments people seek or responses they elicit from others. Therefore, experience is associated with genes, and studies of environments are confounded by this correlation.

**Gene-environment interaction** Genetic risk and an environmental experience working together to produce

- a given outcome. Many psychological disorders are assumed to be caused by such combinations of genetic risk and difficult experience.
- Genotype** An individual's actual genetic structure, usually with reference to a particular characteristic.
- Gerontology** The multidisciplinary study of aging and older adults.
- Gestalt therapy** A variation of the humanistic approach to psychotherapy that underscores affective awareness and expression, genuineness, and experiencing the moment (living in the "here and now").
- Grief** The emotional and social process of coping with a separation or a loss, often described as proceeding in stages.
- Group therapy** The treatment of three or more people in a group setting, often using group relationships as a central part of therapy.
- Hallucinations** A perceptual experience in the absence of external stimulation, such as hearing voices that aren't really there.
- Hallucinogens** Drugs that produce hallucinations.
- Harmful dysfunction** A concept used in one approach to the definition of mental disorder. A condition can be considered a mental disorder if it causes some harm to the person and if the condition results from the inability of some mental mechanism to perform its natural function.
- Hashish** The dried resin from the top of the female cannabis plant. Ingestion of hashish leads to a feeling of being "high" (see *Marijuana*).
- Health behavior** A wide range of activities that are essential to promoting good health, including positive actions such as proper diet and the avoidance of negative activities such as cigarette smoking.
- Health psychologist** A psychologist who specializes in reducing negative health behavior (e.g., smoking) and promoting positive health behavior (e.g., exercise). Health psychology is a part of the interdisciplinary field of behavioral medicine.
- Heritability** The variability in a behavioral characteristic that is accounted for by genetic factors.
- Heritability ratio** A statistic for computing the proportion of variance in a behavioral characteristic that is accounted for by genetic factors in a given study or series of studies.
- High-risk research design** A longitudinal study of persons who are selected from the general population based on some identified risk factor that has a fairly high risk ratio.
- Histrionic personality disorder** An enduring pattern of thinking and behavior that is characterized by excessive emotionality and attention-seeking behavior. People with this disorder are self-centered, vain, and demanding. Their emotions tend to be shallow and may vacillate erratically.
- Homeostasis** The tendency to maintain a steady state. A familiar concept in biology that also is widely applicable in psychology.
- Hormones** Chemical substances that are released into the bloodstream by glands in the endocrine system. Hormones affect the functioning of distant body systems and sometimes act as neuromodulators.
- Human Immunodeficiency Virus (HIV)** The virus that causes AIDS and attacks the immune system, leaving the patient susceptible to infection, neurological complications, and cancers that rarely affect those with normal immune function.
- Humanistic psychotherapy** An approach that assumes that the most essential human quality is the ability to make choices and freely act on them (free will). Promoted as a "third force" to counteract the deterministic views of psychodynamic and the behavioral approaches to psychotherapy.
- Huntington's disease** A primary, differentiated dementia characterized by the presence of unusual involuntary muscle movements. Many Huntington's patients also exhibit a variety of personality changes and symptoms of mental disorders, including depression and anxiety.
- Hyperactivity** A symptom of attention-deficit/hyperactivity disorder (ADHD), often manifested as squirming, fidgeting, or restless behavior. Particularly notable in structured settings.
- Hypertension** High blood pressure.
- Hypnosis** An altered state of consciousness during which hypnotized subjects are particularly susceptible to suggestion. There is considerable debate as to whether hypnosis is a unique state of consciousness or merely a form of relaxation.
- Hypoactive sexual desire** Diminished desire for sexual activity and reduced frequency of sexual fantasies.
- Hypochondriasis** A type of somatoform disorder characterized by a person's preoccupying fear or belief that he or she is suffering from a physical illness.
- Hypomania** An episode of increased energy that is not sufficiently severe to qualify as a full-blown manic episode.
- Hypothalamus** A part of the limbic system that plays a role in sensation, but more importantly that it controls basic biological urges, such as eating, drinking, and activity, as

well as much of the functioning of the autonomic nervous system.

**Hypothesis** A prediction about the expected findings in a scientific study.

**Hypothetical construct** A theoretical device that refers to events or states that reside within a person and are proposed to help understand or explain a person's behavior.

**Hysteria** An outdated but influential diagnostic category that included both somatoform and dissociative disorders. Attempts to treat hysteria had a major effect on Charcot, Freud, and Janet, among others. In Greek, *hysteria* means "uterus," a reflection of ancient speculation that hysteria was restricted to women and caused by frustrated sexual desires.

