Billy, a 7-year-old . . . child, was brought to a mental health clinic by his mother because “he is unhappy and always complaining about feeling sick.” . . . His mother describes Billy as a child who has never been very happy and never wanted to play with other children. From the time he started nursery school, he has complained about stomachaches, headaches, and various other physical problems. . . .

Billy did well in first grade, but in second grade he is now having difficulty completing his work. He takes a lot of time to do his assignments and frequently feels he has to do them over again so that they will be “perfect.” Because of Billy’s frequent somatic complaints, it is hard to get him off to school in the morning. If he is allowed to stay home, he worries that he is falling behind in his schoolwork. When he does go to school, he often is unable to do the work, which makes him feel hopeless about his situation. . . .

His worries have expanded beyond school, and frequently he is clinging and demanding of his parents. He is fearful that if his parents come home late or leave and go somewhere without him that something may happen to them. . . .

Although Billy’s mother acknowledges that he has never been really happy, in the last 6 months, she feels, he has become much more depressed. He frequently lies around the house, saying that he is too tired to do anything. He has no interest or enjoyment in playing. His appetite has diminished. He has trouble falling asleep at night and often wakes up in the middle of the night or early in the morning. Three weeks ago, he talked, for the first time, about wanting to die. . . .

(Spitzer et al., 1994)

In the past year, Eddie [age 9] had been suspended twice for hyperactive and impulsive behavior. Most recently, he had climbed onto the overhead lights of the classroom and caused an uproar when he could not get himself down. His teachers complain that other children cannot concentrate when Eddie is in the room because he walks around constantly. Even when he is seated, his rapid foot and hand movements are disruptive to the other children. Eddie has almost no friends and does not play games with his classmates due to his impulsivity and overly active behavior. After school, he likes to play with his dog or ride his bike alone.

Eddie’s mother reports that he has been excessively active since he was a toddler. At the age of three, Eddie would awaken at 4:30 AM each day and go downstairs without any supervision. Sometimes he would “demolish” the kitchen or living room, and at other times he would leave the house by himself. Once when he was four years old, he was found walking alone on a busy street in the early morning. Luckily, a passerby rescued him before he got into traffic.

After being rejected by a preschool because of his hyperactivity and impulsivity, Eddie attended a kindergarten and had a very difficult year. For first and second grade, he attended a special behavioral program. For third grade, he was allowed to attend a regular education class, with pull-out services for help with his behavior.

(Spitzer et al., 1994)

Billy and Eddie are both displaying psychological disorders. Their disorders are disrupting the boys’ family ties, school performances, and social relationships, but each disorder does so in a particular way and for particular reasons. Billy, who may qualify for a diagnosis of major depressive disorder, struggles primarily with sadness,
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worry, and perfectionism, along with stomachaches and other physical ailments. Eddie’s main problems, on the other hand, are that he cannot concentrate and is overly active and impulsive—difficulties that comprise attention-deficit/hyperactivity disorder (ADHD).

Abnormal functioning can occur at any time in life. Some patterns of abnormality, however, are more likely to emerge during particular periods—during childhood, for example, or, at the other end of the spectrum, during old age. In this chapter you will read about disorders that have their onset during childhood or early adolescence. In the next chapter you’ll observe problems that are more common among the elderly.

Childhood and Adolescence

People often think of childhood as a carefree and happy time—yet it can also be frightening and upsetting. In fact, children of all cultures typically experience at least some emotional and behavioral problems as they encounter new people and situations. Surveys reveal that worry is a common experience: Close to half of all children in the United States have multiple concerns, particularly about school, health, and personal safety (Beidel & Turner, 2005; Szabo & Lovibond, 2004). Bed-wetting, nightmares, temper tantrums, and restlessness are other problems experienced by many children. Adolescence can also be a difficult period. Physical and sexual changes, social and academic pressures, school violence, personal doubts, and temptations cause many teenagers to feel nervous, confused, and down (Weisz et al., 2006; King et al., 2005) (see Table 14-1).

Beyond these common psychological difficulties, at least one-fifth of all children and adolescents in North America experience a diagnosable psychological disorder (Steele, Roberts, & Elkin, 2008). Boys with disorders outnumber girls, even though most of the adult psychological disorders are more common among women.

Some disorders of children—childhood anxiety disorders, childhood depression, and disruptive disorders—have adult counterparts, although they are also distinct in certain ways. Other childhood disorders—elimination disorders, for example—are usually disappear or radically change form by adulthood. There are also disorders that begin at birth or

### Table 14-1

**School Violence: Some Facts and Figures**

- Urban school shootings have most commonly been rooted in such issues as poverty, the drug trade, and gang wars. They often resemble and may even extend from violence in surrounding urban communities.
- Suburban and rural school shootings have most often resembled the “rampage” shootings that occur in workplaces or public places.
- In most suburban and rural school shootings, the shooters have previously told other students of their intentions or have offered strong hints of them.
- In most suburban and rural school shootings, the shooters had planned the attacks days or weeks in advance.
- Six percent of high school students in the United States have missed at least one day of school within the past month because they felt unsafe at school or traveling to school.
- Twenty-eight percent of public high school teachers in the United States have been verbally abused, 15 percent threatened, and 3 percent attacked.

Sources: CDC, 2006; Infoplease, 2006; Bowman, 2002; Elliot et al., 2002; Potter, 2002; Dedman, 2000.
in childhood and persist in stable forms into adult life. These include autism-spectrum disorders and mental retardation, the former marked by a lack of responsiveness to the environment, the latter by an extensive disturbance in intellect.

**Childhood Anxiety Disorders**

Anxiety is, to a degree, a normal part of childhood. Children may be frightened by common events, such as the beginning of school, or by special upsets, such as moving to a new house. In addition, each generation of children is confronted by new sources of anxiety. Today’s children, for example, are repeatedly warned, both at home and at school, about the dangers of Internet surfing and networking, child abduction, drugs, and terrorism.

Children may also be affected greatly by parental problems or inadequacies (Baldwin & Dadds, 2008). If, for example, parents repeatedly reject, disappoint, or avoid their children, the world may seem an unpleasant and anxious place for them. Beyond such environmental factors, there is genetic evidence that some children are prone to an anxious temperament (Baldwin & Dadds, 2008).

For some children, anxiety becomes long-lasting and overwhelming. They may be suffering from an anxiety disorder. Surveys indicate that between 10 and 21 percent of all children and adolescents display an anxiety disorder (Baldwin & Dadds, 2008). Some of the childhood anxiety disorders are similar to their adult counterparts. When specific phobias are experienced by children, for example, they usually look and operate just like the phobias of adulthood. Indeed, a number of untreated childhood phobias grow into adult ones. More often, however, the anxiety disorders of childhood take on a somewhat different character from that of adult anxiety disorders.

What do the anxiety disorders of young children look like? Typically they are dominated by behavioral and somatic symptoms rather than cognitive ones—symptoms such as clinging, sleep difficulties, and stomach pains (Kendall & Pimentel, 2003). They tend to center on specific, sometimes imaginary, objects and events, such as monsters or thunderstorms, rather than broad concerns about one’s place in the world. And they are more often than not triggered by current events and situations. *Separation anxiety disorder,* one of the most common childhood anxiety disorders, follows this profile.

**Separation Anxiety Disorder**

*Separation anxiety disorder* is unique to childhood, begins as early as the preschool years, and is displayed by 4 percent of all children (Van Dyke et al., 2009; Shear et al., 2006). Individuals with this problem feel extreme anxiety, often panic, whenever they are separated from home or a parent. Carrie, a 9-year-old girl, was referred to a local mental health center by her school counselor when she seemed to become extremely anxious at school for no apparent reason.

She initially reported feeling sick to her stomach and later became quite concerned over being unable to get her breath. She stated that she was too nervous to stay at school and that she wanted her mother to come get her and take her home. . . . The counselor indicated that a similar incident occurred the next day with Carrie ending up going home again. She had not returned to school since. . . .

At the time of the intake evaluation the mother indicated that she felt Carrie was just too nervous to go to school. She stated that she had encouraged her daughter to go to school on numerous occasions but that she seemed afraid to go and appeared to feel bad, so she had not forced her. . . . When asked if Carrie went places by herself, the mother...
stated that Carrie didn’t like to do that and that the two of them typically did most everything together. The mother went on to note that Carrie really seemed to want to have her (the mother) around all the time and tended to become upset whenever the two of them were separated.

(Schwartz & Johnson, 1985, p. 188)

Children like Carrie have great trouble traveling away from their family, and they often refuse to visit friends’ houses, go on errands, or attend camp or school. Many cannot even stay alone in a room and cling to their parent around the house. Some also have temper tantrums, cry, or plead to keep their parents from leaving them. The children may fear that they will get lost when separated from their parents or that the parents will meet with an accident or illness. As long as the children are near their parents and not threatened by separation, they may function quite normally. At the first hint of separation, however, the dramatic pattern of symptoms may be set in motion.

As in Carrie’s case, a separation anxiety disorder may further take the form of a school phobia, or school refusal, a common problem in which children fear going to school and often stay home for a long period (Heyne et al., 2002). Many cases of school phobia, however, have causes other than separation fears, such as social or academic fears, depression, and fears of specific objects or persons at school.

Treatments for Childhood Anxiety Disorders

Despite the high prevalence of childhood and adolescent anxiety disorders, many anxious children go untreated (Baldwin & Dadds, 2008). Among the children who do receive treatment, psychodynamic, behavioral, cognitive, cognitive–behavioral, family, and group therapies, separately or in combination, have been applied most often—each with some degree of success (Baldwin & Dadds, 2008). Such treatments parallel the adult anxiety approaches that you read about in Chapter 4, but they are, of course, tailored to the child’s cognitive abilities, unique life situation, and limited control over his or her life. In addition, clinicians may offer psychoeducation and arrange school interventions to treat anxious children. Clinicians have also used drug therapy in a number of cases, particularly antianxiety and antidepressant medications, often in combination with psychotherapy. Drug therapy for childhood anxiety appears to be helpful, but it has begun only recently to receive much research attention (Walkup et al., 2008).
Because children typically have difficulty recognizing their feelings and motives, many therapists, particularly psychodynamic therapists, use play therapy as part of treatment (Snow et al., 2009). In this approach, the children play with toys, draw, and make up stories; in doing so they reveal the conflicts in their lives and their related feelings. The therapists then introduce more play and fantasy to help the children work through their conflicts and change their emotions and behavior. In addition, because children are often excellent hypnotic subjects, some therapists use hypnotherapy to help them overcome intense fears.

BY BERNADINE HEALY, M.D., U.S. NEWS & WORLD REPORT, MAY 21, 2007

The world wide web began as a platform for information, communication, and entertainment. It’s now emerging as a powerful social medium, in which people build communities of newfound friends with whom they form personal and emotional bonds. One has to be concerned about this . . . exercise in networking, however, if these bonds with people known only to the imagination . . . interfere with or replace real intimacies, particularly in those who are in a formative stage of social development. Researchers at the Annenberg School Center for the Digital Future at the University of Southern California, which has been tracking Internet behavior for six years, were taken by surprise when their latest survey found that more than 40 percent of users feel that their online friends are every bit as important to them as their real-life ones.

Beyond communities of presumably real people is the Internet game world, in which emotional contacts are made in three-dimensional virtual reality with fantasy people in fantasy places . . .

Little is known about what might be [the] safety concerns related to games in which young people create avatars [virtual representations of themselves] and interact freely in vivid imaginary worlds, largely unsupervised. Sometimes the play involves any number of supercharged violent or objectionable actions against other imaginary humans—taken without remorse or empathy or personal consequence. To be sure, there is disagreement on the impact of such experiences. Some psychologists argue that they might encourage the behavior in the real world; others that it has no effect and may even be a way to drain off aggressive feelings. Or, as in one study, a 15-year-old girl, whose avatar was a cyberprostitute, believed that her online behavior wasn’t bad since it wasn’t real. In essence, this girl is saying, just chill.

