LEARNING OBJECTIVES

After reading this chapter, you should be able to do the following:

1. Describe the prevalence of childhood disorders and how prevalence varies as a function of children’s age, gender, socioeconomic status (SES), and ethnicity.
2. Critically evaluate the *DSM-5* concept of “mental disorder” as it applies to children and adolescents.
3. Understand and give examples of some of the basic principles of developmental psychopathology.
4. Explain why evidence-based practice is important when treating children and families.

There once was an old man who lived near the ocean. One morning, the man went for a walk on the beach and found the shore littered with starfish, stretching in both directions. A storm had passed the night before, stranding the starfish upon the sand.

In the distance, the man noticed a young boy walking along the shoreline. As the boy approached, he paused every so often, bent down to pick up an object, and threw it into the sea. When the boy came close enough, the man shouted, “Good morning! May I ask what you are doing?”

The young boy stopped, looked up, and replied, “I’m throwing the starfish into the ocean. The storm has washed them onto the beach, and they can’t return to the sea by themselves. They need me to help them.”

The old man replied, “But there must be thousands of starfish on this beach. I’m afraid you really won’t be able to make much of a difference.”

The boy bent down, picked up another starfish, and threw it into the water as far as he could. Then, he turned to the man, smiled, and said, “It made a difference to that one!”

When first learning about psychological disorders in children, it is easy to be pessimistic, like the old man in the story. Approximately 20% of all children and adolescents experience at least one mental health problem prior to adulthood. This percentage means that nearly 15,000,000 youths in the United States alone will encounter problems with their behavioral, cognitive, or social–emotional functioning. These problems include developmental disabilities like Down syndrome or autism spectrum disorder (ASD), externalizing disorders like attention-deficit/hyperactivity disorder (ADHD), internalizing disorders like anxiety and depression, and health-related problems like eating disorders and insomnia. Problems like these are serious; they can affect important aspects of children’s development and long-term outcomes, their ability to learn and perform well in school, their relationships with family and friends, and their overall happiness and well-being (Office of Juvenile Justice and Delinquency Prevention, 2016; Perou et al., 2016).
Equally worrisome is the fact that most children and adolescents who require treatment for these disorders receive substandard care or no care whatsoever. Barriers to effective treatment include poor recognition of children's psychological problems; limited access to high-quality mental health services, especially among children from socioeconomically disadvantaged families; and an overall shortage of mental health professionals who are trained in evidence-based interventions (Garland et al., 2013; Olson, Druss, & Marcus, 2015).

On the other hand, there is good reason to be optimistic, like the young boy who rescued the starfish. There are many new opportunities for students who are interested in helping children and families in need. The past 20 years have witnessed a remarkable increase in the scientific study of child psychopathology. New theories and empirical studies have advanced the field, enabling researchers to more fully understand the causes of these conditions. Research depends on teams of professionals, working together, to piece together the causes of these disorders across multiple levels of analysis: genetic, biological, psychological, familial, and social–cultural (Cicchetti, 2016a, 2016b). No matter what your interest, there is work that needs to be done!

Similarly, we have made great strides developing evidence-based treatments for children with these disorders (Hamilton, Daleiden, & Youngstrom, 2015). These treatments include new medications, psychotherapies, and prevention strategies that can be delivered in a wide range of contexts: clinics, hospitals, schools, and the community. Furthermore, there is increased effort to tailor these interventions to meet the needs of children and families from diverse cultural, ethnic, linguistic, and socioeconomic backgrounds (Christophersen & Vanscoyoc, 2013; Nathan & Gorman, 2015).

There is, perhaps, no more exciting time to be studying abnormal child psychology than now. Even if you do not intend on becoming a mental health professional, it is likely that you will play a significant role in the life of a child or adolescent (if you haven’t already). Not all of us are called to be researchers or therapists, but nearly everyone has the opportunity to promote the welfare of children in some capacity: as a caregiver, parent, teacher, coach, or mentor. This book is intended to introduce you to this intellectually exciting and personally rewarding discipline. Welcome!

1.1 THE PREVALENCE OF CHILDHOOD DISORDERS

How Common Are Mental Disorders in Children?

Overall Prevalence

Epidemiologists are scientists who study the prevalence of medical and psychological disorders in the general population (Maughan & Rutter, 2010). Prevalence refers to the percentage of individuals in a given population who have a medical or psychological condition. To estimate prevalence, epidemiologists collect data from thousands of individuals in the population, recording their current physical or psychological health. To estimate the prevalence of psychological disorders among children and adolescents, epidemiologists usually rely on information gathered from parents, other caregivers, or professionals, such as psychologists, physicians, or teachers. Sometimes, epidemiologists also collect data from children and adolescents themselves, especially when questions deal with feelings (e.g., depression) or behaviors that might be hidden from parents (e.g., alcohol and other drug use). Epidemiologists can use this information to determine point prevalence, the percentage of youths with a disorder at a given point in time, and lifetime prevalence, the percentage of youths with a disorder at any point in their lifetime.

Sometimes, epidemiologists want to determine the likelihood that someone will develop a disorder in a given period of time. Incidence refers to the percentage of new cases of a disorder in a discrete period of time—usually 1 year. Because incidence only refers to new cases of a disorder, it is typically a much smaller number than prevalence. For example, the lifetime prevalence of ASD is approximately 1.8%; that is, roughly 1.8% of youths in the United States have been diagnosed with autism. However, the incidence of autism is approximately 0.3%; that is, in any given year, approximately 0.3% of children will be diagnosed with autism for the first time (Centers for Disease Control and Prevention, 2016c).

Determining the prevalence of children’s mental health problems is challenging for several reasons (Costello & Angold, 2016). First, there is no single agency that tracks the prevalence of mental disorders in children and adolescents. Instead, prevalence must be estimated using data from dozens of individual studies, conducted by different research teams.
Second, epidemiological studies use different methods to collect data, yielding slightly different results. For example, the National Health Interview Survey (NHIS) estimates the prevalence of childhood disorders by interviewing 12,000 parents in their homes each year. In contrast, the National Youth Risk Behavior Survey estimates behavior and substance use problems in adolescents by administering questionnaires to 16,000 high school students annually. These different research methods (e.g., interviewing parents vs. administering questionnaires to teens) can yield different findings. For example, parents are generally better able to comment on children's disruptive behavior but are less accurate in estimating children's difficulties with depression or use of alcohol. In contrast, adolescents may be more accurate reporters of their own mood and substance use, but may underestimate behavior problems (Kamphaus, Reynolds, & Dever, 2014; Stiffler & Dever, 2015).