**Iatrogenesis** The creation of a disorder by an attempt to treat it.

**Id** One of Freud's three central personality structures. In Freudian theory, the id is present at birth and is the source of basic drives and motivations. The id houses biological drives (such as hunger), as well as Freud's two key psychological drives, sex and aggression.

**Identity** Erikson's term for the broad definition of self; in his view, identity is the product of the adolescent's struggle to answer the question "Who am I?"

**Identity crisis** Erikson's period of basic uncertainty about self during late adolescence and early adult life. A consequence of the psychosocial stage of identity versus role confusion.

**Impulse control disorder** A disorder characterized by failure to resist an impulse or a temptation to perform some pleasurable or tension-releasing act that is harmful to oneself or others; examples are pathological gambling, setting fires, and stealing.

**Incest** Sexual activity between close blood relatives, such as father-daughter, mother-son, or siblings.

**Incidence** The number of new cases of a disorder that appear in a population during a specific period of time.

**Independent variable** The variable in an experiment that is controlled and deliberately manipulated by the experimenter (for example, whether a subject receives a treatment). Affects the dependent variable.

**Informed consent** A legal and ethical safeguard concerning risks in research and in treatment. Includes (a) accurate information about potential risks and benefits, (b) competence on the part of subjects/patients to understand them, and (c) the ability of subjects/patients to participate voluntarily.

**Inhibited sexual arousal** Difficulty experienced by a woman in achieving or maintaining genital responses, such as lubrication and swelling, that are necessary to complete sexual intercourse.

**Insanity** A legal term referring to a defendant's state of mind at the time of committing a crime. An insane individual is not held legally responsible for his or her actions because of a mental disease or defect.

**Insanity defense** An attempt to prove that a person with a mental illness did not meet the legal criteria for sanity at the time of committing a crime. The inability to tell right from wrong and an "irresistible impulse" are the two most common contemporary grounds for the defense.

**Insight** Self-understanding; the extent to which a person recognizes the nature (or understands the potential causes) of his or her disorder. In psychoanalysis, insight is the ultimate goal, specifically, to bring formerly unconscious material into conscious awareness.

**Intellectual disability** Formerly known as *mental retardation*, an intellectual disability is characterized by significantly subaverage IQ, deficits in adaptive behavior, and onset before the age of 18.

**Intelligence quotient (IQ)** A measure of intellectual ability that typically has a mean of 100 and a standard deviation of 15. An individual's IQ is determined by comparisons with norms for same-aged peers.

**Internal validity** Whether changes in the dependent variable can be accurately attributed to changes in the independent variable in an experiment, that is, there are no experimental confounds.

**Internalizing disorders** An empirically derived category of psychological problems of childhood that affect the child more than the external world (for example, depression).

**Interpersonal therapy (IPT)** An evidence-based approach to treatment emphasizing the historical importance of close relationships to the development of both normal and problematic emotions and patterns of relating to others. Used particularly in the treatment of depression, IPT uses the past to better understand and directly make changes in the present.

**Interpretation** A tool in psychotherapy and psychoanalysis in which the therapist suggests new meanings about a client's accounts of his or her past and present life.

**Labeling theory** A perspective on mental disorders that is primarily concerned with the social context in which abnormal behavior occurs. Labeling theory is more