The unknown. Should we chill? As Harvard cyber-researcher and psychiatrist Steven Locke acknowledges, we’ve only scratched the surface when it comes to understanding how imaginary experiences that are so vividly realistic might affect brain development in children. We know that real ones do. We also have to consider a broader but more subtle risk: that for some kids, a dependence on virtual human interactions, be they with real or with fantasy people, might influence their evolving social intelligence, affecting whom they trust and how they set expectations, how they deal with both affirmation and rejection, and how they give and receive emotional support. Remember, the virtual world can be just what you want it to be and can become an escape from reality.

In this regard, psychologists are concerned about one form of virtual escape—Internet addiction disorder, which can be a big relationship buster. Those with IAD become so immersed online that they neglect studies, work, friends, and family and when deprived of Internet access grow anxious or depressed. IAD has been reported worldwide in at least 2 percent of Internet users, and the young are most susceptible. Concerned, China last month mandated antiaddiction software to limit young people’s Internet access to three hours per day.

But it’s cybersmart parents who are best suited to influence their children’s time online and also the places they go. Maybe the first question at the next PTA meeting should be, “Where was your 13-year-old’s avatar last night?”

\section*{Childhood Mood Disorders}

Like Billy, the boy you observed at the beginning of this chapter, around 2 percent of children and 9 percent of adolescents currently experience major depressive disorder. Indeed, as many as 15 percent of adolescents experience at least one depressive episode during their teen years (Avenevoli et al., 2008; Curry & Becker, 2008). In addition, clinicians now believe that many children and adolescents experience bipolar disorder.

\section*{Major Depressive Disorder}

As with anxiety disorders, very young children lack some of the cognitive skills—a genuine sense of the future, for example—that help produce clinical depression (Hankin et al., 2008). Nevertheless, if life situations or biological predispositions are significant enough, even very young children sometimes experience severe downward turns of mood (Cummings & Fristad, 2008; Nantel-Vivier & Pihl, 2008). Depression in the young may be triggered by negative life events (particularly losses), major changes, rejection, or ongoing abuse (Abela & Hankin, 2008). Childhood depression is commonly characterized by such symptoms as headaches, stomach pain, irritability, and a disinterest in toys and games (Hankin et al., 2008; Weiss & Garber, 2003).

Clinical depression is much more common among teenagers than among young children. Adolescence is, under the best of circumstances, a difficult and confusing time, marked by angst, hormonal and bodily changes, mood changes, and complex relationships. For some teens these “normal” upsets of adolescence cross the line into clinical depression. In fact, as you read in Chapter 8, suicidal thoughts and attempts are particularly common among adolescents—1 in 6 teens think about suicide each year—and depression is the leading cause of such thoughts and attempts (Spirito & Esposito-Smythers, 2008).

Girls are twice as likely as boys to be depressed by the age of 16 (Hankin et al., 2008). One explanation for this emerging gender difference focuses on teenage girls’ growing dissatisfaction with their bodies. Whereas boys tend to like the increase in muscle mass and other body changes that accompany puberty, girls often detest the increases in body fat and weight gain that they experience during puberty and beyond. Raised in a society that demands extreme thinness as the aesthetic female ideal, many adolescent girls feel imprisoned by their own bodies, experience low self-esteem, and become depressed (Stice et al., 2000). Many also develop eating disorders, as you saw in Chapter 9.

For years it was generally believed that childhood and teenage depression would respond well to the same treatments that have been of help to depressed adults—cognitive-behavioral therapy and antidepressant drugs, for example—and, in fact, many studies have indicated...
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the effectiveness of such approaches (Fombonne & Zinck, 2008; Reinecke & Ginsburg, 2008). Some recent events, however, have raised questions about these approaches for teenagers.

In one development, the National Institute of Mental Health recently sponsored a massive six-year study called the Treatments for Adolescents with Depression Study (TADS), which compared the effectiveness of cognitive-behavioral therapy alone, antidepressant therapy alone, cognitive-behavioral and antidepressant therapy combined, and placebo therapy for teenage depression (Curry & Becker, 2008; TADS, 2007, 2004). Three major surprises emerged from this highly regarded study. First, neither antidepressants alone nor cognitive-behavioral therapy alone was as effective for teenage depression as was a combination of antidepressants and cognitive-behavioral therapy. Second, antidepressants alone tended to be significantly more helpful to depressed teens than cognitive-behavioral therapy alone. And third, cognitive-behavioral therapy alone was barely more helpful than placebo therapy. Many researchers believe that certain peculiarities in the subject population of the TADS study may have been responsible for the poor showing of cognitive-behavioral therapy. However, other clinical theorists believe that the TADS study is a definitive research undertaking and that many depressed teens may in fact respond less well to cognitive-behavioral therapy than adults do.

A second development in recent years has been the discovery that antidepressant drugs may be dangerous for some depressed children and teenagers (Kutcher & Gardner, 2008). As you read in Chapter 8, the United States Food and Drug Administration (FDA) concluded in 2004, based on a number of clinical reports, that the drugs may produce a real, though small, increase in the risk of suicidal behavior for certain children and adolescents, especially during the first few months of treatment, and it ordered that all antidepressant containers carry “black box” warnings stating that the drugs “increase the risk of suicidal thinking and behavior in children.” Arguments about the wisdom of this FDA order have since followed, with observers noting that the overall risk of suicide may actually be reduced for the vast majority of children who take the drugs (Kutcher & Gardner, 2008; Henderson, 2005).

While the findings of the TADS study and questions about antidepressant drug safety continue to be sorted out, these two recent developments serve to highlight once again the importance of research, particularly in the treatment realm. We are reminded that treatments that work for individuals of a certain age, gender, race, or ethnic background may be ineffective or problematic for other groups of individuals.

Bipolar Disorder

For decades, conventional clinical wisdom held that bipolar disorder is exclusively an adult mood disorder, whose earliest age of onset is the late teens. However, since the mid-1990s, clinical theorists have done an about-face, and a number of them now believe that many children display bipolar disorder. A review of national diagnostic trends from 1994 through 2003 found that the number of children—often very young children—and adolescents diagnosed and treated for bipolar disorder in the United States increased 40-fold, from 25 such diagnoses per 100,000 individuals in 1994 to 1,000 per 100,000 individuals in 2003 (Carey, 2007; Moreno et al., 2007).

Is this new diagnostic trend accurate? In a national survey of adults with bipolar disorders, one-third of the respondents recalled that their symptoms actually began before they reached 15 years of age, suggesting that bipolar disorders among children and teenagers have indeed been around for years but were overlooked by diagnosticians and therapists (Hirschfield et al., 2003). In contrast, some clinical theorists believe that the diagnosis of bipolar disorder is currently being overapplied to children and adolescents (Carey, 2007; Moreno et al., 2007). They suggest that the label has become a clinical “catchall” that is being applied to almost every explosive, aggressive child.
The outcome of this debate is important, particularly because the current shift in diagnoses has been accompanied by an increase in the number of children who receive adult medications for bipolar disorder (Moreno et al., 2007; Offman, 2007). Around one-half of children in treatment for bipolar disorder receive an antipsychotic drug; one-third receive an antibipolar, or mood stabilizing, drug; many others receive antidepressant or stimulant drugs; and a large number receive a combination of such drugs. Around 40 percent of children in treatment for bipolar disorder receive psychotherapy, particularly family therapy and cognitive-behavioral therapy (Cummings & Fristad, 2008; Carey, 2007). Clearly this is an issue that requires careful study.

### DSM Checklist

#### Conduct Disorder

1. A repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated, with at least three of the following present in the past twelve months (and at least one in the past six months):
   a. Frequent bullying or threatening of others.
   b. Frequent provoking of physical fights.
   c. Using dangerous weapons.
   d. Physical cruelty to people.
   e. Physical cruelty to animals.
   f. Stealing while confronting a victim.
   g. Forcing someone into sexual activity.
   h. Fire-setting.
   i. Deliberately destroying others’ property.
   j. Breaking into a house, building, or car.
   k. Frequent manipulation of others.
   l. Stealing items of nontrivial value without confronting a victim.
   m. Frequent staying out beyond curfews, beginning before the age of 13.
   n. Running away from home overnight at least twice.
   o. Frequent truancy from school, beginning before the age of 13.

2. Significant impairment.

Based on APA, 2000.

### Opppositional Defiant Disorder and Conduct Disorder

Most children break rules or misbehave on occasion. If they consistently display extreme hostility and defiance, however, they may qualify for a diagnosis of oppositional defiant disorder or conduct disorder. Those with oppositional defiant disorder are often hostile (they argue repeatedly with adults, lose their temper, and feel great anger and resentment) and disobedient (they ignore adult rules and requests) and display negative behaviors (they may try to annoy other people and blame others for their own mistakes and problems). As many as 10 percent of children qualify for this diagnosis (McMahon & Kotler, 2008). The disorder is more common in boys than in girls before puberty but equal in both sexes after puberty.

Children with conduct disorder, a more severe problem, repeatedly violate the basic rights of others. They are often aggressive and may be physically cruel to people or animals, deliberately destroy other people’s property, skip school, or run away from home (see Table 14-2). Many steal from, threaten, or harm their victims, committing such crimes as shoplifting, forgery, breaking into buildings or cars, mugging, and armed robbery. As they get older, their acts of physical violence may include rape or, in rare cases, homicide (APA, 2000). The symptoms of conduct disorder are apparent in this summary of a clinical interview with a 15-year-old boy named Derek:

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**Questioning revealed that Derek was getting into ... serious trouble of late, having been arrested for shoplifting 4 weeks before. Derek was caught with one other youth when he and a dozen friends swarmed a convenience store and took everything they could before leaving in cars. This event followed similar others at a compact disc store and a retail clothing store. Derek blamed his friends for getting caught because they apparently left him behind as he struggled out of the store. He was charged only with shoplifting, however, after police found him holding just three candy bars and a bag of potato chips. Derek expressed no remorse for the theft or any care for the store clerk who was injured when one of the teens pushed her into a glass case. When informed of the clerk's injury, for example, Derek replied, “I didn’t do it, so what do I care?”**

The psychologist decided to question Derek further about other legal violations in the past. He discovered a rather extended history of trouble. Ten months earlier, Derek had been arrested for vandalism—breaking windows and damaging cars—on school property.
He was placed on probation for 6 months because this was his first offense. In addition, Derek boasted of other exploits for which he was not caught, including several shoplifting attempts, heavy marijuana use on the weekends, joyriding, and missing school. ... Derek had missed 23 days (50 percent) of school since the beginning of the academic year. ... In addition, Derek described break-in attempts of his neighbors' apartments and his precocious sexual activity. ... Only rarely during the interview did Derek stray from his bravado.

(Kearney, 1999, pp. 104–105)

Conduct disorder usually begins between 7 and 15 years of age (APA, 2000). Around 1 to 10 percent of children, three-quarters of them boys, qualify for this diagnosis (Nock et al., 2006; Hibbs & Jensen, 2005). Children with a relatively mild conduct disorder often improve over time, but severe cases may continue into adulthood and develop into antisocial personality disorder (Phares, 2008). Research indicates that most individuals who develop conduct disorder first display a pattern of oppositional defiant disorder (Lahey, 2008; Lahey & Loeber, 1994). More than one-third of children with conduct disorder also display attention-deficit/hyperactivity disorder (ADHD), a disorder that you will read about shortly (Waschbusch, 2002).

Some clinical theorists believe that there are actually several kinds of conduct disorder, including (1) an overt-destructive pattern, in which individuals display openly aggressive and confrontational behaviors; (2) an overt-nondestructive pattern, dominated by openly offensive but nonconfrontational behaviors such as lying; (3) a covert-destructive pattern, characterized by secretive destructive behaviors such as violating other people's property, breaking and entering, and setting fires; and (4) a covert-nondestructive pattern, in which individuals secretly commit nonaggressive behaviors, such as being truant from school (McMahon & Frick, 2005). It may be that the different patterns have different causes.