Third, there are practical problems with epidemiological research. Many people do not want to participate in lengthy surveys, others do not understand questions asked of them, and still others provide inaccurate information. Conducting large-scale interviews or surveys is also costly and time consuming.

Despite these methodological obstacles, researchers have conducted several large epidemiological studies designed to estimate the prevalence of childhood disorders. Collectively, these studies include data from tens of thousands of children and their caregivers, using a variety of research strategies. Altogether, these data suggest that 13% to 15% of youths experience a psychological disorder in any given year. Slightly more than 20% of youths experience a disorder at some point before adulthood (Perou et al., 2016).

Recent data indicate that the overall prevalence of children's mental health problems is on the rise. For example, in the past decade, there has been a 24% increase in the number of children receiving mental health or substance abuse treatment in the United States (Health Care Cost Institute, 2012). The number of youths prescribed medication to treat psychological disorders, such as ADHD, has also increased approximately 28% during that same time (Visser, Danielson, & Bitsko, 2014). Finally, the rate of hospital admissions for children with psychological disorders, such as depression, has increased 80% in the past 20 years (Pluhner, Wier, & Stocks, 2013).

Table 1.1 shows the prevalence of specific mental disorders among children and adolescents in the United States. As you might suspect, ADHD is the most common condition; approximately 8.9% of youths will be diagnosed with this disorder at some point before adulthood. Anxiety disorders, such as separation anxiety or social phobia, are also relatively common. Certain conditions, such as autism, are more common than previously thought; as many as 1 in 68 children will develop this serious condition (Autism and Developmental Disabilities Monitoring [ADDM] Network, 2016). Other problems, such as eating disorders and tics (i.e., repeated, involuntary vocalizations or movements), are relatively rare in children.

Children's disorders tend to occur together. Comorbidity refers to the presentation of two or more disorders in the same person at the same time. On average, approximately 40% of children and adolescents with one mental disorder have at least one other psychiatric condition (Merikangas & He, 2014). Certain disorders show high comorbidity in children and adolescents. For example, as many as 75% of youths with depression also experience an anxiety disorder that interferes with their daily functioning (Cummings, Caporino, & Kendall, 2014). Similarly, approximately 50% of young children with ADHD also exhibit conduct problems, such as oppositional defiant behavior toward parents or other adults (Pliszka, 2015). For disorders like depression and ADHD, comorbidity is the rule rather than the exception in children.

Psychological disorders have direct, deleterious consequences on the lives of children and their families. The total cost of child and adolescent mental health care in the United States is approximately $247 billion annually (Centers for Disease Control and Prevention, 2016b). Children with mental health problems need evidence-based interventions, such as counseling and/or medication, to help them manage their symptoms and improve their functioning. Children's mental health problems can also compromise their caregivers' well-being, leading to reduced productivity at work and increased tension at home. The cost to communities is also enormous. Societal costs include incarceration and rehabilitation for youths

| Table 1.1 Prevalence of Mental Disorders in Children (Ages 3–15) |
|----------------|----------------|----------------|
| Diagnosis          | Past 12 Months | Lifetime  |
| Children (3–15 years) |                |            |
| **Any Disorder**   | **13.1%**      | **20.1%**  |
| ADHD               | 8.1%           | 8.9%       |
| Anxiety Disorders  | 4.0%           | 4.7%       |
| Depression         | 3.0%           | 3.9%       |
| Conduct Problems   | 2.1%           | 3.9%       |
| Autism Spectrum Disorder | 1.1%       | 1.8%       |
| Eating Disorders   | 0.2%           | 0.7%       |
| Bipolar Disorders  | 0.2%           | 0.3%       |
| Tics/Tourette Disorder | 0.2%       | 0.3%       |
| Schizophrenia      | <0.1%          | 0.1%       |

This table shows the median percentage of youths with each disorder from the following US data sets: ADDM Network, National Comorbidity Survey Replication–Adolescent Supplement, NHIS, National Health and Nutrition Examination Survey, National Survey of Children's Health, National Survey on Drug Use and Health, National Youth Risk Behavior Survey (2013–2016).
with conduct problems, drug and alcohol counseling for youths with substance abuse and dependence, and family supervision and reunification services for youths who experience maltreatment. School districts must pay for special education services for children with cognitive, learning, and behavior problems that interfere with their ability to benefit from traditional public education. Preventing childhood disorders would spare families suffering and save communities money. Unfortunately, prevention remains an underutilized approach to dealing with child and adolescent psychopathology in the United States (Ghaemi, Khakshour, Abasi, & Hajikhani Golchin, 2015).

Use of Medication

One of the greatest changes in the field of abnormal child psychology in the past two decades has been the increased use of medication to treat childhood disorders. Psychotropic medications are prescription drugs used to treat psychological problems. Today, approximately 7.5% of all school-age children and adolescents are taking at least one psychotropic medication (Howie, Pastor, & Lukacs, 2014; Jonas, Gu, & Albertorio-Diaz, 2013).

The use of psychotropic medication varies as a function of children's age (Figure 1.1). Medication is more frequently prescribed to adolescents than to prepubescent children. The greater use of psychotropic medication among adolescents likely reflects the greater overall prevalence of mental health problems in adolescents compared to younger children. Furthermore, adolescents’ mental health problems tend to be more severe and, consequently, may be more likely to require medication. Although young children are less likely to be prescribed medication, recent research indicates that 1% to 2% of preschoolers are currently taking at least one psychotropic drug (Chirdkiatgumchai et al., 2013; Fontanella, Hiance, Phillips, Bridge, & Campo, 2014).

Medication use also varies by gender. Regardless of age, boys are more likely to receive medication for psychological problems than girls. This gender difference in medication use reflects the fact that boys are approximately 3 times more likely than girls to be diagnosed with ADHD and receive medication for that condition.

The percentage of youths receiving medication to treat psychological problems has more than doubled from 1995 to today. Interestingly, the percentage of children participating in psychotherapy, a nonmedicinal treatment, has remained relatively stable during this same time period (Olfson, Blanco, Wang, Laje, & Correll, 2014; Olfson, He, & Merikangas, 2013).