- interested in social factors that determine whether a person will be given a psychiatric diagnosis than in psychological or biological reasons for the behaviors.
- Lateralized** Functions or sites that are located primarily or solely in one hemisphere of the brain (the left or the right).
- Learning disabilities (LDs)** A heterogeneous group of educational problems characterized by academic performance that is notably below academic aptitude.
- Life-cycle transitions** Movements from one social or psychological “stage” of adult development into a new one; often characterized by interpersonal, emotional, and identity conflict.
- Life-span development** The study of continuities and changes in behavior, affect, and cognition from infancy through the last years of life.
- Limbic system** A variety of brain structures, including the thalamus and hypothalamus, that are central to the regulation of emotion and basic learning processes.
- Longitudinal study** A type of research design in which subjects are studied over a period of time (contrasts with the cross-sectional approach of studying subjects only at one point in time). Longitudinal studies attempt to establish whether hypothesized causes precede their putative effects in time.
- Mainstreaming** The educational philosophy that children with intellectual disabilities should be taught, as much as possible, in regular classrooms rather than in “special” classes.
- Malingering** Pretending to have a psychological disorder in order to achieve some external gain such as insurance money or avoidance of work.
- Mania** A disturbance in mood characterized by such symptoms as elation, inflated self-esteem, hyperactivity, and accelerated speaking and thinking. An exaggerated feeling of physical and emotional well-being.
- Marijuana** The dried leaves and flowers of the female cannabis plant. “Getting high” on marijuana refers to a pervasive sense of well-being and happiness.
- Mean** The arithmetic average of a distribution of scores; the sum of scores divided by the number of observations.
- Median** The midpoint of a frequency distribution; half of all subjects fall above and half fall below the median.
- Medulla** The part of the hindbrain that controls various body functions involved in sustaining life, including heart rate, blood pressure, and respiration.
- Melancholia** A particularly severe type of depression. In DSM-IV, melancholia is described in terms of a number of specific features, such as loss of pleasure in activities and lack of reactivity to events in the person’s environment that are normally pleasurable.
- Menopause** The cessation of menstruation and the associated physical and psychological changes that occur among middle-aged women (the so-called “change of life”).
- Mental retardation** Substantial limitations in present functioning characterized by significantly subaverage intellectual functioning (IQ of 70 to 75 or below), concurrent limitations in adaptive skills, and an onset before age 18.
- Meta-analysis** A statistical technique that allows the results from different studies to be combined in a standardized way.
- Midbrain** Part of the brain between the hindbrain and forebrain that is involved in the control of some motor activities, especially those related to fighting and sex.
- Mode** The most frequent score in a frequency distribution.
- Modeling** A social learning concept describing the process of learning through imitation. Contrasts with the broader concept of identification.
- Monoamine oxidase inhibitors (MAOIs)** A group of antidepressant drugs that inhibit the enzyme monoamine oxidase (MAO) in the brain and raise the levels of neurotransmitters, such as norepinephrine, dopamine, and serotonin.
- Monozygotic (MZ) twins** Identical twins produced from a single fertilized egg; thus MZ twins have identical genotypes.
- Mood** A pervasive and sustained emotional response that, in its extreme, can color the person’s perception of the world.
- Mood disorders** A broad category of psychopathology that includes depressive disorders and bipolar disorders. These conditions are defined in terms of episodes in which the person’s behavior is dominated by either clinical depression or mania.
- Moratorium** A period of allowing oneself to be uncertain or confused about identity. Erikson advocated a moratorium as an important step in the formation of an enduring identity.
- Multiple personality disorder** An unusual dissociative disorder characterized by the existence of two or more distinct personalities in a single individual (called *dissociative identity disorder* in DSM-IV).
- Narcissistic personality disorder** An enduring pattern of thinking and behavior that is characterized by pervasive grandiosity. Narcissistic people are preoccupied with their own achievements and abilities.
- Negative symptoms** (of schizophrenia) Include flat or blunted affect, avolition, alogia, and anhedonia.

**Neurofibrillary tangles** A type of brain lesion found in the cerebral cortex and the hippocampus in patients with Alzheimer's disease. A pattern of disorganized neurofibrils, which provide structural support for the neurons and help transport chemicals that are used in the production of neurotransmitters.

**Neurologist** A physician who has been trained to diagnosis and treat disorders of the nervous system, including diseases of the brain, spinal cord, nerves, and muscles.

**Neurons** The nerve cells that form the basic building blocks of the brain. Each neuron is composed of the soma or cell body, the dendrites, the axon, and the terminal buttons.

**Neuropsychological assessment** Assessment procedures focused on the examination of performance on psychological tests to indicate whether a person has a brain disorder. An example is the Halstead-Reitan Neuropsychological Test Battery.

**Neuropsychologist** A psychologist who has particular expertise in the assessment of specific types of cognitive impairment, including those associated with dementia and amnesic disorders.

**Neurosis** A traditional term, often associated with psychoanalytic theory, that describes maladaptive behavior resulting from the ego's failure to control anxiety resulting from unconscious conflicts. In DSM-I and DSM-II, neurotic disorders were defined as those in which anxiety is the chief characteristic. Anxiety presumably could be felt and expressed directly, or it could be controlled unconsciously by defense mechanisms.

**Neurotransmitters** Chemical substances that are released into the synapse between two neurons and carry signals from the terminal button of one neuron to the receptors of another.

**Nonshared environment** The component of a sibling's environment inside or outside the family that is unique to that sibling, for example, being a favorite child or one's best friend. Contrasts with the shared environment, family experiences that are common across siblings.