Many children with conduct disorder are suspended from school, placed in foster homes, or incarcerated. When children between the ages of 8 and 18 break the law, the legal system often labels them juvenile delinquents (Lahey, 2008). Boys are much more involved in juvenile crime than girls, although rates for girls are on the increase. Girls are most likely to be arrested for drug use, sexual offenses, and running away, boys for drug use and crimes against property. Arrests of teenagers for serious crimes have at least tripled during the past 20 years (U.S. Department of Justice, 2006, 2000, 1994).

What Are the Causes of Conduct Disorder?

Many cases of conduct disorder have been linked to genetic and biological factors (Blair et al., 2006). In addition, a number of cases have been linked to drug abuse, poverty, traumatic events, and exposure to violent peers or community violence (Hibbs & Jensen, 2005). Most often, however, conduct disorder has been tied to troubled parent-child relationships, inadequate parenting, family conflict, marital conflict, and family hostility (Phares, 2008, 2003). Children whose parents reject, leave, coerce, or abuse them or fail to provide appropriate and consistent supervision are apparently more likely to develop conduct problems. Similarly, children seem more prone to this disorder when their parents themselves are antisocial, display excessive anger, or have substance-related, mood, or schizophrenic disorders (Julien, 2008).

How Do Clinicians Treat Conduct Disorder?

Because aggressive behaviors become more locked in with age, treatments for conduct disorder are generally most effective with children younger than 13 (Hibbs & Jensen, 2005). A number of interventions, from sociocultural to child-focused, have been developed in recent years. As you will see, several of these have had modest (and at times moderate) success, but clearly no one of them alone is the answer for this difficult
problem. Today’s clinicians are increasingly combining several approaches into a wide-ranging treatment program (Boxer & Frick, 2008).

Sociocultural Treatments Given the importance of family factors in conduct disorder, therapists often use family interventions. One such approach, used with preschoolers, is called parent-child interaction therapy (Querido & Eyberg, 2005). Here therapists teach parents to work with their child positively, to set appropriate limits, to act consistently, to be fair in their discipline decisions, and to establish more appropriate expectations regarding the child. The therapists also try to teach the child better social skills.

When children reach school age, therapists often use a family intervention called parent management training. In this approach (1) parents are again taught more effective ways to deal with their children and (2) parents and children meet together in behavior-oriented family therapy (McMahon & Kotler, 2008; Kazdin, 2007, 2005). Typically, the family and therapist target particular behaviors for change; then, with the help of written manuals, therapy rehearsals, and homework, the parents are taught how to better iden-
tify problem behaviors, stop rewarding unwanted behaviors, and reward proper behaviors with consistency (Kendall, 2000). Like the preschool family interventions, parent management training has often achieved a measure of success (McMahon & Kodler, 2008).

Other sociocultural approaches, such as residential treatment in the community and programs at school, have also helped some children improve (Boxer & Frick, 2008; Henggeler & Lee, 2003). In one such approach, treatment foster care, delinquent boys and girls with conduct disorder are assigned to a foster home in the community by the juvenile justice system. While there, the children, foster parents, and biological parents all receive training and treatment interventions, followed by more treatment for the children and their biological parents after the children leave foster care.

In contrast to these sociocultural interventions, institutionalization in so-called juvenile training centers has not met with much success (Heilbrun et al., 2005; Tate et al., 1995). In fact, such institutions may serve to strengthen delinquent behavior rather than resocialize young offenders (see Figure 14-1).

**Child-Focused Treatments** Treatments that focus primarily on the child with conduct disorder, particularly cognitive-behavioral interventions, have achieved some success in recent years (Kazdin, 2007, 2003, 2002). In an approach called problem-solving skills training, therapists combine modeling, practice, role playing, and systematic rewards to help teach children constructive thinking and positive social behaviors. During therapy, the clinicians may play games and solve tasks with the children and help them apply the lessons and skills derived from the games to real-life situations. In another helpful child-focused approach, the Anger Coping and Coping Power Program, children with conduct problems participate in group sessions that teach them to manage their anger more effectively, solve problems, build social skills, set goals, and handle peer pressure (Boxer & Frick, 2008).

Recently, drug therapy has also been used on children with conduct disorder. Studies suggest that stimulant drugs may be helpful in reducing their aggressive behaviors at home and at school (Connor et al., 2002).

**Prevention** It may be that the greatest hope for dealing with the problem of conduct disorder lies in prevention programs that begin in the earliest stages of childhood (Boxer & Frick, 2008). These programs try to change unfavorable social conditions before a conduct disorder is able to develop. The programs may offer training opportunities for young people, recreational facilities, and health care and may try to ease the stresses of poverty and improve parents’ child-rearing skills. All such approaches work best when they educate and involve the family.
Attention-Deficit/Hyperactivity Disorder

Children who display attention-deficit/hyperactivity disorder (ADHD) have great difficulty attending to tasks, behave overactively and impulsively, or both (see Table 14–3). The disorder often appears before the child starts school, as with Eddie, one of the boys we met at the beginning of this chapter. Steven is another child whose symptoms began very early in life:

Steven’s mother cannot remember a time when her son was not into something or in trouble. As a baby he was incredibly active, so active in fact that he nearly rocked his crib apart. All the bolts and screws became loose and had to be tightened periodically. Steven was also always into forbidden places, going through the medicine cabinet or under the kitchen sink. He once swallowed some washing detergent and had to be taken to the emergency room. As a matter of fact, Steven had many more accidents and was more clumsy than his older brother and younger sister. . . . He always seemed to be moving fast. His mother recalls that Steven progressed from the crawling stage to a running stage with very little walking in between.

Trouble really started to develop for Steven when he entered kindergarten. Since his entry into school, his life has been miserable and so has the teacher’s. Steven does not seem capable of attending to assigned tasks and following instructions. He would rather be talking to a neighbor or wandering around the room without the teacher’s permission. When he is seated and the teacher is keeping an eye on him to make sure that he works, Steven’s body still seems to be in motion. He is either tapping his pencil, fidgeting, or staring out the window and daydreaming. Steven hates kindergarten and has few long-term friends; indeed, school rules and demands appear to be impossible challenges for him. The effects of this mismatch are now showing in Steven’s schoolwork and attitude. He has fallen behind academically and has real difficulty mastering new concepts; he no longer follows directions from the teacher and has started to talk back.

(Gelfand, Jenson, & Drew, 1982, p. 256)

The symptoms of ADHD often feed into one another. Children who have trouble focusing attention may keep turning from task to task until they end up trying to run in several directions at once. Similarly, constantly moving children may find it hard to attend to tasks or show good judgment. In many cases one of these symptoms stands out much more than the other. About half of the children with ADHD also have learning or communication problems, many perform poorly in school, a number have difficulty interacting with other children, and about 80 percent misbehave, often quite seriously (Phares, 2008; Watson et al., 2008). It is also common for these children to have anxiety or mood problems (Julien, 2008).

Around 5 percent of schoolchildren display ADHD, as many as 90 percent of them boys (Hoza, Kaiser, & Hurt, 2008; Rapport et al., 2008). The disorder usually persists throughout childhood. Many children show a marked lessening of symptoms as they move into mid-adolescence, but between 35 and 60 percent of affected children continue to have ADHD as adults (Julien, 2008; Kessler et al., 2006, 2005). The symptoms of restlessness and overactivity are not usually as pronounced in adult cases.

ADHD is a difficult disorder to assess (Rapport et al., 2008). Ideally, the child’s behavior should be observed in several environmental settings (school, home, with friends) because the symptoms of hyperactivity and inattentiveness must
be present across multiple settings in order to fit DSM-IV-TR’s criteria. Moreover, because children with this disorder often give poor descriptions of their own symptoms, it is important to obtain reports from their parents and teachers. And, finally, diagnostic interviews, ratings scales, and psychological tests can be helpful in the assessment of ADHD. Unfortunately, studies suggest that many children receive their diagnosis from pediatricians or family physicians rather than mental health professionals and that only one-third to one-half of such diagnoses are based on psychological or educational testing (Hoagwood et al., 2000).

What Are the Causes of ADHD?

Today’s clinicians generally consider ADHD to have several interacting causes. Biological factors have been identified in many cases, particularly abnormal activity of the neurotransmitter dopamine and abnormalities in the frontal-striatal regions of the brain (Julien, 2008; Teicher et al., 2008). The disorder has also been linked to high levels of stress and to family dysfunctioning (Rapport et al., 2008; Barkley, 2006, 2004, 2002).
addition, sociocultural theorists have noted that ADHD symptoms and a diagnosis of ADHD may themselves create social problems and produce additional symptoms. That is, children who are hyperactive tend to be viewed particularly negatively by their peers and by their parents, and they often view themselves negatively as well (Rapport et al., 2008).

How Is ADHD Treated?

There is heated disagreement about the most effective treatment for ADHD (DuPaul & Barkley, 2008; Hoza et al., 2008). The most commonly applied approaches are drug therapy, behavioral therapy, or a combination of the two.

Millions of children and adults with ADHD are currently treated with methylphenidate (trade name Ritalin) or with certain other stimulant drugs. As researchers have confirmed the drugs’ quieting effect on children with ADHD and their ability to help such children focus, solve complex tasks, perform better at school, and control aggression, use of the drugs has increased enormously—according to some estimates, at least a threefold increase since 1990 alone (Anderson, 2007; Barkley, 2006, 2004, 2002) (see Figure 14-2). This increase in use also extends to preschoolers (Zito et al., 2000). As many as 10 to 12 percent of all American boys may take Ritalin or other stimulants for ADHD, and the number of girls taking it is growing. Collectively, the stimulant drugs are now the most common treatment for ADHD (Hoza et al., 2008).

On the positive side, Ritalin and other stimulant drugs are very helpful to children and adults with ADHD. Moreover, with some notable exceptions, the drugs have been found by researchers to be relatively safe for the majority of people with the disorder (Rapport et al., 2008). On the negative side, many clinicians worry about those notable exceptions and about the possible long-term effects of the drugs. Others question whether the favorable findings of the drug studies (most of which have been done on white American children) are applicable to children from minority groups (Biederman et al., 2005, 2004). And still others worry that the drugs are currently being prescribed for many children who do not actually suffer from ADHD (Rapport et al., 2008).

Behavioral therapy has also been widely applied in cases of ADHD. Here parents and teachers learn how to reward attentiveness or self-control in the children, often placing the children on a token economy program. Such operant conditioning treatments have been helpful for a number of children, especially when combined with stimulant drug therapy (Rapport et al., 2008; Barkley, 2006, 2004, 2002). Combining behavioral and drug therapies is also desirable because, according to research, children who receive both treatments require lower levels of medication, meaning, of course, that they are less subject to the medication’s undesired effects (Hoza et al., 2008).

Multicultural Factors and ADHD

Throughout this book, you have seen that race often affects how persons are diagnosed with and treated for various psychological disorders. Thus, you should not be totally surprised that race also seems to come into play with regard to ADHD.

A number of studies indicate that African American and Hispanic American children with significant attention and activity problems are less likely than white American children with similar symptoms to be assessed for ADHD, receive an ADHD diagnosis, or undergo treatment for this disorder (Bussing et al., 2005, 2003, 1998). Moreover, among those who do receive an ADHD diagnosis and treatment, children from racial minorities are less likely than white American children to be treated with stimulant drugs or a combination of stimulants and behavioral therapy—the interventions that seem to be of most help to those with ADHD (Stevens et al., 2005). And, finally, among children who do receive stimulant drug treatment for ADHD, children from racial minorities are
less likely than white American children to receive the promising (but more expensive) long-acting stimulant drugs that have been developed in recent years (Cooper, 2004).

In part, these racial differences in diagnosis and treatment are tied to economic factors. Studies consistently reveal that poorer children are less likely than wealthier ones to be identified as having ADHD and are less likely to receive effective treatment, and racial minority families have, on average, lower incomes and weaker insurance coverage than white American families. Consistent with this point, one study found that privately insured African American children with ADHD receive higher, more effective doses of stimulant drugs than do Medicaid-insured African American children with ADHD (Lipkin et al., 2005).