Two factors seem to be driving this overall rise in the use of psychotropic medication for children. First, clinicians are getting better at recognizing mental disorders in youths. Second, physicians have more medication options for children now than two decades ago (Olfson et al., 2014). Interestingly, not all types of psychotropic medications have showed the same increase in popularity. Medications used to treat ADHD, such as Ritalin and Adderall, showed a dramatic increase in the past two decades. In contrast, medications used to treat anxiety disorders (i.e., anxiolytics) and

![Figure 1.1](image-url)

**Figure 1.1** Medication use by children and adolescents. Approximately 7.5% of youths use psychotropic medication. Boys are more likely to use medication than girls, and adolescents are more likely to use medication than prepubescent children (Howie et al., 2014).
thought disorders like schizophrenia (i.e., antipsychotics) have increased at a slower pace. Only one class of medication for children and adolescents has declined in popularity: antidepressants. In the 1990s, physicians began prescribing antidepressant medications, like Prozac, to youths with depressive symptoms. In 2004, however, the US Food and Drug Administration (FDA) issued a warning to physicians that youths prescribed antidepressants were significantly more likely to experience suicidal thoughts or engage in suicidal behaviors (4%) than youths with depression who took placebo (2%). Because of this warning, antidepressant prescriptions declined. Today, antidepressants are usually reserved for youths who show more serious depressive symptoms and who are not responsive to psychotherapy (Friedman, 2014).

Is medication overprescribed? To answer this question, researchers examined psychological problems and medication use in a large, nationally representative sample of adolescents (Merikangas & He, 2014). In the previous year, approximately 40% of adolescents experienced a mental health problem. However, only 14.2% of adolescents with mental health problems were prescribed medication by their physician. These findings challenge the widespread belief that psychotropic medication is overprescribed to youths. On the contrary, many children and adolescents who might benefit from medication never receive it.

Summary:
- Approximately 13% to 15% of youths experience a psychological disorder in any given year; 20% of youths experience a disorder prior to reaching adulthood. The most common disorders among children are ADHD and anxiety disorders.
- Approximately 40% of youths with one disorder have another (comorbid) disorder.
- Approximately 7.5% of school-age children and adolescents are taking at least one psychotropic medication. Although medication can be overprescribed, most youths with psychological disorders do not receive medication.

What Factors Influence the Prevalence of Childhood Disorders?

Mental health problems are not equally distributed across the population (Cook, Barry, & Busch, 2013; Ringeisen, Casanueva, Urato, & Stambaugh, 2015). The prevalence of mental disorders varies across sociodemographic groups. Four sociodemographic factors are especially important: (1) age, (2) gender, (3) socioeconomic status (SES), and (4) ethnicity.

Age

The prevalence of mental disorders varies with age. On average, adolescents are more likely than children to experience mental health problems (Merikangas & He, 2014). The best data that we have regarding the prevalence of mental health problems in adolescents comes from the results of the National Comorbidity Survey Replication–Adolescent Supplement (Kessler et al., 2012a). The researchers who conducted this study interviewed a nationally representative sample of more than 10,000 adolescents ages 13 to 17. They also administered rating scales to parents to gather additional data on adolescents' functioning. Results showed that 23.4% of adolescents reported a mental disorder in the past month and 40.3% reported a mental disorder in the previous year. Although most of the disorders experienced by adolescents were mild to moderate in severity, the overall prevalence of disorders was much higher than in previous studies involving children (Kessler et al., 2012b).

The study also allows us to compare the prevalence of specific disorders across childhood and adolescence (see Figure 1.2). Certain disorders are more common among younger children: autism, separation anxiety, and ADHD. However, the prevalence of most disorders increases with age. For example, adolescents are much more likely to experience problems with social phobia, depression, bipolar disorders, and eating disorders than prepubescent children. Problems with alcohol and other drug use also typically emerge in adolescence and are relatively rare among prepubescent children.

Gender

The prevalence of psychological disorders also varies across gender. In early childhood, many disorders are more typically seen in boys. For example, boys are 4 times more likely than girls to be diagnosed with ASD and 3 times more likely than girls to be diagnosed with ADHD. Boys are also more likely than girls to show disruptive behavior problems, such as oppositional defiant disorder (ODD). The prevalence of other disorders is approximately equal in young boys and girls (Perou et al., 2016).

By adolescence, however, girls are more likely than boys to experience mental health problems (Kessler et al., 2012a). Adolescent boys continue to be at greater risk than adolescent girls for developing behavior problems. Similarly, adolescent boys are slightly more likely than adolescent girls to develop problems with alcohol and other drugs. However, adolescent girls are 2 to 3 times more likely than adolescent boys to experience problems with depression or anxiety. Furthermore, adolescent girls are 5 to 10 times more likely than adolescent boys to be diagnosed with an eating disorder.

Psychologists have struggled to explain why girls show a dramatic increase in mental health problems during adolescence. Researchers have suggested many causes ranging from biological changes during puberty to unreasonable social–cultural expectations placed on girls. Recently, however, researchers have identified two particularly important factors: stressful life events and the way girls think about those events.
In one study, researchers followed a large sample of adolescents from late childhood through middle adolescence (Hamilton, Stange, Abramson, & Alloy, 2015). Most adolescents reported increased stress during this time period; however, girls were particularly sensitive to "interpersonally dependent stressors"—that is, stressful events that involved important people or relationships in their lives. For example, girls were especially likely to report difficulties with parents, peers, or romantic partners. Perhaps more importantly, the way girls thought about these interpersonally dependent stressors affected their mood. For example, adolescents who believed they were responsible for these interpersonal problems (e.g., "It's my fault my mom is angry with me") were more likely to experience depression than adolescents who did not blame themselves (e.g., "My mom is just grouchy after working all day"). Similarly, adolescents who tended to ruminate, or dwell upon and overthink these events (e.g., "I wonder why my friends are mad at me? Was it something I said?"), were also more likely to experience problems with depression. These findings suggest that girls’ thoughts about interpersonal events can greatly determine their well-being. In fact, cognitive therapists help adolescents change their ways of thinking to alleviate these negative moods (Image 1.2).

**Socioeconomic Status**

Socioeconomic status (SES) is one of the best predictors of children’s mental health. SES is a composite variable that reflects three aspects of a child’s environment: (1) parents’ levels of education, (2) parents’ employment, and (3) family income. As you might expect, these three variables are correlated; parents with more education tend to work more complex, higher-paying jobs. Overall, children from lower-SES families are at greater risk for developing mental disorders than children from middle- or high-SES families (Kessler et al., 2012a).