**Normal distribution** A frequency distribution represented by a bell-shaped curve—the normal curve—that is important for making statistical inferences. Many psychological characteristics (e.g., intelligence) are assumed to follow the normal distribution.

**Normalization** The philosophy that mentally retarded or mentally ill people are entitled to live as much as possible like other members of the society. Often with deinstitutionalization in providing custodial care and mainstreaming in education.

**Null hypothesis** The prediction that an experimental hypothesis is not true. Scientists must assume that the null hypothesis holds until research contradicts it.

**Obesity** Excess body fat, a circumstance that roughly corresponds with a body weight 20 percent above the expected weight.

**Obsession** A repetitive, unwanted, intrusive cognitive event that may take the form of thoughts, images, or impulses. Obsessions intrude suddenly into consciousness and lead to an increase in subjective anxiety.

**Obsessive-compulsive personality disorder** An enduring pattern of thinking and behavior that is characterized by perfectionism and inflexibility. These people are preoccupied with rules and efficiency. They are excessively conscientious, moralistic, and judgmental.

**Operant conditioning** A learning theory asserting that behavior is a function of its consequences. Specifically, behavior increases if it is rewarded, and it decreases if it is punished.

**Operational definition** A procedure that is used to measure a theoretical construct.

**Opiates** (sometimes called *opiods*) Drugs that have properties similar to opium. The main active ingredients in opium are morphine and codeine.

**Oppositional defiant disorder (ODD)** A psychological disorder of childhood characterized by persistent but relatively minor transgressions, such as refusing to obey adult requests, arguing, and acting angry.

**Orgasmic disorder** A sexual disorder in which the person has recurrent difficulties reaching orgasm after a normal sexual arousal.

**Outpatient commitment** Outpatient commitment generally requires the same dangerousness standards as inpatient commitment, but the patient is court-ordered to comply with treatment in the community (e.g., making regular office visits, taking medication). Outpatient commitment is permitted by 39 states, and because it involves less infringement on civil liberties, commitment criteria may be applied less stringently for outpatient versus inpatient commitment.

**Pain disorder** A type of somatoform disorder characterized by preoccupation with pain, and complaints are motivated at least in part by psychological factors.

**Panic attack** A sudden, overwhelming experience of terror or fright. While anxiety involves a blend of several negative emotions, panic is more focused.

- Panic disorder** A form of anxiety disorder in which a person experiences recurrent, unexpected panic attacks. At least one of the attacks must have been followed by a period of one month or more in which the person has either persistent concern about having additional attacks, worry about the implications of the attack or its consequences, or a significant change in behavior related to the attacks. Panic disorder is divided into two subtypes, depending on the presence or absence of agoraphobia.
- Paradigm** A set of assumptions both about the substance of a theory and about how scientists should collect data and test theoretical propositions. The term was applied to the progress of science by Thomas Kuhn, an influential historian and philosopher.
- Paranoid personality disorder** An enduring pattern of thinking and behavior characterized by a pervasive tendency to be inappropriately suspicious of other people's motives and behaviors. People who fit the description for this disorder expect that other people are trying to harm them, and they take extraordinary precautions to avoid being exploited or injured.
- Paraphilias** Forms of sexual disorder that involve sexual arousal in association with unusual objects and situations, such as inanimate objects, sexual contact with children, exhibiting their genitals to strangers, and inflicting pain on another person.
- Parkinson's disease** A disorder of the motor system that is caused by a degeneration of a specific area of the brain stem known as the *substantia nigra* and loss of the neurotransmitter dopamine, which is produced by cells in this area.
- Pedophilia** One of the paraphilias, characterized by marked distress over, or acting on urges involving, sexual activity with a prepubescent child.
- Peripheral nervous system** Nerves that stem from the central nervous system and connect to the body's muscles, sensory systems, and organs. Divided into two subdivisions, the somatic and the autonomic nervous systems.
- Personality** The combination of persistent traits or characteristics that, taken as a whole, describe a person's behavior. In DSM-IV, personality is defined as "enduring patterns of perceiving, relating to, and thinking about the environment and oneself, which are exhibited in a wide range of important social and personal contexts."
- Personality disorder** Inflexible and maladaptive patterns of personality that begin by early adulthood and result in either social or occupational problems or distress to the individual.
- Personality inventory** Sometimes called an *objective personality test*, it consists of a series of straightforward statements that the person is required to rate or endorse as being either true or false in relation to himself or herself.
- Phenotype** The observed expression of a given genotype or genetic structure, for example, eye color.
- Phenylketonuria (PKU)** A cause of mental retardation transmitted by the pairing of recessive genes that results in the deficiency of the enzyme that metabolizes phenylalanine. Infants have normal intelligence at birth, but the ingestion of foods containing phenylalanine causes phenylketonuria and produces brain damage. Can be prevented with a phenylalanine-free diet.
- Phobia** A persistent and irrational narrowly defined fear that is associated with a specific object or situation.
- Placebo effect** The improvement in a condition produced by a placebo (sometimes a substantial change). An overriding goal of scientific research is to identify treatments that exceed placebo effects.
- Polygenic** Caused by more than one gene. Characteristics become normally distributed as more genes are involved in the phenotypic expression of a trait.
- Polysubstance abuse** (also known as *multidrug abuse*) A disorder characterized by the abuse of at least three different psychoactive drugs (not including nicotine or caffeine). No single substance predominates in the pattern of abuse.
- Pons** Part of the hindbrain that serves various functions in regulating stages of sleep.
- Positive symptoms** (of schizophrenia) Include hallucinations, delusions, disorganized speech, inappropriate affect, and disorganized behavior.
- Posttraumatic stress disorder (PTSD)** A psychological disorder characterized by recurring symptoms of numbing, reexperiencing, and hyperarousal following exposure to a traumatic stressor.
- Prefrontal lobotomy** A psychosurgery technique introduced in 1935 by Egas Moniz in which the two hemispheres of the brain are severed. Moniz won a Nobel Prize for the treatment, which now is discredited.
- Premature ejaculation** A type of sexual disorder, in which a man is unable to delay ejaculation long enough to accomplish intercourse.
- Premorbid history** A pattern of behavior that precedes the onset of an illness. Adjustment prior to the disorder.
- Preparedness model** The notion that organisms are biologically prepared, on the basis of neural pathways in