Some clinical theorists further believe that social bias and stereotyping may contribute to the racial differences in diagnosis and treatment that have been observed. They argue that our society often views the symptoms of ADHD as medical problems when exhibited by white American children but as indicators of poor parenting, lower IQ, substance use, or violence when displayed by African American and Hispanic American children (Kendall & Hatton, 2002). This notion has been supported by the finding that, all symptoms being equal, teachers are more likely to conclude that overactive white American children have ADHD but that overactive African American or Hispanic American children have other kinds of difficulties (Raymond, 1997; Samuel et al., 1997). Moreover, white American parents are more likely than African American and Hispanic American parents to believe that their children have ADHD or to seek ADHD evaluations and treatments for their children (Stevens et al., 2005; Kendall & Hatton, 2002).

Whatever the reason—economic disadvantage, social bias, racial stereotyping, or other factors—it appears that children from racial minority groups are less likely to receive a proper ADHD diagnosis and treatment. While many of today’s clinical theorists correctly alert us to the possibility that ADHD may be generally overdiagnosed and overtreated, it is important to also recognize that children from certain segments of society may, in fact, be underdiagnosed and undertreated.
**Elimination Disorders**

Children with elimination disorders repeatedly urinate or pass feces in their clothes, in bed, or on the floor. They already have reached an age at which they are expected to control these bodily functions, and their symptoms are not caused by physical illness.

**Enuresis**

Enuresis is repeated involuntary (or in some cases intentional) bed-wetting or wetting of one’s clothes. It typically occurs at night during sleep but may also occur during the day. Children must be at least 5 years of age to receive this diagnosis. The problem may be triggered by stressful events, such as a hospitalization, entrance into school, or family problems.

The prevalence of enuresis decreases with age. As many as 10 percent of children who are 5 years old suffer from this disorder, compared to 3 to 5 percent of 10-year-olds and 1 percent of 15-year-olds. Those with enuresis typically have a close relative (parent, sibling) who has had or will have the same disorder (Friman, 2008; APA, 2000).

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**Child Abuse**

What I remember most about my mother was that she was always beating me. She’d beat me with her high-heeled shoes, with my father’s belt, with a potato masher. When I was eight, she black and blue my legs so badly, I told her I’d go to the police. She said, “Go, they’ll just put you into the darkest prison.” So I stayed. When my breasts started growing at 13, she beat me across the chest until I fainted. Then she’d hug me and ask forgiveness. . . . Most kids have nightmares about being taken away from their parents. I would sit on our front porch crying softly of going far, far away to find another mother. . . . (TIME, SEPTEMBER 5, 1983, P. 20)

A problem that affects all too many children and has an enormous impact on their psychological development is child abuse, the nonaccidental use of excessive physical or psychological force by an adult on a child, often with the intention of hurting or destroying the child. At least 5 percent, and perhaps as many as 26 percent, of children in the United States are physically abused each year (Phares, 2008). Surveys suggest that 1 of every 10 children is the victim of severe violence, such as being kicked, bitten, hit, beaten, or threatened with a knife or a gun. In fact, some observers believe that physical abuse and neglect are the leading causes of death among young children.

Overall, girls and boys are physically abused at approximately the same rate (Humphrey, 2006). However, boys are at greatest risk when they are under the age of 12, while the risk for girls is highest when they are older than 12 (Azar et al., 1998). Although child abuse occurs in all socioeconomic groups, it is apparently more common among the poor (Mammen et al., 2002).

Abusers are usually the child’s parents (Faust et al., 2008; Humphrey, 2006). Clinical investigators have learned that abusive parents often have poor impulse control, low self-esteem, and weak parenting skills (Tolan et al., 2006; Mammen et al., 2002). Many have been abused themselves as children and have had poor role models (McCaghy et al., 2006). In some cases, they are experiencing the stress of marital discord or family unemployment (Faust et al., 2008).

Studies suggest that the victims of child abuse may suffer both immediate and long-term psychological effects. Research has revealed, for example, that abused children have more performance and behavior problems in school. Long-term negative effects include lack of social acceptance, a higher number of medical and psychological disorders, more abuse of alcohol and other substances, more arrests during adolescence and adulthood, a greater risk of becoming criminally violent, a higher unemployment rate, and a higher suicide rate (Faust et al., 2008; Harkness & Lumley, 2008; Widom, 2001). Finally, as many as one-third of abuse victims grow up to be abusive, neglectful, or inadequate parents themselves (Heyman & Slep, 2002).

Two forms of child abuse have received special attention: psychological and sexual abuse. Psychological abuse may include severe rejection, excessive discipline, scapegoating and ridicule, isolation, and refusal to provide help for a child with psychological problems (Faust et al., 2008).

Child sexual abuse, the use of a child for the gratification of adult sexual desires, may occur outside of or within the home (Faust et al., 2008; McCaghy et al., 2006).

Surveys suggest that at least 13 percent of women were forced into sexual contact with an adult male during their childhood, many of them with their father or stepfather (Phares, 2008, 2003; Hill, 2003). At least 4 percent of men were also sexually abused during childhood (Romano & DeLuca, 2001). Child sexual abuse appears to be equally common across all socioeconomic classes, races, and ethnic groups (McCaghy et al., 2006).

A variety of therapies have been used in cases of child abuse, including groups
Research has not favored one explanation for enuresis over the others. Psychodynamic theorists explain it as a symptom of broader anxiety and underlying conflicts (Friman, 2008). Family theorists point to disturbed family interactions (Fletcher, 2000). Behaviorists view the problem as the result of improper or coercive toilet training (Christophersen & Purvis, 2001). And biological theorists suspect that children with this disorder often have a small bladder capacity or weak bladder muscles (Friman, 2008).

Most cases of enuresis correct themselves even without treatment. However, therapy, particularly behavioral therapy, can speed up the process (Butler, 2004; Nield & Kamat, 2004). In a widely used classical conditioning approach, the bell-and-battery technique, a bell and a battery are wired to a pad consisting of two metallic foil sheets, and the entire apparatus is placed under the child at bedtime (Houts, 2003; Mowrer & Mowrer, 1938). A single drop of urine sets off the bell, awakening the child as soon as he or she starts to wet. Thus the bell (unconditioned stimulus) paired with the sensation of a full bladder (conditioned stimulus) produces the response of waking. Eventually, a full bladder alone awakens the child.

Another effective behavioral treatment method is dry-bed training, in which children receive training in retention control, are awakened periodically during the night, practice sponsored by Parents Anonymous, which helps parents to develop insight into their behavior, provides training on alternatives to abuse, and teaches parenting skills (Tolan et al., 2006; Wolfe et al., 1988). Still other treatments help parents deal more effectively with the stresses that often trigger the abuse, such as unemployment, marital conflict, and feelings of depression. In addition, prevention programs, often in the form of home visitations and parent training, have proved promising (Mekerle et al., 2007).

Finally, research suggests that the psychological needs of the child victims should be addressed as early as possible (Gray et al., 2000; Roessler & McKenzie, 1994). Clinicians and educators have launched early detection programs that aim to (1) educate all children about child abuse, (2) teach them skills for avoiding or escaping from abusive situations, (3) encourage children to tell another adult if they are abused, and (4) assure them that abuse is never their own fault (Godenzi & DePuy, 2001; Finkelhor et al., 1995). These programs seem to increase the likelihood that children will report abuse, reduce their tendency to blame themselves for it, and increase their feelings of efficacy (Goodman-Brown et al., 2003).
going to the bathroom, and are appropriately rewarded (Friman, 2008; Christophersen & Purvis, 2001). Like the bell-and-battery technique, this behavioral approach is often effective, according to research.

**Encopresis**

Encopresis, repeatedly defecating into one’s clothing, is less common than enuresis, and it is also less well researched. This problem usually occurs during the waking hours, not at night during sleep (Walker, 2003). It is usually involuntary, starts after the age of 4, and affects about 1 percent of 5-year-olds (see Table 14-4). The disorder is more common in boys than in girls (Friman, 2008; APA, 2000).

Encopresis causes intense social problems, shame, and embarrassment (Cox et al., 2002). Children who suffer from it usually try to hide their condition and to avoid situations, such as camp or school, in which they might embarrass themselves (APA, 2000). Cases may stem from stress, biological factors such as repeated constipation, improper toilet training, or a combination of these factors. Because physical problems are so often linked to the disorder, a medical examination is typically conducted first.

The most common and successful treatments for encopresis are behavioral and medical approaches (Friman, 2008; McGrath et al., 2000). Among other features of treatment, practitioners may try to help the children better detect when their bowels are full by the application of biofeedback training (see pages 105 and 156), eliminate the children’s constipation, and stimulate regular bowel functioning with high-fiber diets, mineral oil, laxatives, and lubricants (Friman, 2008; McClung et al., 1993). Family therapy has also proved helpful (Murphy & Carr, 2000).
Long-Term Disorders That Begin in Childhood

As you read at the beginning of this chapter, many childhood disorders change or subside as the person ages. Two groups of disorders that emerge during childhood, however, are likely to continue unchanged throughout life: the pervasive developmental disorders and mental retardation. Researchers have investigated both of these categories extensively. In addition, although it was not always so, clinicians have developed a range of treatment approaches that can make a major difference in the lives of people with these problems.

Pervasive Developmental Disorders

Pervasive developmental disorders are a group of disorders marked by impaired social interactions, unusual communications, and inappropriate responses to stimuli in the environment. The group includes autistic disorder, Asperger’s disorder, Rett’s disorder, and childhood disintegrative disorder. Because autistic disorder initially received more attention than the others, these disorders are often referred to as autistic-spectrum disorders. Although the patterns are similar in many ways, they differ significantly in the degree of social impairment sufferers experience and in the time of onset. Given the low prevalence of Rett’s disorder and childhood disintegrative disorder, we will examine only autistic disorder and Asperger’s disorder in this chapter.

Autistic Disorder

A child named Mark presents a typical picture of autism:

In retrospect [Susan, Mark’s mother] can recall some things that appeared odd to her. For example, she remembers that . . . Mark never seemed to anticipate being picked up when she approached. In addition, despite Mark’s attachment to a pacifier (he would complain if it were mislaid), he showed little interest in toys. In fact, Mark seemed to lack interest in anything. He rarely pointed to things and seemed oblivious to sounds. . . . Mark spent much of his time repetitively tapping on tables, seeming to be lost in his own world.

After his second birthday, Mark’s behavior began to trouble his parents. . . . Mark, they said, would “look through” people or past them, but rarely at them. He could say a few words but didn’t seem to understand speech. In fact, he did not even respond to his own name. Mark’s time was occupied examining familiar objects, which he would hold in front of his eyes while he twisted and turned them. Particularly troublesome were Mark’s odd movements—he would jump, flap his arms, twist his hands and fingers, and perform all sorts of facial grimaces, particularly when he was excited—and what Robert [Mark’s father] described as Mark’s rigidity. Mark would line things up in rows and scream if they were disturbed. He insisted on keeping objects in their place and would become upset whenever Susan attempted to rearrange the living room furniture. . . .

Slowly, beginning at age five, Mark began to improve. . . . The pronoun in the sentence was inappropriate and the sentence took the form of a question he had been asked previously, but the meaning was clear.

(Wing, 1976)
Mark was displaying autistic disorder, or autism, a pattern first identified by American psychiatrist Leo Kanner in 1943. Children with this disorder are extremely unresponsive to others, uncommunicative, repetitive, and rigid (see Table 14-5). Their symptoms appear early in life, before 3 years of age. Just a decade ago, autism seemed to affect around 1 out of every 2,000 children (APA, 2000). However, in recent years there has been a steady increase in the number of children diagnosed with autism, and it now appears that at least 1 in 600 and perhaps as many as 1 in 160 children display the disorder (Teicher et al., 2008; Fombonne, 2003).