There are at least two explanations for the association between SES and risk for psychological disorders. First, higher-SES parents may be less likely to experience psychological problems themselves. They pass on genes conducive to better mental health to their children. Second, higher-SES parents may be better able to provide environments for their children that protect them from psychological problems. For example, parents with higher incomes may be better able to afford higher-quality health care, nutrition, or schooling for their children. These early experiences, in turn, can protect their children from the emergence of mental health problems.

A related predictor of children’s mental health is family composition. Recent research indicates that youths living with only one biological parent are twice as likely to develop an anxiety or mood disorder as youths living with both biological parents. Furthermore, adolescents living in single-parent homes may be 6 times more likely to develop...
a behavior or substance use disorder as youths living in a two-parent household (Kessler et al., 2012a). The association between single-parent families and increased mental health problems is partially explained by SES; single parents often earn lower family incomes than two-parent families. However, single parents also report greater stress and may have more difficulty monitoring their children's behavior than two-parent families. These factors, in turn, can contribute to their children's behavior problems (Frick, 2013).

**Ethnicity**

The relationship between ethnicity and childhood disorders is complex. Certain disorders are more commonly diagnosed in non-Latino, White families. For example, the prevalence of ASD is approximately twice as high among non-Latino, White children (1.1%) compared to Latino (0.5%) or African American (0.4%) youths. Similarly, ADHD is more frequently diagnosed in non-Latino, White youths (9.1%) than in African American (8.0%) or Latino (4.1%) children. Anxiety disorders are also slightly more common among White youths compared to their non-White classmates (Perou et al., 2016).

On the other hand, African American youths are more likely to develop conduct problems than White youths. Specifically, approximately 8.1% of African American youths will develop oppositional defiant behavior or conduct problems at some point in childhood, compared to 4.2% of White and 3.9% of Latino youths (Perou et al., 2016).

What explains these differences? One possibility is that differences in SES partially explain these differences in mental disorders across ethnicities. Sadly, members of many minority groups disproportionately come from lower-SES families (Taylor & Wang, 2013). Consequently, minority families often face many of the same risks confronted by low-SES families: reduced access to high-quality health care and nutrition, less optimal child care, impoverished educational experiences, and higher family stress. Immigrant families also face special risks, such as stress associated with language differences and acculturation (Coll & Magnuson, 2014). These risk factors might explain the higher prevalence of conduct problems among African American youths. Indeed, when researchers control for SES, there are often few differences in the percentage of children diagnosed with mental disorders across ethnic groups (Hayden & Mash, 2014).

Another possibility is that children's racial or ethnic background might partially determine the likelihood that their disorders are identified and treated. For example, African American and Latino children tend to be diagnosed with ASD much later than non-Latino, White children (Ratto, Reznick, & Turner-Brown, 2015). Research indicates that minority parents are often less able to recognize the early signs of autism; consequently, their
children's disorder may remain unrecognized (Magaña, Lopez, Aguina, & Morton, 2013). Similarly, recent research has found that many Latino parents regard the hyperactive–impulsive symptoms of ADHD to be developmentally normative. Consequently, they may be less likely to view their children's symptoms as problematic and less likely seek treatment (Gerdes, Lawton, Haack, & Hurtado, 2014).

A third possibility is that these differences reflect divergent parenting practices and cultural values across racial and ethnic groups. For example, African American adolescents are much less likely to develop alcohol and other drug use problems that non-Latino, White adolescents (Kessler et al., 2012a). Some experts have argued that African American culture, which tends to discourage heavy alcohol use, protects many of these youths from substance use disorders (Zapolski, Pedersen, McCarthy, & Smith, 2014). Furthermore, the more African American adolescents endorsed these cultural beliefs, the more likely they were to avoid substance use problems (Stock et al., 2013).

Summary:

- Adolescents are more likely than children to experience psychological disorders.
- Boys are more likely to be diagnosed with psychological disorders in early childhood, especially ASD and ADHD. Girls are more likely to be diagnosed in adolescence, especially anxiety and depression.
- Children from low-SES families are at greater risk for psychological disorders than children from higher-SES families.
- The prevalence of certain disorders, such as ADHD and ASD, is higher among non-Latino, White children than children of other ethnicities. The prevalence of other disorders, especially disruptive disorders, is higher among certain minority youths.

Do Most Youths With Mental Disorders Receive Treatment?

Access to Treatment

Although 20% of children and adolescents will develop a mental disorder at some point prior to adulthood, only about one-half of these youths receive treatment. The most recent, epidemiological studies indicate that approximately 51% of children and 45% of adolescents with mental disorders receive any form of treatment (Centers for Disease Control and Prevention, 2016b; Costello, He, Sampson, Kessler, & Merikangas, 2014). The likelihood that a youth will receive treatment depends on his or her disorder. For example, youths with ADHD are most likely to receive treatment, usually in the form of stimulant medication (e.g., Adderall, Ritalin). In contrast, youths with anxiety disorders are least likely to receive medication or therapy.

Children and adolescents with mental health problems are most likely to receive treatment at school (24%), a specialized mental health clinic (23%), or a medical facility (10%). Some children receive services through other social service agencies (8%), clinics that offer complementary or alternative medicine (5%), or the juvenile justice system (5%). As we might expect, youths with ADHD and learning disabilities are most likely to receive treatment at school, whereas youths with certain high-risk conditions such as eating disorders and substance use problems are more likely to visit specialized mental health facilities. Children and adolescents with anxiety and mood disorders are most likely to be treated by their pediatricians.

Not all children have equal access to high-quality mental health care. Parents of higher SES are most likely to obtain specialty mental health care for their children. In contrast, youths from lower-SES backgrounds disproportionately receive treatment through public schools, human-service agencies, and the juvenile justice system. Furthermore, African American youths are less likely than non-Latino, White youths to receive treatment (Costello et al., 2014).

Altogether, these data indicate that only 50% of youths with mental health problems receive the treatment they need. Furthermore, when children are able to access treatment, it is often not delivered by mental health specialists. Instead, many youths receive care from paraprofessionals such as school personnel, juvenile justice officers, nurses, and pediatricians. We desperately need students to devote their careers to providing specialized mental health services to children and adolescents, either by delivering evidence-based treatment themselves, or by removing sociocultural barriers to families' access to high-quality treatment.