their central nervous systems, to learn certain types of associations (also known as *biological constraints on learning*).

**Prevalence** An epidemiological term that refers to the total number of cases that are present within a given population during a particular period of time.

**Primary sleep disorder** A condition where a sleeping difficulty is the principal complaint. In DSM-IV, either a dyssomnia—a difficulty in the amount, quality, or timing of sleep—or a parasomnia—an abnormal event that occurs during sleep; for example, nightmares.

**Probands** Index cases. In behavior genetic studies, probands are family members who have a disorder, and the relatives of the index cases are examined for concordance.

**Problem-focused coping** Externally oriented coping in an attempt to change or otherwise control a stressor.

**Prodromal phase** Precedes the active phase of schizophrenia and is marked by an obvious deterioration in role functioning. Prodromal signs and symptoms are less dramatic than those seen during the active phase of the disorder.

**Professional responsibilities** A professional's obligation to follow the ethical standards of his or her profession and to uphold the laws of the states in which he or she practices, for example, confidentiality.

**Prognosis** Predictions about the future course of a disorder with or without treatment.

**Projective tests** Personality tests, such as the Rorschach inkblot test, in which the person is asked to interpret a series of ambiguous stimuli.

**Prospective design** A research design in which people are studied longitudinally and forward in time. Supposed causes of future outcomes are assessed in the present, and subjects are then followed to see if the hypothesized effects develop over time.

**Psychiatry** The branch of medicine that is concerned with the study and treatment of mental disorders.

**Psychoanalysis** Freud's orthodox form of psychotherapy that is practiced rarely today because of its time, expense, and questionable effectiveness in treating mental disorders. Freud viewed the task of psychoanalysis as promoting insight by uncovering the unconscious conflicts and motivations that cause psychological difficulties.

**Psychoanalytic theory** A paradigm for conceptualizing abnormal behavior based on the concepts and writings of Sigmund Freud. Highlights unconscious processes and conflicts as causing abnormal behavior and emphasizes psychoanalysis as the treatment of choice.

**Psychodynamic psychotherapy** An “uncovering” form of psychotherapy in which the therapist typically is more engaged and directive; the process is considerably less lengthy than in psychoanalysis.

**Psychological dependence** A term used to describe forceful, subjective urges to use drugs, often as a means of relieving negative mood states. Contrasts with the term “physiological dependence,” which involves symptoms of tolerance and withdrawal.

**Psychology** The science, profession, and academic discipline concerned with the study of mental processes and behavior in humans and animals.

**Psychomotor retardation** A generalized slowing of physical and emotional reactions. The slowing of movements and speech; frequently seen in depression.