Around 80 percent of all cases of autism occur in boys. As many as 90 percent of children with the disorder remain severely disabled into adulthood. They have enormous difficulty maintaining employment, performing household tasks, and leading independent lives (Benaron, 2009). Moreover, even the highest-functioning adults with autism typically have problems displaying closeness and empathy and have limited interests and activities (Baron-Cohen & Wheelwright, 2003).

The individual's lack of responsiveness—including extreme aloofness, lack of interest in other people, low empathy, and inability to share attention with others—has long been considered the central feature of autism. Like Mark, children with this disorder typically do not reach for their parents during infancy. Instead they may arch their backs when they are held and appear not to recognize or care about those around them.

Language and communication problems take various forms in autism. Approximately half of all sufferers fail to speak or develop language skills (Gillis & Romanczyk, 2007).

### Table: 14-5

#### DSM Checklist

**AUTISTIC DISORDER**

1. A total of at least six items from the following groups of symptoms:

   **A. 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 appropriately.
   
   c. Lack of spontaneous seeking to share enjoyment, interests, or achievements with other people.
   
   d. Lack of social or emotional reciprocity.

   **B. Impairment in communication, as manifested by at least one of the following:**
   
   a. Delay in, or total lack of, the development of spoken language.
   
   b. In individuals with adequate speech, marked impairment in the ability to start 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.

   **C. Restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:**
   
   a. Abnormal preoccupation with one or more stereotyped and restricted patterns of interest.
   
   b. Inflexible adherence to specific nonfunctional routines or rituals.
   
   c. Stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping or twisting).
   
   d. Persistent preoccupation with parts of objects.

2. Prior to 3 years of age, delay or abnormal functioning in either social interaction, language, or symbolic or imaginative play.

Based on APA, 2000.
Asperger’s Disorder

Around the time that Kanner first identified autism, a Viennese physician named Hans Asperger began to note a syndrome in which children display significant social impairments yet manage to maintain appropriate levels of cognitive function and language. Those with Asperger’s disorder, or Asperger’s syndrome, experience the kinds of social deficits, odd interests, and restricted and repetitive behaviors that characterize individuals with autism, but at the same time they often have normal (or near normal) intellectual, adaptive, and language skills (Siegel & Ficca, 2006). Many individuals with this disorder want to fit in and interact with others, but their poor social functioning makes it hard for them to do so. They wind up appearing awkward and unaware of social rules (ASA, 2006).

Clinical research suggests that there may be several subtypes of Asperger’s disorder. One team of researchers has distinguished three subtypes: rule boys, logic boys, and emotion boys (Sohn & Grayson, 2005). Rule boys are Asperger sufferers who need to have a set of rules that govern their lives. They are extremely stubborn about following these rules and may become aggressive when the rules are not clearly laid out. Logic boys are primarily interested in the reasons behind rules; rules alone are not sufficient.

Those who do talk may show peculiarities in their speech. One of the most common speech problems is echolalia, the exact echoing of phrases spoken by others. The individuals repeat the words with the same inflection, but with no sign of understanding. Some even repeat a sentence days after they have heard it (delayed echolalia).

Because they have difficulty empathizing and sharing a frame of reference with others, individuals with autism may also display other speech oddities, such as pronominal reversal, or confusion of pronouns—for example, the use of “you” instead of “I.” When Mark was hungry, he would say, “Do you want dinner?” In addition, individuals may have problems naming objects, using abstract language, employing a proper tone when talking, speaking spontaneously, using language for conversational purposes, or understanding speech.

Autism is also marked by limited imaginative play and by very repetitive and rigid behavior. Children with the disorder may be unable to play in a varied, spontaneous way. Unlike other individuals of the same age, the children may fail to include others in their play and have no desire to imitate or be like others (Kasari et al., 2006). Typically they become very upset at minor changes of objects, persons, or routines and resist any efforts to change their own repetitive behaviors. Mark, for example, lined things up and screamed if they were disturbed. Similarly, children with autism may react with tantrums if a parent wears an unfamiliar pair of glasses, a chair is moved to a different part of the room, or a word in a song is changed. Kanner (1943) labeled such reactions a perseveration of sameness. Furthermore, many sufferers become strongly attached to particular objects—plastic lids, rubber bands, buttons, water. They may collect these objects, carry them, or play with them constantly. Some are fascinated by movement and may watch spinning objects, such as fans, for hours.

The motor movements of people with autism may also be unusual. Mark would jump, flap his arms, twist his hands and fingers, rock, spin, and make faces. These acts are called self-stimulatory behaviors. Some individuals also perform self-injurious behaviors, such as repeatedly lunging into or banging their head against a wall, pulling their hair, or biting themselves.

The symptoms of this disorder suggest a very disturbed and contradictory pattern of reactions to stimuli. Sometimes individuals with autism seem overstimulated by sights and sounds and appear to be trying to block them out, while at other times they seem understimulated and appear to be performing self-stimulatory actions. They may, for example, fail to react to loud noises yet turn around when they hear soda being poured. Similarly, they may fail to recognize that they have reached the edge of a dangerous high place yet immediately spot a small object that is out of position in their room.

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They want to know how the world works, often question the logic of others’ reasoning, and may have their own reasons for why things are happening. In turn, they are typically unwilling to accept illogical events and often become overly analytical. Emotion boys tend to be run by their feelings. They have more tantrums than others with Asperger’s disorder. It is hard to sway them with rules or reason, and they often act out.

Approximately 1 in 250 individuals displays Asperger’s disorder, again 80 percent of them boys (CADDRE, 2004). It is important to diagnose and treat Asperger’s disorder early in life so that the individual has a better chance of being successful at school and living independently. Although Asperger individuals must contend with deficits throughout their lives, many are able to complete a high level of education, even college or trade school. Similarly, they may successfully hold jobs, particularly ones that require a focus on details and limited social interactions (ASA, 2005).

What Are the Causes of Pervasive Developmental Disorders? Much more research has been conducted on autism than on Asperger’s disorder or other pervasive developmental disorders. Thus, this section will concentrate on the causes of autism, keeping in mind, however, that there may turn out to be key differences between the causes of this disorder and those of the other pervasive developmental disorders.

A variety of explanations have been offered for autism. This is one disorder for which sociocultural explanations have probably been overemphasized. In fact, such explanations initially led investigators in the wrong direction. More recent work in the psychological and biological spheres has persuaded clinical theorists that cognitive limitations and brain abnormalities are the primary causes of autism.

SOCIOCULTURAL CAUSES At first, theorists thought that family dysfunction and social stress were the primary causes of autism. When he first identified autism, for example, Kanner (1954, 1943) argued that particular personality characteristics of the parents created an unfavorable climate for development and contributed to the child’s disorder. He saw these parents as very intelligent yet cold—“refrigerator parents.” These claims had enormous influence on the public and on the self-image of the parents themselves, but research has totally failed to support a picture of rigid, cold, rejecting, or disturbed parents (Jones & Jordan, 2008).

Similarly, some clinical theorists have proposed that a high degree of social and environmental stress is a factor in autism. Once again, however, research has not supported this notion. Investigators who have compared children with autism to children without the disorder have found no differences in the rate of parental death, divorce, separation, financial problems, or environmental stimulation (Cox et al., 1975).

PSYCHOLOGICAL CAUSES According to certain theorists, people with autism have a central perceptual or cognitive disturbance that makes normal communication and interactions impossible. One influential explanation holds that individuals with the disorder fail to develop a theory of mind—an awareness that other people base their behaviors on their own beliefs, intentions, and other mental states, not on information that they have no way of knowing (Hale & Tager-Flusberg, 2005; Frith, 2000).

By 3 to 5 years of age, most children can take the perspective of another person into account and use it to anticipate what the person will do. In a way, they learn to read others’ minds. Let us say, for example, that we watch Jessica place a marble in a container and then we observe Frank move the marble to a nearby room while Jessica is taking a nap. We know that later Jessica will search first in the container for the marble because she is not aware that Frank moved it. We know that because we take Jessica’s perspective into account. A normal child would also anticipate Jessica’s search correctly. A person with autism would not. He or she would expect Jessica to look in the nearby room because that is where the marble actually is. Jessica’s own mental processes would be unimportant to the person.
Studies show that people with autism do have this kind of “mindblindness,” although they are not the only kinds of individuals with this limitation (Jones & Jordan, 2008). They thus have great difficulty taking part in make-believe play, using language in ways that include the perspectives of others, developing relationships, or participating in human interactions. Why do people with autism have this and other cognitive limitations? Some theorists believe that they suffered early biological problems that prevented proper cognitive development.

**BIOLOGICAL CAUSES** For years researchers have tried to determine what biological abnormalities might cause theory-of-mind deficits and the other features of autism. They have not yet developed a detailed biological explanation, but they have uncovered some promising leads (Teicher et al., 2008; Rodier, 2000). First, examinations of the relatives of people with autism keep suggesting a *genetic factor* in this disorder. The prevalence of autism among their siblings, for example, is as high as 6 to 8 per 100 (Teicher et al., 2008; Gillis & Romanczyk, 2007), a rate much higher than the general population’s. Moreover, the prevalence of autism among the identical twins of people with autism is 60 percent. In addition, chromosomal abnormalities have been discovered in around 10 percent of people with the disorder (Sudhalter et al., 1990).

**PSYCH WATCH**

**A Special Kind of Talent**

Most people are familiar with the savant syndrome, thanks to Dustin Hoffman’s portrayal of a man with autism in the movie *Rain Man*. The savant skills that Hoffman portrayed—counting 246 toothpicks in the instant after they fall to the floor, memorizing the phone book through the G’s, and doing numerical calculations at lightning speed—were based on the astounding talents of certain real-life people who are otherwise limited by autism or mental retardation.

A savant (French for “learned” or “clever”) is a person with a major mental disorder or intellectual handicap who has some spectacular ability. Often these abilities are remarkable only in light of the handicap, but sometimes they are remarkable by any standard (Yewchuk, 1999).

A common savant skill is calendar calculating, the ability to calculate what day of the week a date will fall on, such as New Year’s Day in 2050 (Kennedy & Squire, 2007; Heavey et al., 1999). A common musical skill such individuals may possess is the ability to play a piece of classical music flawlessly from memory after hearing it only once. Other individuals can paint exact replicas of scenes they saw years ago (Hou et al., 2000).

Some theorists believe that savant skills do indeed represent special forms of cognitive functioning; others propose that the skills are merely a positive side to certain cognitive deficits (Scheuffgen et al., 2000; Miller, 1999). Special memorization skills, for example, may be facilitated by the very narrow and intense focus often found in cases of autism.
Some studies have also linked autism to prenatal difficulties or birth complications (Teicher et al., 2008; Rodier, 2000). The chances of developing the disorder are higher when the mother had rubella (German measles) during pregnancy, was exposed to toxic chemicals before or during pregnancy, or had complications during labor or delivery. In 1998 one team of investigators proposed that a postnatal event—the vaccine for measles, mumps, and rubella—might produce autism in some children, alarming many parents of toddlers. However, research has not confirmed a link between the vaccine and the disorder (Cook, 2006; Institute of Medicine, 2004).

Finally, researchers have identified specific biological abnormalities that may contribute to autism. One line of research has pointed to the cerebellum, for example (Teicher et al., 2008; Pierce & Courchesne, 2002, 2001). Brain scans and autopsies reveal abnormal development in this brain area occurring early in the life of people with autism. Scientists have long known that the cerebellum coordinates movement in the body, but they now suspect that it also helps control a person’s ability to shift attention rapidly. It may be that people whose cerebellum develops abnormally will have great difficulty adjusting their level of attention, following verbal and facial cues, and making sense of social information—all key features of autism.

In a similar vein, brain scans indicate that many children with autism have increased brain volume and white matter (Wicker, 2008) and structural abnormalities in the brain’s limbic system, brain stem nuclei, and amygdala (Gillis & Romanczyk, 2007). Many individuals with the disorder also experience reduced activity in the brain’s temporal and frontal lobes when they perform language and motor tasks (Escalante, Minshew, & Sweeney, 2003).