Barriers to Treatment

Researchers and policy experts have identified several barriers to families' access to high-quality mental health interventions (Garland et al., 2013; Santiago, Kaltman, & Miranda, 2013). First, financial hardship often interferes with children's access to comprehensive treatment. In the United States, mental health treatment and medical treatment do not receive equal coverage from insurance companies, despite evidence that mental health problems cost families and society considerable financial expense. Families may find themselves unable to pay for high-quality treatment. Families who lack adequate insurance face the additional challenge of obtaining treatment from a public social service system that is often overburdened and underfunded.

Second, even if families can pay for high-quality mental health services, they may be unable to find these services. As we will see, evidence-based high-quality mental health treatments are not available in most communities. For example, Multisystemic Therapy (MST) is an evidence-based treatment for older adolescents with serious conduct problems. Many well-designed studies have shown MST to reduce adolescents' disruptive behavior problems, improve their social and academic functioning, reduce their likelihood of arrest and incarceration, and
save money (Dopp, Bordinu, Wagner, & Sawyer, 2014; van der Stouwe, Ascher, Stams, Deković, & van der Laan, 2014). However, few clinicians are trained in providing MST, and MST is available in only a small number of communities. Consequently, many clinicians rely on other, less well-supported interventions.

Third, there are simply not enough experts in child and adolescent mental health to satisfy the need for services. Our current mental health system is able to address the needs of only about 10% of all youths with psychological problems. Furthermore, only 63% of counties in the United States have a mental health clinic that provides treatment for children and adolescents (Cummings, Wen, & Druss, 2013). Youths who receive treatment are typically those who show the most serious distress or impairment. Youths with less severe problems, such as moderate depression, mild learning disabilities, or unhealthy eating habits, often remain unrecognized and untreated until their condition worsens. Inadequate mental health services are especially pronounced in disadvantaged communities.

Finally, stigma can interfere with children's access to mental health treatment (O'Driscoll, Heary, Hennessy, & McKeague, 2012). Stigma refers to negative beliefs about individuals with mental disorders that can lead to fear, avoidance, and discrimination by others or shame and low self-worth in oneself (Corrigan, Bink, Schmidt, Jones, & Rüschi, 2016). Many caregivers are reluctant to refer their children for therapy because of the negative connotations associated with diagnosis and treatment. In fact, roughly 25% of all pediatrician visits involve behavioral or emotional problems that could be better addressed by mental health professionals (Horwitz et al., 2002). Parents often seek help from pediatricians and family physicians to avoid the stigma of mental health treatment. Stigma associated with the diagnosis and treatment of childhood disorders causes many at-risk youths to receive less than optimal care (Bowers, Manion, Papadopoulos, & Gauvreau, 2013).

Summary:

- Only about one-half of children with psychological problems receive treatment. Non-Latino, White children and youths from higher-SES families are most likely to receive care.
- Barriers to treatment include (a) financial problems, (b) a lack of evidence-based treatment in the community, (c) an absence of well-trained clinicians, and (d) stigma.

1.2 WHAT IS A “MENTAL DISORDER”? How Do We Identify “Abnormal” Behavior in Children?

There is no consensus on how to define abnormal behavior in children and adolescents, and no agreement on how best to differentiate abnormality from normal functioning. However, mental health practitioners and researchers have proposed several criteria to identify children with behavioral and social–emotional problems (Cicchetti, 2016a; Dulcan, 2015; Hayden & Mash, 2014).

One approach to defining abnormality is based on statistical deviancy. Using this approach, abnormal behaviors are defined by their relative infrequency in the general population. For example, transient thoughts about death are fairly common among adolescents. However, recurrent thoughts about killing oneself are statistically infrequent and could indicate a mood disturbance, such as depression. Advocates of the statistical deviancy approach might administer a rating scale to clients and identify youths who show symptoms well beyond the range of normality, compared to other children and adolescents of the same age and gender (Achenbach, 2015).

The chief limitation of the statistical deviancy approach to defining abnormality is that not all infrequent behaviors are indicative of mental disorders. Imagine a child who is tearful, prefers to stay in her room, does not want to play with friends, and is having problems completing schoolwork. From the statistical deviancy perspective, we might diagnose this girl with depression because she shows mood problems that are rare among children her age. However, if we learn that her grandfather died a few days before her assessment, we would likely interpret her behavior as a normal grief reaction, not as an indicator of major depressive disorder (MDD). Although statistical infrequency may be an important component of a definition of abnormality, it is insufficient. Statistical deviancy does not take into account the context of children’s behavior.

Another approach to defining abnormality is based on disability or degree of impairment. From this perspective, abnormal behavior is defined by thoughts, feelings, or actions that interfere with a person's social, academic, or occupational functioning. For example, an adolescent who feels sad because she broke up with her boyfriend would not be diagnosed with depression, as long as she is able to maintain relationships with friends, get along with parents, and perform adequately in school. However, her behavior might be considered abnormal if her functioning deteriorates in any of these areas.

Defining abnormality by level of impairment has a serious drawback: Many people with mental disorders do not show overt impairment in functioning. For example, 15-year-old Dorothy Dutiel shot and killed herself and a classmate at her high school in Glendale, Arizona. Dorothy obtained a gun from another classmate who did not know that she was depressed and intended a murder–suicide. After the incident, first responders found a handwritten note in Dorothy’s pocket that read, “I would like to clarify that (the student) and his family are in no way affiliated with my actions. (The student) was under the absolute impression I needed the gun for self-defense.
I lied to receive this gun.” Dorothy’s classmate was unaware that she was depressed. Not all mental health problems are accompanied by overt impairment.

Yet another definition of abnormality incorporates a person’s degree of psychological distress. People can show psychological distress through depressed mood, irritability, anxiety, worry, panic, confusion, frustration, anger, or any other feeling of dysphoria. Psychological distress is one of the central features of most anxiety and mood disorders.

One limitation of defining abnormality in terms of psychological distress is that distress is often subjective. Some signs of distress can be observed by others, such as sweaty palms and flushed face. However, distress is usually assessed by asking clients to report their feelings. Subjective assessment of distress in children is especially problematic. Many young children are not aware of their mood states. For example, some youths express anxiety or depression in terms of physical complaints, like headaches or stomachaches, instead of experiencing negative emotions. Other children have trouble differentiating their feelings. For example, young children often confuse negative emotions, such as “fear” and “anger.” Finally, children’s ratings of distress often cannot be compared against an objective criterion. For example, a child who reports feeling “bad” might be experiencing more distress than another child who reports feeling “terrible.”