**Psychomotor stimulants** Drugs such as amphetamine and cocaine that produce their effect by simulating the effects of certain neurotransmitters, specifically norepinephrine, dopamine, and serotonin.

**Psychoneuroimmunology (PNI)** Research on the effects of stress on the functioning of the immune system.

**Psychopathology** The manifestations of (and the study of the causes of) mental disorders. Generally used as another term to describe abnormal behavior.

**Psychopathy** Another term for *antisocial personality disorder*. Usually associated with Cleckley's definition of that concept, which included features such as disregard for the truth, lack of empathy, and inability to learn from experience.

**Psychopharmacology** The study of the effects of psychoactive drugs on behavior. Clinical psychopharmacology involves the expert use of drugs in the treatment of mental disorders.

**Psychophysiology** The study of changes in the functioning of the body that result from psychological experiences.

**Psychosis** A term that refers to several types of severe mental disorder in which the person is out of contact with reality. Hallucinations and delusions are examples of psychotic symptoms.

**Psychosomatic disorder** A term indicating that a physical disease is a product both of the psyche (mind) and the soma (body).

**Psychostimulants** Medications that heighten energy and alertness when taken in small dosages, but lead to restless, even frenetic, behavior when misused. Often used in the treatment of attention-deficit/hyperactivity disorder.



- Psychotherapy** The use of psychological techniques in an attempt to produce change in the context of a special, helping relationship.
- Purging** An intentional act designed to eliminate consumed food from the body. Self-induced vomiting is the most common form.
- Random assignment** Any of several methods of ensuring that each subject has a statistically equal chance of being exposed to any level of an independent variable.
- Rape** Acts involving nonconsensual sexual penetration obtained by physical force, by threat of bodily harm, or when the victim is incapable of giving consent by virtue of mental illness, mental retardation, or intoxication.
- Rating scale** An assessment tool in which the observer is asked to make judgments that place the person somewhere along a dimension.
- Reactivity** The influence of an observer's presence on the behavior of the person who is being observed.
- Receptors** Sites on the dendrites or soma of a neuron that are sensitive to certain neurotransmitters.
- Recidivism** Repeat offending in violating the law.
- Reciprocal causality** The concept of causality as bidirectional (or circular). Interaction is a process of mutual influence, not separable causes and effects.
- Reductionism** The scientific perspective that the whole is the sum of its parts and that the task of scientists is to divide the world into its smaller and smaller components.
- Relapse** The reappearance of active symptoms following a period of remission (such as a return to heavy drinking by an alcoholic after a period of sustained sobriety).
- Reliability** The consistency of measurements, including diagnostic decisions. One index of reliability is agreement among clinicians.
- Remission** A stage of disorder characterized by the absence of symptoms (i.e., symptoms that were previously present are now gone).
- Representative sample** A sample that accurately represents the larger population of an identified group (e.g., a representative sample of all children in the United States).
- Resilience** The ability to "bounce back" from adversity despite life stress and emotional distress.
- Retrograde amnesia** The loss of memory for events prior to the onset of an illness or the experience of a traumatic event.
- Retrospective reports** Recollections about past experiences that are often questioned in terms of reliability and validity.
- Reuptake** The process of recapturing some neurotransmitters in the synapse before they reach the receptors of another cell and returning the chemical substances to the terminal button. The neurotransmitter then is reused in subsequent neural transmission.
- Reverse causality** Indicates that causation could be operating in the opposite direction: Y could be causing X instead of X causing Y. A threat to interpretation in correlational studies, and a basic reason why correlation does not mean causation.
- Risk factor** A variable that is associated with a higher probability of developing a disorder.
- Savant performance** An exceptional ability in a highly specialized area of functioning typically involving artistic, musical, or mathematical skills.
- Schema** A general cognitive pattern that guides the way a person perceives and interprets events in his or her environment.
- Schizoaffective disorder** A disorder defined by a period of disturbance during which the symptoms of schizophrenia partially overlap with a major depressive episode or a manic episode.
- Schizoid personality disorder** An enduring pattern of thinking and behavior characterized by pervasive indifference to other people, coupled with a diminished range of emotional experience and expression. People who fit this description prefer social isolation to interactions with friends or family.
- Schizophrenia** A type of (or group of) psychotic disorders characterized by positive and negative symptoms and associated with a deterioration in role functioning. The term was originally coined by Eugen Bleuler to describe the *splitting of mental associations*, which he believed to be the fundamental disturbance in schizophrenia (previously known as *dementia praecox*).
- Schizotypal personality disorder** An enduring pattern of discomfort with other people coupled with peculiar thinking and behavior. The latter symptoms take the form of perceptual and cognitive disturbances. Considered by some experts to be part of the schizophrenic spectrum.
- School refusal** (*school phobia*) Extreme reluctance to go to school, accompanied by various symptoms of anxiety such as stomachaches and headaches. May be a fear of school or an expression of separation anxiety disorder.
- Seasonal affective disorder** A type of mood disorder (either unipolar or bipolar) in which there has been a