Given such findings, many researchers believe that autism may in fact have multiple biological causes (Cook, 2006; Mueller & Courchesne, 2000). Perhaps all of the relevant biological factors (genetic, prenatal, birth, and postnatal) eventually lead to a common problem in the brain—a “final common pathway,” such as neurotransmitter abnormalities, that produces the cognitive problems and other features of the disorder.

How Do Clinicians and Educators Treat Pervasive Developmental Disorders? Treatment can help people with autism adapt better to their environment, although no treatment yet known totally reverses the autistic pattern. Treatments of particular help are behavioral therapy, communication training, parent training, and community integration. In addition, psychotropic drugs and certain vitamins have sometimes helped when combined with other approaches (Teicher et al., 2008; Volkmar, 2001).

Behavioral Therapy Behavioral approaches have been used in cases of autism for more than 35 years to teach new, appropriate behaviors, including speech, social skills, classroom skills, and self-help skills, while reducing negative, dysfunctional ones (Bock et al., 2009). Most often, the therapists use modeling and operant conditioning. In modeling, they demonstrate a desired behavior and guide people with the disorder to imitate it. In operant conditioning, they reinforce such behaviors, first by shaping them—breaking them down so they can be learned step by step—and then rewarding each step clearly and consistently (Campbell et al., 2008; Lovaas, 2003, 1987). With careful planning and execution, these procedures often produce more functional behaviors.

A long-term study compared the progress of two groups of children with autism (Campbell et al., 2008; McEachin et al., 1993; Lovaas, 1987). Nineteen received intensive behavioral treatments, and 19 served as a control group. The treatment began when the children were 3 years old and continued until they were 7. By the age of 7, the behavioral group was doing better in school and scoring higher on intelligence tests than the control group. Many were able to go to school in regular classrooms. The gains continued into
the research participants’ teenage years. In light of such findings, many clinicians now consider early behavioral programs to be the preferred treatment for autism.

A recent behavioral program that has achieved considerable success is the Learning Experiences . . . An Alternative Program (LEAP) for preschoolers with autism (Kohler, Strain, & Goldstein, 2005). In this program, four autistic children are integrated with 10 normal children in a classroom. The normal children learn how to use modeling and operant conditioning in order to help teach social, communication, play, and other skills to the autistic children. The program has been found to improve significantly the cognitive functioning of autistic children, as well as their social and peer interactions, play behaviors, and other behaviors. Moreover, the normal children in the classroom experience no negative effects as a result of serving as intervention agents.

As such programs suggest, therapies for people with autism, particularly behavioral ones, tend to provide the most benefit when they are started early in the children’s lives (Campbell et al., 2008; Palmer, 2003). Very young autistic children often begin with services at home, but ideally, by the age of 3 they attend special programs outside the home. A federal law lists autism as 1 of 10 disorders for which school districts must make available a free and appropriate education from birth to age 22. Typically, services are provided by education, health, or social service agencies until the children reach 3 years of age; then the department of education for each state determines what services will be offered (NRC, 2001).

Given the recent increases in the prevalence of autism, many school districts are now trying to provide education and training for autistic children in special classes that operate at the district’s own facilities. However, most school districts remain ill equipped to meet the profound needs of students with autism. The most fortunate students are sent by their school districts to attend special schools, where education and therapy are combined. At such schools, specially trained teachers help the children improve their skills and interactions with the world. The higher-functioning students with autism may eventually spend at least part of their school day returning to normal classrooms in their own school district (Smith et al., 2002).

Although significantly impaired, children with Asperger’s disorder have less profound educational and treatment needs than do those with autism. Once diagnosed, many such children are assigned to special programs (either within their own school system or at special schools) in which they receive a combination of education and cognitive-behavioral therapy tailored to their particular impairments. In one such program, cognitive social integration therapy, the children are taught to be more flexible with regard to social rules, problem solving, and behavioral choices (Sohn & Grayson, 2005).

The severe problems of individuals with autism often require teachers and therapists to develop innovative approaches. This teacher, for example, escorts an autistic child down the school hallway while the boy wears a full-body sack that helps minimize intolerable stimuli and increases his sense of security.
The teacher works with the Asperger students in groups, acknowledging their thoughts and feelings, teaching them how to cope with change, and helping them to develop new social skills and other kinds of abilities. The teacher also helps ensure that the newly learned skills generalize to the individual’s life by using techniques such as rehearsal, role playing, and visual imaging throughout the group sessions.

**COMMUNICATION TRAINING** Even when given intensive behavioral treatment, half of the people with autism remain speechless. As a result, they are often taught other forms of communication, including sign language and simultaneous communication, a method combining sign language and speech. They may also learn to use augmentative communication systems, such as “communication boards” or computers that use pictures, symbols, or written words to represent objects or needs (Gillis & Romanczyk, 2007). A child may point to a picture of a fork to give the message “I am hungry,” for example, or point to a radio for “I want music.”

Some programs now use child-initiated interactions to help improve the communication skills of autistic children (Koegel et al., 2005). In such programs, teachers try to identify intrinsic reinforcers rather than trivial ones like food or candy. The children are first encouraged to choose items that they are interested in, and they then learn to initiate questions (“What’s that?”; “Where is it?”; “Whose is it?”) in order to obtain the items. Studies find that child-directed interventions of this kind often increase self-initiated communications, language development, and social participation (Koegel et al., 2005).

**PARENT TRAINING** Today’s treatment programs involve parents in a variety of ways. Behavioral programs, for example, often train parents so that they can apply behavioral techniques at home (Schreibman & Koegel, 2005). Instruction manuals for parents and home visits by teachers are often included in such programs. Research has demonstrated that the behavioral gains produced by trained parents are often equal to or greater than those generated by teachers.

In addition to parent-training programs, individual therapy and support groups are becoming more available to help the parents of autistic children deal with their own emotions and needs (Hastings, 2008). A number of parent associations and lobbies also offer emotional support and practical help.

**COMMUNITY INTEGRATION** Many of today’s school-based and home-based programs for autism teach self-help, self-management, and living, social, and work skills as early as possible to help the children function better in their communities. In addition, greater numbers of carefully run group homes and sheltered workshops are now available for teenagers and young adults with autism. These and related programs help the individuals become a part of their community; they also reduce the concerns of aging parents whose children will always need supervision.

**Mental Retardation**

Ed Murphy, aged 26, can tell us what it’s like to be diagnosed as retarded:

> What is retardation? It’s hard to say. I guess it’s having problems thinking. Some people think that you can tell if a person is retarded by looking at them. If you think that way you don’t give people the benefit of the doubt. You judge a person by how they look or how they talk or what the tests show, but you can never really tell what is inside the person.

*(Bogdan & Taylor, 1976, p. 51)*

For much of his life Ed was labeled mentally retarded and was educated and cared for in special institutions. During his adult years, clinicians discovered that Ed’s intellectual ability was in fact higher than had been assumed. In the meantime, however, he
had lived the childhood and adolescence of a person labeled retarded, and his statement
reveals the kinds of difficulties often faced by people with this disorder.

The term “mental retardation” has been applied to a varied population, including
children in institutional wards who rock back and forth, young people who work in
special job programs, and men and women who raise and support their families by
working at undemanding jobs. In recent years, the less stigmatizing term intellectual
disability has become synonymous with mental retardation in many clinical settings. As
many as 3 of every 100 persons meet the criteria for this diagnosis (Brown et al., 2009;
APA, 2000). Around three-fifths of them are male, and the vast majority are considered
mildly retarded.

According to DSM-IV-TR, people should receive a diagnosis of mental retardation
when they display general intellectual functioning that is well below average, in com-
bination with poor adaptive behavior (APA, 2000). That is, in addition to having a low IQ
(a score of 70 or below), a person with mental retardation must have great difficulty in
areas such as communication, home living, self-direction, work, or safety (APA, 2000).
The symptoms must also appear before the age of 18. Although these DSM-IV-TR
criteria may seem straightforward, they are in fact hard to apply.

Assessing Intelligence Educators and clinicians administer intelligence tests to
measure intellectual functioning (see Chapter 3). These tests consist of a variety of ques-
tions and tasks that rely on different aspects of intelligence, such as knowledge, reason-
ing, and judgment. An individual’s overall test score, or intelligence quotient (IQ), is
thought to indicate general intellectual ability.

Many theorists have questioned whether IQ tests are indeed valid. Do they actually
measure what they are supposed to measure? The correlation between IQ and school
performance is rather high—around .50—indicating that many children with lower
IQs do, as one might expect, perform poorly in school, while many of those with
higher IQs perform better (Sternberg et al., 2001). At the same time, the correlation
also suggests that the relationship is far from perfect. That is, a particular child’s school
performance is often higher or lower than his or her IQ might predict. Moreover, the
accuracy of IQ tests at measuring extremely low intelligence has not been evaluated
adequately, so it is difficult to assess people with severe mental retardation properly
(Bebko & Weiss, 2006).

Intelligence tests also appear to be socioculturally biased, as you read in Chapter
3 (Gopaul-McNicol & Armour-Thomas, 2002). Children reared in households at the
middle and upper socioeconomic levels tend to have an advantage on the tests because
they are regularly exposed to the kinds of language and thinking that the tests evaluate. The tests rarely measure the “street sense” needed for survival by people who live in poor, crime-ridden areas—a kind of know-how that certainly requires intellectual skills. Similarly, members of cultural minorities and people for whom English is a second language often appear to be at a disadvantage in taking these tests.

If IQ tests do not always measure intelligence accurately and objectively, then the diagnosis of mental retardation also may be biased. That is, some people may receive the diagnosis partly because of test flaws, cultural differences, discomfort with the testing situation, or the bias of a tester.

A CLOSER LOOK

Between 15 and 20 percent of children, boys more often than girls, develop slowly and function poorly compared to their peers in an area such as learning, communication, or coordination (Watson, Watson, & Ret, 2008; APA, 2000). The children do not suffer from mental retardation, and in fact they are often very bright, yet their problems may interfere with school performance, daily living, and in some cases social interactions. Similar difficulties may be seen in the children’s close biological relatives (Watson et al., 2008). According to DSM-IV-TR, these children may be suffering from a learning disorder, a communication disorder, or a developmental coordination disorder—problems that can cause significant psychological suffering and embarrassment for the children (Piek et al., 2007; Alexander-Passe, 2006; Daniel et al., 2006).

The skill in arithmetic, written expression, or reading exhibited by children with learning disorders is well below their intellectual capacity (APA, 2000). Across the United States, children with learning disorders comprise the largest subgroup of individuals placed in special education classes (Watson et al., 2008). One learning disorder is called mathematics disorder and is diagnosed in children who have markedly impaired mathematical skills. Another is reading disorder, also known as dyslexia, in which children have great difficulty recognizing words and comprehending as they read. They typically read slowly and haltingly and may omit, distort, or substitute words as they go.

The communication disorders take various forms as well (APA, 2000). Children with phonological disorder consistently fail to make correct speech sounds at an appropriate age, so that many of them seem to be talking baby talk. Those with expressive language disorder may struggle at learning new words, confine their speech to short simple sentences, or show a general lag in language development. And those who suffer from stuttering may repeat, prolong, or interject sounds as they speak; pause before finishing a word; or experience excessive tension in the muscles used for speech.

Finally, children with developmental coordination disorder perform coordinated motor activities at a level well below that of others their age (APA, 2000). Younger children with this disorder are clumsy and are slow to master skills such as tying shoe-laces, buttoning shirts, and zipping pants. Older children with the disorder may have great difficulty assembling puzzles, building models, playing ball, and printing or writing.