A second limitation to defining abnormality based on distress is that many youths with serious behavior problems do not experience negative emotions. For example, adolescents with conduct problems often show no signs of anxiety or depression. They may only express remorse when they are caught and punished. Similarly, younger children with oppositional and defiant behavior toward adults rarely express psychological distress. Instead, their disruptive behavior causes distress to their parents and teachers (see Image 1.3).

Abnormal behavior might also be defined by actions that violate society’s standards or rules. Put another way, abnormality may be defined in terms of cultural deviancy. For example, conduct disorder (CD) is characterized by a persistent pattern of behavior that violates the rights of others or the rules of society. Adolescents with CD often have histories of disruptive behavior problems that clearly go against cultural norms and mores: shoplifting, robbery, violence toward others, and truancy.

The chief limitation of defining abnormal behavior exclusively by the degree to which it violates social norms is that these norms can vary considerably from culture to culture. For example, in Western societies, parents often require young children to sleep in their own beds, usually in separate rooms. Children who refuse to sleep in their own beds may be classified as having a sleep disorder. However, in many non-Western societies, requiring young children to sleep alone is considered cruel and detrimental to their social and emotional development.

Some experts define abnormality in terms of behavioral rigidity. From this perspective, abnormal behavior is characterized by the repeated and inflexible display of certain actions, thoughts, or emotions in response to psychosocial stressors. Consider a child who shows fear at the prospect of separating from his mother. Under some circumstances, clinging to parents is adaptive, for example, when the child is in an unfamiliar and potentially dangerous setting, such as a crowded airport. Under other circumstances, however, separation anxiety is clearly maladaptive, such as when a child is unwilling to leave his parents to attend school. Whereas mental health is characterized by flexibility and adaptation to changing circumstances, abnormality may be characterized by the persistent use of the same behavior in all situations, regardless of the context (Millon, 2014).

A final way to differentiate abnormality from normality is based on the notion of harmful dysfunction. According to Jerome Wakefield (1992), a disorder exists when two criteria are met. First, the person must show a
A mental disorder is a syndrome characterized by clinically significant disturbance in an individual’s cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning. Mental disorders are usually associated with significant distress or disability in social, occupational, or other important activities. An expectable or culturally approved response to a common stressor or loss, such as the death of a loved one, is not a mental disorder. Socially deviant behavior (e.g., political, religious, sexual) and conflicts that are primarily between the individual and society are not mental disorders unless the deviance or conflict results from a dysfunction in the individual, as described above. (American Psychiatric Association, 2013, p. 20)

DSM-5 adopts a medical approach to mental disorders in which psychological problems have underlying causes that reside within the individual (Stein, Phillips, et al., 2010). For example, if someone is diagnosed with a medical illness, such as smallpox, we assume that this illness is caused by a virus that has infected the person’s body. Similarly, practitioners who adopt the medical model for mental disorders assume that if a child exhibits behavioral or social–emotional problems, those problems are caused by some underlying dysfunction within the child.

There are two limitations with the DSM-5 medical conceptualization of mental disorders, especially when applied to children. First, some childhood disorders are relational in nature and are best understood in an interpersonal context (Heyman et al., 2009). For example, young children with ODD argue with their parents, refuse to comply with parental requests, and throw tantrums when they do not get their way. Interestingly, their defiant behavior is often directed at some adults (e.g., parents) but not others (e.g., teachers). Therefore, the disorder seems to be dependent on the relationship between people and does not merely reside within the child. Relationships may be especially important to mental disorders in children and adolescents, who are highly dependent on other people for their well-being.

A second limitation of the medical approach to mental disorders is that we often do not know the underlying cause for children’s psychological problems. When smallpox was first described by physicians in the 15th century, it was assigned a diagnostic label based on its symptoms: small blisters (i.e., “pox”) on the skin. We now know that smallpox is caused by a virus, not the blisters themselves. Today, however, we are only beginning to understand the underlying causes of mental disorders. When we say that a child has ADHD, we are describing his symptoms, not their underlying cause. In fact, ADHD probably has multiple underlying causes that have yet to be fully identified (Pliszka, 2016). Therefore, we must avoid attributing a child’s symptoms to his diagnostic label since these labels describe symptoms, not the underlying cause.
not causes. Instead, we must look at the scientific research literature to determine the underlying causes of childhood disorders. For example, we should not say, “My son has problems with attention because of his ADHD” because ADHD is defined by problems with attention. Instead, we might say, “My son has problems with inattention because of underactivity of his prefrontal cortex,” which more accurately reflects the cause of his behavior problems, rather than merely describes his symptoms.

The *DSM-5* definition also claims that all mental disorders have an underlying dysfunction that is typically biological in nature. Indeed, some disorders are associated with specific biological causes. For example, many adolescents who develop schizophrenia experience progressive deterioration of the frontal lobes of their brain shortly before their first symptoms (Giedd et al., 2015). However, requiring an underlying biological cause for childhood disorders is problematic in at least three ways.

1. First, researchers have not yet identified specific biological causes for most childhood disorders (Frances, 2009). For example, autism is a highly heritable condition that leads to serious impairment in social communication and behavior. However, researchers have been unable to identify which genes cause this disorder.

2. Second, when specific abnormalities have been identified in research studies, not all children with the disorder show these abnormalities. For example, some children with autism show reduced synaptic density and abnormalities in their limbic system; however, these differences in brain structure cannot be used to identify children with the disorder. The brains of most children with autism are not different than the brains of typically developing peers.

3. Third, even when children show specific biological abnormalities, we usually cannot conclude that these abnormalities cause the disorder. For example, some children with autism show underactivity in a brain region responsible for processing human faces. However, we do not know if underactivity in this brain region causes autism or whether their autistic symptoms lead to deterioration in this brain region. Alternatively, a third variable, such as exposure to environmental toxins during pregnancy, may cause abnormalities in both brain and behavior (see Figure 1.3).

It is worth noting that *DSM-5* describes people with mental disorders as “usually” experiencing significant distress or disability (i.e., impairment)—they may not always show both characteristics. As we have seen, some seriously depressed adolescents experience tremendous emotional pain, but they do not show marked impairment in their social or academic functioning. Other youths who show serious conduct problems have been arrested and have dropped out of school, but they report no problems with anxiety, depression, or low self-esteem.