regular temporal relation between onset (or disappearance) of the person's episodes and a particular time of the year. For example, the person might become depressed in the winter.

**Secondary gain** The psychoanalytic concept that conversion (or other somatoform) symptoms can help a patient avoid responsibility or receive attention (reinforcement).

**Selective serotonin reuptake inhibitors (SSRIs)** A group of antidepressant drugs that inhibit the reuptake of serotonin into the presynaptic nerve endings and therefore promote neurotransmission in serotonin pathways.

**Self-control** Appropriate behavior guided by internal (rather than external) rules.

**Sensate focus** A procedure for the treatment of sexual dysfunction that involves a series of simple exercises in which the couple spends time in a quiet, relaxed setting, learning to touch each other.

**Separation anxiety** A normal fear that begins to develop around 8 months and peaks around 15 months. The infant expresses distress following separation from an attachment figure, typically a parent or other close caregiver.

**Separation anxiety disorder** A psychological disorder of childhood characterized by persistent and excessive worry for the safety of an attachment figure and related fears such as getting lost, being kidnapped, nightmares, and refusal to be alone. Distinct from normal separation anxiety, which typically develops shortly before an infant's first birthday.

**Sexual aversion disorder** A form of sexual dysfunction in which a person has an extreme aversion to, and avoids, genital sexual contact with a partner.

**Sexual dysfunctions** Forms of sexual disorder that involve inhibitions of sexual desire or interference with the physiological responses leading to orgasm.

**Sexual masochism** A form of paraphilia in which sexual arousal is associated with the act of being humiliated, beaten, bound, or otherwise made to suffer.

**Sexual sadism** A form of paraphilia in which sexual arousal is associated with desires to inflict physical or psychological suffering, including humiliation, on another person.

**Shared environment** The component of the family environment that offers the same or highly similar experiences to all siblings, for example, socioeconomic status. Stands in contrast to the nonshared environment, experiences inside and outside the family that are unique to one sibling.

**Social clocks** Age-related goals people set for themselves and later use to evaluate life achievements.

**Social phobia** A type of phobic disorder in which the person is persistently fearful of social situations that might expose him or her to scrutiny by others, such as fear of public speaking.

**Social skills training** A behavior therapy technique in which clients are taught new skills that are desirable and likely to be rewarded in the everyday world.

**Social support** The emotional and practical assistance received from others.

**Social work** A profession whose primary concern is how human needs can be met within society.

**Somatic symptoms** Symptoms of mood disorders that are related to basic physiological or bodily functions, including fatigue, aches and pains, and serious changes in appetite and sleep patterns.

**Somatization disorder** A type of somatoform disorder characterized by multiple, somatic complaints in the absence of organic impairments.

**Somatoform disorders** A category of psychological disorders characterized by unusual physical symptoms that occur in the absence of a known physical pathology. Examples include hypochondriasis and conversion disorder. Somatoform disorders are somatic in form only, thus their name (note the distinction from psychosomatic disorders, which do involve real physical pathology).

**Specific phobia** Marked and persistent fear of clearly apparent, circumscribed objects or situations, such as snakes, spiders, heights, or small enclosed spaces. Exposure to the stimulus leads to an immediate increase in anxiety, and the phobic stimulus is avoided (or endured with great discomfort).

**Standard deviation** A measure of dispersion of scores around the mean. Technically, the square root of the variance.

**Standard scores** A standardized frequency distribution in which each score is subtracted from the mean and the difference is divided by the standard deviation.

**Statistically significant** A statistical statement that a research result has a low probability of having occurred by chance alone. By convention, a result is said to be statistically significant if the probability is 5 percent or less that it was obtained by chance. This probability is often written as  $p = .05$ .

**Status offense** An act that is illegal only because of a youth's status as a minor, for example, running away from home, truancy from school.

**Stigma** A negative stamp or label that sets the person apart from others, connects the person to undesirable features, and leads others to reject the person.