Research into the causes of these developmental difficulties has been limited (Golden, 2008; Teicher et al., 2008; Watson et al., 2008). However, treatments have been developed, and some of the disorders do respond well to special interventions (Watson et al., 2008; Pless & Carlsson, 2000). Reading therapy, for example, is very helpful in mild cases of reading disorder, and speech therapy brings about complete recovery in most cases of phonological disorder. Furthermore, learning, communication, and developmental coordination disorders often disappear before adulthood, even without any treatment (APA, 2000).
Assessing Adaptive Functioning  Diagnosticians cannot rely solely on a cutoff IQ score of 70 to determine whether a person suffers from mental retardation. Some people with a low IQ are quite capable of managing their lives and functioning independently, while others are not. The cases of Brian and Jeffrey show the range of adaptive abilities.

Brian comes from a lower-income family. He always has functioned adequately at home and in his community. He dresses and feeds himself and even takes care of himself each day until his mother returns home from work. He also plays well with his friends. At school, however, Brian refuses to participate or do his homework. He seems ineffective, at times lost, in the classroom. Referred to a school psychologist by his teacher, he received an IQ score of 60.

Jeffrey comes from an upper-middle-class home. He was always slow to develop, and sat up, stood, and talked late. During his infancy and toddler years, he was put in a special stimulation program and given special help and attention at home. Still Jeffrey has trouble dressing himself today and cannot be left alone in the backyard lest he hurt himself or wander off into the street. Schoolwork is very difficult for him. The teacher must work slowly and provide individual instruction for him. Tested at age 6, Jeffrey received an IQ score of 60.

Brian seems well adapted to his environment outside of school. However, Jeffrey’s limitations are widespread. In addition to his low IQ score, Jeffrey has difficulty meeting challenges at home and elsewhere. Thus a diagnosis of mental retardation may be more appropriate for Jeffrey than for Brian.

Several scales have been developed to assess adaptive behavior. Here again, however, some people function better in their lives than the scales predict, while others fall short. Thus to properly diagnose mental retardation, clinicians should probably observe the functioning of each individual in his or her everyday environment, taking both the person’s background and the community’s standards into account. Even then, however, such judgments may be subjective, as clinicians may not be familiar with the standards of a particular culture or community.

What Are the Features of Mental Retardation?  The most consistent feature of mental retardation is that the person learns very slowly (Sturmey, 2008; Hodapp & Dykens, 2003). Other areas of difficulty are attention, short-term memory, planning, and language. Those who are institutionalized with mental retardation are particularly likely to have these limitations. It may be that the unstimulating environment and minimal interactions with staff in many institutions contribute to such difficulties.

DSM-IV-TR describes four levels of mental retardation: mild (IQ 50–70), moderate (IQ 35–49), severe (IQ 20–34), and profound (IQ below 20). In contrast, the American Association of Mental Retardation (1992) prefers to distinguish different kinds of mental retardation according to the level of support the person needs—intermittent, limited, extensive, or pervasive.

Mild Retardation  Between 80 and 85 percent of all people with mental retardation fall into the category of mild retardation (IQ 50–70) (Leonard & Wen, 2002; APA, 2000). They are sometimes called “educably retarded” because they can benefit from schooling and can support themselves as adults. Mild mental retardation is not usually recognized until children enter school and are assessed there. The individuals demonstrate rather typical language, social, and play skills, but they need assistance when under stress—a limitation that becomes increasingly apparent as academic and social demands increase. Interestingly, the intellectual performance of individuals with mild mental
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Mild mental retardation often seems to improve with age; some even seem to leave the label behind when they leave school, and they go on to function well in the community (Sturmey, 2008). Their jobs tend to be unskilled or semiskilled.

Research has linked mild mental retardation mainly to sociocultural and psychological causes, particularly poor and unstimulating environments, inadequate parent-child interactions, and insufficient learning experiences during a child’s early years (Sturmey, 2008; Stromme & Magnus, 2000). These relationships have been observed in studies comparing deprived and enriched environments (see Figure 14-3). In fact, some community programs have sent workers into the homes of young children with low IQ scores to help enrich the environment there, and their interventions have often improved the children’s functioning. When continued, programs of this kind also help improve the individual’s later performance in school and adulthood (Sparling et al., 2005; Ramey & Ramey, 2004, 1992).

Although sociocultural and psychological factors seem to be the leading causes of mild mental retardation, at least some biological factors also may be operating. Studies suggest, for example, that a mother’s moderate drinking, drug use, or malnutrition during pregnancy may lower her child’s intellectual potential (Ksir et al., 2008). Similarly, malnutrition during a child’s early years may hurt his or her intellectual development, although this effect can usually be reversed at least partly if a child’s diet is improved before too much time goes by.

Moderate, Severe, and Profound Retardation Approximately 10 percent of persons with mental retardation function at a level of moderate retardation (IQ 35–49). They typically receive their diagnosis earlier in life than do individuals with mild retardation, as they demonstrate clear deficits in language development and play during their preschool years. By middle school they further display significant delays in their acquisition of reading and number skills. By adulthood, however, many individuals with moderate mental retardation manage to acquire a fair degree of communication skill, learn to care for themselves, benefit from vocational training, and can work in unskilled or semiskilled jobs, usually under supervision. Most such persons also function well in the community if they have supervision (Bebko & Weiss, 2006; APA, 2000).
Approximately 3 to 4 percent of people with mental retardation display severe retardation (IQ 20–34). They typically demonstrate basic motor and communication deficits during infancy. In school, they may be able to string together only two or three words when speaking. The individuals usually require careful supervision, profit somewhat from vocational training, and can perform only basic work tasks in structured and sheltered settings. Their understanding of communication is usually better than their speech. Most are able to function well in the community if they live in group homes, in community nursing homes, or with their families (Bebko & Weiss, 2006; APA, 2000).

Around 1 to 2 percent of all people with mental retardation fall into the category of profound retardation (IQ below 20). This level of retardation is very noticeable at birth or early infancy. With training, people with profound retardation may learn or improve basic skills such as walking, some talking, and feeding themselves. They need a very structured environment, with close supervision and considerable help, including a one-to-one relationship with a caregiver, in order to develop to the fullest (Sturmey, 2008; APA, 2000).

Severe and profound levels of mental retardation often appear as part of larger syndromes that include severe physical handicaps. The physical problems are often even more limiting than the individual’s low intellectual functioning and in some cases can be fatal.

What Are the Causes of Moderate, Severe, and Profound Mental Retardation? The primary causes of moderate, severe, and profound retardation are biological, although people who function at these levels also are affected greatly by their family and social environment (Sturmey, 2008; Hodapp & Dykens, 2003). Sometimes genetic factors are at the root of these biological problems, in the form of chromosomal or metabolic disorders. In fact, researchers have identified 1,000 genetic causes of mental retardation, although few of them have undergone much study (Dykens & Hodapp, 2001; Azar, 1995). Other biological causes of these kinds of mental retardation come from unfavorable conditions that occur before, during, or after birth, such as birth injuries.

CHROMOSOMAL CAUSES The most common of the chromosomal disorders leading to mental retardation is Down syndrome, named after Langdon Down, the British physician who first identified it. Fewer than 1 of every 1,000 live births result in Down syndrome, but this rate increases greatly when the mother’s age is over 35. Many older expectant mothers are now encouraged to undergo amniocentesis (testing of the amniotic fluid that surrounds the fetus) during the fourth month of pregnancy to identify Down syndrome and other chromosomal abnormalities.

Individuals with Down syndrome may have a small head, flat face, slanted eyes, high cheekbones, and, in some cases, protruding tongue. The latter may affect their ability to pronounce words clearly. They are often very affectionate with family members but in general display the same range of personality characteristics as people in the general population (Carr, 1994).

Several types of chromosomal abnormalities may cause Down syndrome (Teicher et al., 2008). The most common type (94 percent of cases) is trisomy 21, in which the individual has three free-floating twenty-first chromosomes instead of two. Most people with Down syndrome range in IQ from 35 to 55 (AAMR, 2005). The individuals appear to age early, and many even show signs of dementia as they approach 40 (Bebko & Weiss, 2006; Lawlor et al., 2001). Studies suggest that Down syndrome and early dementia often occur together because the genes that produce them are located close to each other on chromosome 21 (Selkoe, 1991).

Fragile X syndrome is the second most common chromosomal cause of mental retardation. Children born with a fragile X chromosome (that is, an X chromosome with a genetic
inclusion.

dren with mental retardation in regular education. And given a separate, specially designed education, children with mental retardation can be educated to lead normal lives in living conditions and opportunities similar to those found in the rest of society.

The genetic causes of mental retardation include abnormalities in the chromosomes and genes. In the case of abnormalities in the chromosomes, the 23rd chromosome determines a person's sex and so it is also referred to as the sex chromosome. In males, the 23rd chromosome pair consists of an X chromosome and a Y chromosome. In females, the 23rd chromosome pair consists of two X chromosomes.

The most common metabolic disorder to cause mental retardation is phenylketonuria (PKU), which strikes 1 of every 14,000 children. Babies with PKU appear normal at birth but cannot break down the amino acid phenylalanine. The chemical builds up and is converted into substances that poison the system, causing severe retardation and several other symptoms. Today infants can be screened for PKU, and if started on a special diet before 3 months of age, they may develop normal intelligence.

Children with Tay-Sachs disease, another metabolic disorder resulting from a pairing of recessive genes, progressively lose their mental functioning, vision, and motor ability over the course of two to four years and eventually die. One of every 30 persons of Eastern European Jewish ancestry carries the recessive gene responsible for this disorder, so that 1 of every 900 Jewish couples is at risk for having a child with Tay-Sachs disease.

PREGNATAL AND BIRTH-RELATED CAUSES As a fetus develops, major physical problems in the pregnant mother can threaten the child's prospects for a normal life (Bebko & Weiss, 2006; Neisser et al., 1996). When a pregnant woman has too little iodine in her diet, for example, her child may develop cretinism, marked by an abnormal thyroid gland, slow development, mental retardation, and a dwarflike appearance. The disorder is rare today because the salt in most diets now contains extra iodine. Also, any infant born with this disorder may quickly be given thyroid extract to bring about a normal development.

Other prenatal problems may also cause mental retardation. As you saw in Chapter 10, children whose mothers drink too much alcohol during pregnancy may be born with fetal alcohol syndrome, a group of very serious problems that includes lower intellectual functioning. In fact, a generally safe level of alcohol consumption during pregnancy has not been established by research. In addition, certain maternal infections during pregnancy—rubella (German measles) and syphilis, for example—may cause childhood problems that include mental retardation.

Birth complications can also lead to mental retardation. A prolonged period without oxygen (anoxia) during or after delivery can cause brain damage and retardation in a baby. Similarly, although premature birth does not necessarily lead to long-term problems for children, researchers have found that a birth weight of less than 3.5 pounds may sometimes result in retardation (Neisser et al., 1996).

CHILDOOD PROBLEMS After birth, particularly up to age 6, certain injuries and accidents can affect intellectual functioning and in some cases lead to mental retardation. Poisonings, serious head injuries caused by accident or abuse, excessive exposure to X rays, and excessive use of certain drugs pose special dangers (Evans, 2006). For example, a serious case of lead poisoning, from eating lead-based paints or inhaling high levels of automobile fumes, can cause retardation in children. Mercury, radiation, nitrite, and pesticide poisoning may do the same. In addition, certain infections, such as meningitis and encephalitis, can lead to mental retardation if they are not diagnosed and treated in time (MFA, 2008; Baroff & Olley, 1999).

Interventions for People with Mental Retardation The quality of life attained by people with mental retardation depends largely on sociocultural factors: where they live and with whom, how they are educated, and the growth opportunities available at home and in the community. Thus intervention programs for these individuals try to provide comfortable and stimulating residences, a proper education, and social and economic opportunities. At the same time, the programs seek to improve the self-image.
and increase the self-esteem of individuals with mental retardation. Once these needs are met, formal psychological or biological treatments are also of help in some cases.

**WHAT IS THE PROPER RESIDENCE?** Until recent decades, parents of children with mental retardation would send them to live in public institutions—state schools—as early as possible. These overcrowded institutions provided basic care, but residents were neglected, often abused, and isolated from society.