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**Figure 1.3** Correlation does not imply causality.

<table>
<thead>
<tr>
<th>A</th>
<th>Brain Abnormalities</th>
<th>Autistic Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Brain Abnormalities</td>
<td>Brain Abnormalities</td>
</tr>
<tr>
<td></td>
<td>Autistic Symptoms</td>
<td>Autistic Symptoms</td>
</tr>
<tr>
<td>C</td>
<td>Other Risk Factors</td>
<td>Autistic Symptoms</td>
</tr>
</tbody>
</table>

*Source:* Based on Baron-Cohen (2005) and Lawrence, Lott, and Haier (2005).

*Note:* Although there is a correlation between brain structure and autistic symptoms, we do not know if (a) brain abnormalities cause autistic behaviors, (b) autistic behaviors lead to abnormal brain development, or (c) other risk factors, like exposure to toxins, cause both brain abnormalities and autism.
Although most youths with mental health problems experience distress and impairment, both features are usually not required for a DSM-5 diagnosis.

**Summary:**
- The DSM-5 definition of mental disorder reflects Wakefield’s notion of a “harmful dysfunction.” According to DSM-5, a disorder reflects a biological, developmental, or psychological dysfunction that causes distress or disability in the individual.
- DSM-5 adopts a medical approach to disorders. Limitations of this approach include (1) we cannot always identify the underlying cause of children’s disorders, and (2) many childhood disorders are best understood in an interpersonal context rather than within an individual.

**How Does Culture Affect the Identification of Childhood Disorders?**

According to DSM-5, clinicians must carefully differentiate symptoms of a mental disorder from behaviors and psychological states that are sanctioned in a given culture. Differentiating abnormal symptoms from culturally sanctioned behavior is especially challenging when clinicians are asked to assess youths from other cultural backgrounds. Consider the case of Julia (below).

Ethnicity and culture can affect the diagnostic process in at least four ways (Alarcon, 2009; Miller & Prosek, 2013). First, members of minority groups living in the United States often have different cultural values that affect their views of children, beliefs about child-rearing, and behaviors they consider problematic. For example, non-Latino, White parents often place great value on fostering children’s social-emotional development and encouraging child autonomy. These parents often provide warm and responsive behavior during parent–child interactions. In contrast, many African American parents place relatively greater value on children’s compliance; consequently, they may adopt less permissive and more authoritarian socialization tactics. Clinicians need to be aware of cultural differences in socialization goals and parents’ ideas about appropriate and inappropriate child behavior.

Second, recent immigrants living in the United States often encounter psychosocial stressors associated with acculturation. Acculturation stressors can include assimilation into the mainstream culture, separation from extended family and friends, language differences, limited educational and employment opportunities, and prejudice. Some immigrants do not share the same legal status as members of the dominant culture. For these reasons, the sheer number of psychosocial stressors encountered by these families is greater than those encountered by families who are members of the dominant culture.

Third, language and cultural differences can cause problems in the assessment and diagnosis of minority youths. The assessment and diagnostic process was designed predominantly for English-speaking individuals living in the United States and other Western societies. The words that describe some psychological symptoms are not easily translated into other languages. Furthermore, many symptoms reported by individuals from other cultures do not readily map onto DSM-5 diagnostic criteria. Psychological tests are almost always developed with

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**CASE STUDY**

**CULTURAL CONTEXT**

**Culture Matters**

Julia was a 16-year-old Asian American girl who was referred to our clinic by her oncologist after she was diagnosed with a rare form of cancer. Julia refused to participate in radiation therapy or take medications for her illness. Her physician suspected that Julia was paranoid because she attempted to attack him when he tried to examine her in his office.

With the help of a translator, Julia’s therapist learned that Julia was a second-generation Hmong immigrant from Southeast Asia who lived with her parents and extended family. Julia and her family had limited contact with individuals outside the Hmong community and refused to participate in Western medicine. Instead, Julia and her parents practiced traditional Eastern folk medicine.

Because Julia’s therapist doubted that folk medicine alone would help her cancer, she suggested that Julia’s community shaman talk with her physician to identify which aspects of medical treatment might be acceptable to Julia and her family. Over time, Julia was able to successfully participate in Western medical treatment by having the shaman attend all of the radiation therapy sessions, bless the medications prescribed by the oncologist, and perform other remedies important to Julia and her family.
English-speaking children and adolescents in mind. For example, children raised in Columbus, Ohio, will likely find the following question on an intelligence test fairly easy: “Who was Christopher Columbus?” However, immigrant children who recently moved to the city might find the question extremely challenging. Psychologists must be aware of differences in language and cultural knowledge when interpreting test results.

Fourth, ethnic minorities are often underrepresented in mental health research. Over the past two decades, researchers have made considerable gains in understanding the causes and treatment for a wide range of child and adolescent disorders. However, researchers know relatively little about how differences in children’s ethnicity and cultural backgrounds might place them at greater risk for certain disorders or affect treatment. Furthermore, researchers have only recently begun to create treatment programs designed specifically for minority youths. For example, narrative therapies have been developed to help Spanish-speaking children and adolescents overcome mood and anxiety problems, using culturally relevant storytelling (Costantino, Malgady, & Cardalda, 2005). Youths listen to, write, and sometimes enact stories in which the main characters model adaptive responses to stressful life experiences in a manner that is consistent with social–cultural attitudes and values. Clearly, more research needs to be done to investigate the interplay between psychopathology and culture.

Summary:

- Children’s ethnicity can affect their likelihood of being identified with a disorder in at least four ways: (1) the cultural values of the child's family may be different from those of the clinician; (2) immigrant families may experience increased stress due to acculturation; (3) language differences can cause communication problems between the clinician and the family; and (4) minority children are often underrepresented in mental health research.

### 1.3 AN INTRODUCTION TO DEVELOPMENTAL PSYCHOPATHOLOGY

**What Is Developmental Psychopathology?**

**Development Over Time**

Developmental psychopathology is a broad approach to studying adaptive and maladaptive development across the life span. Developmental psychopathologists believe that development is shaped by the complex interaction of biological, psychological, and social–cultural factors over time. An adequate understanding of development depends on the appreciation of each of these domains, how they interact, and how they affect the person from infancy through adulthood (Achenbach, 2015; Rutter & Sroufe, 2000).