**Stress** An event that creates physiological or psychological strain for the individual. Stress has been defined differently by various scientists.

**Substance abuse** The less severe form of substance use disorder listed in DSM-IV. Describes a pattern of drug use that is defined in terms of interference with the person's ability to fulfill major role obligations, the recurrent use of a drug in dangerous situations, or the experience of repeated legal difficulties that are associated with drug use.

**Substance dependence** The more severe form of substance use disorder listed in DSM-IV. Refers to a pattern of repeated self-administration that results in tolerance, withdrawal, or compulsive drug-taking behavior.

**Superego** One of Freud's three central personality structures, roughly equivalent to the "conscience." In Freudian theory, the superego contains societal standards of behavior, particularly rules that children learn from identifying with their parents. The superego attempts to control id impulses.

**Synapse** A small gap filled with fluid that lies between the axon of one neuron and a dendrite or soma of another neuron.

**Syndrome** A group of symptoms that appear together and are assumed to represent a specific type of disorder.

**Systematic desensitization** A treatment for overcoming fears and phobias developed by Joseph Wolpe. Involves learning relaxation skills, developing a fear hierarchy, and systematic exposure to imagined, feared events while simultaneously maintaining relaxation.

**Systems theory** An innovation in the philosophy of conceptualizing and conducting science that emphasizes interdependence, cybernetics, and especially holism—the idea that the whole is more than the sum of its parts. Often traced to the biologist and philosopher Ludwig von Bertalanffy.

**Temperament** Characteristic styles of relating to the world that are often conceptualized as inborn traits. Generally emphasizes the "how" as opposed to the "what" of behavior.

**Tend and befriend** An alternative response to stress hypothesized to be more common among females. Tending involves caring for offspring in a way that protects them from harm and also alters the offspring's neuroendocrine responses in a

healthful manner. Befriending is responding to threat with social affiliation, thereby reducing the risk of physical danger and encouraging the exchange of resources.

**Therapeutic alliance** The emotional bond of confidence and trust between a therapist and client believed to facilitate therapy.

**Third variable** An unmeasured factor that may account for a correlation observed between any two variables. A threat to interpretation in correlational studies, and a basic reason why correlation does not mean causation.

**Tolerance** The process through which the nervous system becomes less sensitive to the effects of a psychoactive substance. As a result, the person needs to consume increased quantities of the drug to achieve the same subjective effect.

**Transvestic fetishism** A form of paraphilia in which sexual pleasure is derived from dressing in the clothing of the opposite gender.

**Traumatic stress** A catastrophic event that involves real or perceived threat to life or physical well-being.

**Tricyclics (TCAs)** A group of antidepressant drugs that block the uptake of neurotransmitters, such as norepinephrine and dopamine, from the synapse.

**Type A behavior pattern** A characterological response to challenge that is competitive, hostile, urgent, impatient, and achievement-striving. Linked to an increased risk for coronary heart disease.

**Unipolar mood disorder** A form of mood disorder in which the person experiences episodes of depression but has never experienced an episode of mania or hypomania.

**Vaginismus** A form of sexual dysfunction in which the outer muscles of the vagina snap tightly shut when penetration is attempted, thus preventing insertion of any object.

**Validity** The meaning or systematic importance of a construct or a measurement.

**Variance** A measure of dispersion of scores around the mean. Technically, the average squared difference from the mean (see also *standard deviation*).

**Vascular dementia** (also known as *multi-infarct dementia*) A type of dementia associated with vascular disease. The cognitive symptoms of vascular dementia are the same as those for Alzheimer's disease, but a gradual onset is not required.

**Ventricles** Four connected chambers in the brain filled with cerebrospinal fluid. The ventricles are enlarged in some psychological and neurological disorders.

**Voyeurism** A form of paraphilia (also known as *peeping*) in which a person becomes sexually aroused by observing unsuspecting people (usually strangers) while they are undressing or engaging in sexual activities.

**Vulnerability marker** A specific measure, such as a biochemical assay or a psychological test, that might be useful in identifying people who are vulnerable to a disorder such as schizophrenia.

**Weight set point** Fixed weights or small ranges of weight around which the body regulates weight, for example, by increasing or decreasing metabolism.

**Withdrawal** The constellation of symptoms that are experienced shortly after a person stops taking a drug after heavy or prolonged use.

**Worry** A relatively uncontrollable sequence of negative, emotional thoughts and images that are concerned with possible future threats or danger.



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