During the 1960s and 1970s, the public became more aware of these sorry conditions and, as part of the broader deinstitutionalization movement (see Chapter 12), demanded that many people with mental retardation be released from the state schools (Beyer, 1991). In many cases, the releases occurred without adequate preparation or supervision. Like deinstitutionalized people suffering from schizophrenia, the individuals were virtually dumped into the community. Often they failed to adjust and had to be institutionalized once again.

Since that time, reforms have led to the creation of small institutions and other community residences (group homes, halfway houses, local branches of larger institutions, and independent residences) that teach self-sufficiency, devote more staff time to patient care, and offer educational and medical services. Many of these settings follow the principles of normalization first started in Denmark and Sweden—they attempt to provide living conditions similar to those enjoyed by the rest of society, flexible routines, and normal developmental experiences, including opportunities for self-determination, sexual fulfillment, and economic freedom (Hodapp & Dykens, 2003).

Today the vast majority of children with mental retardation live at home rather than in an institution. During adulthood and as their parents age, however, the families may become less able to provide the kinds of assistance and opportunities that the individuals need. A community residence becomes an appropriate alternative for some of them. Most people with mental retardation, including almost all with mild mental retardation, now spend their adult lives either in the family home or in a community residence (Sturmey, 2008).

**WHICH EDUCATIONAL PROGRAMS WORK BEST?** Because early intervention seems to offer such great promise, educational programs for individuals with mental retardation may begin during the earliest years. The appropriate education depends on the individual's degree of retardation (Bebko & Weiss, 2006; Patton et al., 2000). Educators hotly debate whether special classes or mainstreaming is most effective once the children enter school (Hardman, Drew, & Egan, 2002). In special education, children with mental retardation are grouped together in a separate, specially designed educational program. In contrast, mainstreaming, or inclusion, places them in regular classes with non-retarded students. Neither approach seems consistently superior (Bebko & Weiss, 2006). It may well be that mainstreaming is better for some areas of learning and for some children, special classes for others (Cummins & Lau, 2003).

Teacher preparedness is another factor that may play into decisions about mainstreaming and special education classes. Many teachers report feeling inadequately prepared to provide education and support for children with mental retardation, especially children who have additional problems (Scheuermann et al., 2003). Brief training courses for teachers appear to help address such concerns (Campbell, Gilmore, & Cuskelly, 2003).

Teachers who work with individuals with mental retardation often use operant conditioning principles to improve the self-help, communication, social, and academic skills of the individuals (Sturmey, 2008; Ardoin et al., 2004). They break learning tasks down into small steps, giving positive reinforcement as each increment
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is accomplished. In addition, many institutions, schools, and private homes have set up *token economy programs*—the operant conditioning programs that have also been used to treat institutionalized patients suffering from schizophrenia and other severe mental disorders.

**WHEN IS THERAPY NEEDED?** Like anyone else, people with mental retardation sometimes experience emotional and behavioral problems. As many as 25 percent of them have a psychological disorder other than mental retardation (Hodapp et al., 2006; McBrien, 2003). Furthermore, some suffer from low self-esteem, interpersonal problems, and difficulties adjusting to community life. These problems are helped to some degree by either individual or group therapy. In addition, large numbers of people with mental retardation are given psychotropic medications (Sturmey, 2008). Many clinicians argue, however, that too often the medications are used simply for the purpose of making the individuals easier to manage.

**HOW CAN OPPORTUNITIES FOR PERSONAL, SOCIAL, AND OCCUPATIONAL GROWTH BE INCREASED?** People need to feel effective and competent in order to move forward in life. Those with mental retardation are most likely to achieve these feelings if their communities allow them to grow and to make many of their own choices. Denmark and Sweden, where the normalization movement began, have again been leaders in this area, developing youth clubs that encourage those with mental retardation to take risks and function independently (Flynn & Lemay, 1999; Perske, 1972). The Special Olympics program has also encouraged those with mental retardation to be active in setting goals, participate in their environment, and interact socially with others (Weiss et al., 2003).

Socializing, sex, and marriage are difficult issues for people with mental retardation and their families, but with proper training and practice, the individuals usually can learn to use contraceptives and carry out responsible family planning (Lumley & Scotti, 2001; Bennett-Gates & Zigler, 1999). The National Association for Retarded Citizens offers guidance in these matters, and some clinicians have developed *dating skills programs* (Segal, 2008; Valent-Hein et al., 1994).

Some states restrict marriage for people with mental retardation. These laws are rarely enforced, however, and in fact between one-quarter and one-half of all people with mild mental retardation eventually marry (Grinspoon et al., 1986). Contrary to popular myths, the marriages can be very successful. Moreover, although some individuals may be incapable of raising children, many are quite able to do so, either on their own or with special help and community services (Sturmey, 2008).

Finally, adults with mental retardation—whatever the severity—need the personal and financial rewards that come with holding a job (Kiernan, 2000). Many work in *sheltered workshops*, protected and supervised workplaces that train them at a pace and level tailored to their abilities. After training in the workshops, many with mild or moderate retardation move on to hold regular jobs (Moore, Flowers, & Taylor, 2000).

Although training programs for people with mental retardation have improved greatly in quality over the past 30 years, there are too few of them. Consequently, most of these individuals fail to receive a complete range of educational and occupational training services. Additional programs are required so that more people with mental retardation may achieve their full potential, as workers and as human beings.
**SUMMING UP**

**Long-Term Disorders That Begin in Childhood**

Pervasive developmental disorders and mental retardation are problems that emerge early and typically continue throughout a person’s life. People with autism, the most heavily researched pervasive developmental disorder, are extremely unresponsive to others, have poor communication skills, and behave in a very rigid and repetitive manner. Individuals with Asperger’s disorder, another kind of pervasive developmental disorder, display profound social impairment yet maintain relatively high levels of cognitive functioning and language skills.

The leading explanations of autism point to cognitive deficits, such as failure to develop a theory of mind, and biological abnormalities, such as abnormal development of the cerebellum, as causal factors. Although no treatment totally reverses the autistic pattern, significant help is available in the form of behavioral treatments, communication training, treatment and training for parents, and community integration.

People with mental retardation are significantly below average in intelligence and adaptive ability. Approximately 3 of every 100 people qualify for this diagnosis. Mild retardation, by far the most common level of mental retardation, has been linked primarily to environmental factors such as understimulation, inadequate parent-child interactions, and insufficient early learning experiences. Moderate, severe, and profound mental retardation are caused primarily by biological factors, although individuals who function at these levels also are affected enormously by their family and social environment. The leading biological causes are chromosomal abnormalities, metabolic disorders, prenatal problems, birth complications, and childhood diseases and injuries.

Today intervention programs for people with mental retardation emphasize the importance of a comfortable and stimulating residence, either the family home or a small institution or group home that follows the principles of normalization. Other important interventions include proper education, therapy for psychological problems, and programs offering training in socializing, sex, marriage, parenting, and occupational skills. One of the most intense debates in the field of education centers on whether individuals with mental retardation profit more from special classes or from mainstreaming.

**PUTTING IT... together**

**Clinicians Discover Childhood and Adolescence**

Early in the twentieth century, mental health professionals virtually ignored children (Phares, 2008). At best, they viewed them as small adults and treated their psychological disorders as they would adult problems (Peterson & Roberts, 1991). Today the problems and special needs of young people have caught the attention of researchers and clinicians. Although all of the leading models have been used to help explain and treat these problems, the sociocultural perspective—especially the family perspective—is considered to play a special role.

Because children and adolescents have limited control over their lives, they are particularly affected by the attitudes and reactions of family members. Clinicians must therefore deal with those attitudes and reactions as they try to address the problems of the young. Treatments for conduct disorder, ADHD, mental retardation, and other problems of childhood and adolescence typically fall short unless clinicians educate and work with the family as well.

**BETWEEN THE LINES**

**Children in Need**

Half of students identified with significant emotional disturbances drop out of high school.

Currently there is 1 school counselor for every 513 students. The recommended ratio is 1 per 250 students.

(Gruttadaro, 2005)
At the same time, clinicians who work with children and adolescents have learned that a narrow focus on any one model can lead to problems. For years autism was explained exclusively by family factors, misleading theorists and therapists alike and adding to the pain of parents already devastated by their child's disorder. Similarly, in the past, the sociocultural model often led professionals wrongly to accept anxiety among young children and depression among teenagers as inevitable, given the many new experiences confronted by the former and the latter group’s preoccupation with peer approval.

The increased clinical focus on the young has also been accompanied by increased attention to their human and legal rights. More and more, clinicians have called on government agencies to protect the rights and safety of this often powerless group. In doing so, they hope to fuel the fights for greater educational resources and against child abuse and neglect, sexual abuse, malnourishment, and fetal alcohol syndrome.

As the problems and, at times, mistreatment of young people receive greater attention, the special needs of these individuals are becoming more visible. Thus the study and treatment of psychological disorders among children and adolescents are likely to continue at a rapid pace. Now that clinicians and public officials have “discovered” this population, they are not likely to underestimate their needs and importance again.

1. Although boys with psychological disorders outnumber girls, adult women with such disorders outnumber adult men. How might you explain this age-related shift? pp. 429–446
2. Do video games that feature violence help produce oppositional defiant disorder, conduct disorder, or other childhood problems? pp. 436–437
3. What psychological effects might bullying have on its victims? Why do many individuals seem able to overcome the trauma of being bullied, while others do not? p. 438
4. The overall rate of repeated arrests of adolescents sent to juvenile detention, or juvenile training, centers has been estimated to be as high as 80 percent. How might such centers themselves be contributing to this recidivism rate? p. 439
5. What might be the merits and flaws of special classes versus mainstreaming for people with mental retardation? pp. 461–462

**KEY TERMS**

- separation anxiety disorder, p. 431
- play therapy, p. 433
- oppositional defiant disorder, p. 436
- conduct disorder, p. 436
- attention-deficit/hyperactivity disorder (ADHD), p. 440
- methylphenidate (Ritalin), p. 442
- enuresis, p. 444
- encopresis, p. 446
- pervasive developmental disorders, p. 447
- autistic disorder, p. 448
- echolalia, p. 449
- self-stimulatory behavior, p. 449
- self-injurious behavior, p. 449
- Asperger’s disorder, p. 449
- theory of mind, p. 450
- cerebellum, p. 452
- augmentative communication system, p. 454
- group home, p. 454
- mental retardation, p. 455
- intelligence quotient (IQ), p. 455
- mild retardation, p. 457
- moderate retardation, p. 458
- severe retardation, p. 459
- profound retardation, p. 459
- Down syndrome, p. 459
- fragile X syndrome, p. 459
- recessive genes, p. 460
- phenylketonuria (PKU), p. 460
- fetal alcohol syndrome, p. 460
- rubella, p. 460
- syphilis, p. 460
- state school, p. 461
- deinstitutionalization, p. 461
- normalization, p. 461
- special education, p. 461
- mainstreaming, p. 461
- token economy program, p. 462
- sheltered workshop, p. 462
1. What are the prevalence rates and gender ratios for the various childhood disorders? pp. 431–462, 446
2. What are the different kinds of childhood anxiety and mood disorders? What are today’s leading explanations and treatments for these disorders? pp. 431–436
3. Describe oppositional defiant disorder and conduct disorders. What factors help cause conduct disorders, and how are these disorders treated? pp. 436–439
4. What are the symptoms of attention-deficit/hyperactivity disorder? What are the current treatments for it, and how effective are they? pp. 440–443
5. What are enuresis and encopresis? How are these disorders treated? pp. 444–446
6. What are the symptoms of autistic disorder and of Asperger’s disorder? pp. 447–450
7. What are the possible causes of autism? What are the overall goals of treatment for autism, and which interventions have been most helpful for individuals with this disorder? pp. 450–454
8. Describe the different levels of mental retardation. pp. 457–459
9. What are the causes of mild mental retardation? What are the causes of moderate, severe, and profound mental retardation? pp. 458–460
10. What kinds of residences, educational programs, treatments, and community programs are helpful to persons with mental retardation? pp. 460–462