Developmental psychopathologists study human development across several levels of analysis. These levels include the person’s (1) genetics, (2) brain structure and functioning, (3) psychological development (i.e., actions, thoughts, and emotions), (4) family interactions and peer relationships, and (5) the broader social–cultural context in which the person lives. Each of these levels can be used to describe and explain the emergence of children’s disorders. More importantly, however, factors on each of these levels interact with each other, over time, to shape children’s developmental outcomes (Cicchetti, 2016a, 2016b). Developmental psychopathologists call this process of unfolding probabilistic epigenesis.

To understand epigenesis, consider Nina, a child with Down syndrome (see Figure 1.4). As you probably know, this genetic disorder places Nina at increased risk for low cognitive functioning. Nina’s disorder was caused by a genetic mutation on chromosome 21, probably acquired through an abnormality in her mother’s egg cell (Level 1: genetics). This genetic mutation caused Nina’s brain and central nervous system to develop in an abnormal fashion. Specifically, she showed abnormalities in her hippocampus, a brain region important for memory and learning (Level 2: biology). These abnormalities, in turn, shaped her psychological functioning during early childhood. Nina’s parents reported delays in her motor development (e.g., sitting up, walking), use of language, and acquisition of daily living skills (e.g., toilet training, dressing). In school, she showed problems learning to read, write, and count (Level 3: psychology). These psychological characteristics affected the type of care she received from parents and teachers. Nina’s mother was understandably very protective, and her teachers often offered Nina extra attention in school. Nina’s cognitive functioning also affected her relationships with peers. Nina preferred to play with younger children rather than her classmates (Level 4: parents and peers). By the time Nina reached junior high school, she was well behind her peers academically. However, Nina was able to spend half the school day in a regular sixth-grade classroom, assisted by an aide. She spent the remainder of the day in a special education class. These extra services offered by her school district enabled Nina to begin a part-time job during high school (Level 5: social–cultural factors).

Nina’s story illustrates the unfolding of development over time. Each level of development affects the one beyond it. Epigenesis is also a bidirectional process. Genetic and biological factors certainly affect psychological and social functioning; however, psychological and social factors can also determine the effects of genes and biology on development. Many experts use the term transactional to refer to the way factors across levels affect each other over time (Kerig, 2016; Sameroff, 2000).
To understand the transactional nature of development, consider Anthony, another child with Down syndrome. Anthony’s mother, Anita, was heartbroken when her obstetrician told her that Anthony had Down syndrome (see Image 1.4). Rather than despair, Anita decided that she was going to maximize her son’s cognitive, social, and behavioral potential by giving him the most enriching early environment that she could provide. Anita spent countless hours talking to Anthony, reading books, listening to music, playing games, and going on outings. Anita also learned to capitalize on Anthony’s strengths. For example, she noted that Anthony acquired skills best through hands-on learning rather than verbal instruction. Although Anthony acquired language and daily living skills slowly, Anita had high expectations for him. She remained patient and tried to provide structure and help so that Anthony might learn these skills independently. Anita enrolled Anthony in a special needs preschool and was heavily involved throughout his education. Anthony developed fairly good language and daily living skills and was able to graduate with his high school class. Today, Anthony is employed full-time in the mailroom of a large company, lives independently, and has several friends and hobbies.

Understanding and predicting child development is extremely difficult for two reasons. First, development is influenced by many factors across multiple levels: genes, biology, psychology, family, and society. Second, these factors are constantly changing over time, each interacting with the others. Consequently, the unfolding of development is not predetermined by one’s genes, biology, or any other factor. Instead, the unfolding of development is probabilistic; a person’s developmental outcome can vary depending on the interplay of many biological and environmental factors. Developmental psychopathologists use the term probabilistic epigenesis to refer to the complex transaction of biogenetic, psychological, familial, and social–cultural factors that shape development over time (Gottlieb & Willoughby, 2006; Rutter & Sroufe, 2000).

**Adaptive vs. Maladaptive Development**

From the perspective of developmental psychopathology, normal and abnormal behavior is determined by the degree to which it promotes children’s competence. Behaviors that allow children to develop social, emotional, and behavioral competence over time and meet the changing demands of the environment are regarded as adaptive. Examples of adaptive behavior include toddlers learning to understand other people’s emotional states, school-age children learning to think before acting, and adolescents using moral reasoning to solve interpersonal problems. These behaviors are adaptive because they allow children to understand and interact with their environment in effective and flexible ways (Sroufe, 1997).

Behaviors that interfere with children’s social, emotional, and behavioral competence or do not meet the changing demands of the environment are regarded as maladaptive behaviors. Examples of maladaptive behaviors...
include toddlers who do not understand others’ emotional expressions and withdraw from social interactions, school-age children who impulsively hit others when they are angry, and adolescents who fail to show respect to peers. These behaviors are considered maladaptive because they indicate a failure to develop social competencies and they interfere with children’s social–emotional well-being (Sroufe, 1997).

Normal behavior is determined by the degree to which children’s actions are adaptive, given their age and level of development. Consequently, normality and abnormality are dependent on children’s developmental context. Consider a 2-year-old child who stubbornly refuses to dress in the morning and tantrums when told that he cannot have cookies for breakfast. Although these oppositional behaviors cause parents grief, they are usually not considered abnormal in 2-year-olds. In fact, defiance and stubbornness can reflect toddlers’ developmentally appropriate bids for autonomy. However, the same behaviors shown by a 6-year-old child would likely be considered maladaptive and abnormal. In the context of his age and level of development, these behaviors likely reflect problems balancing needs for autonomy with respect for parental authority (Burt, Coatsworth, & Masten, 2016).

Normal and abnormal behaviors are also determined by the degree to which they are adaptive given the child’s surroundings. Consequently, normality and abnormality are dependent on children’s environmental context. Consider Xavier, a 13-year-old boy who has a history of running away from home, staying out all night, skipping school, and earning low grades. Clearly, Xavier’s behavior is problematic. However, if we discover that Xavier is also experiencing physical abuse at home, we might see how his problematic behavior reflects an attempt to cope with this psychosocial stressor. Specifically, Xavier stays out at night and runs away from home to escape physical maltreatment. Furthermore, he likely has difficulty completing assignments and attending school because of his stressful home environment. Although Xavier’s behavior deserves the attention of caring professionals, his actions are best understood in terms of his environmental context.

Developmental psychopathologists view abnormal development as a deviation from normality. Our ability to recognize, understand, and treat childhood disorders depends on our knowledge of normal child development. Consider George, a 14-year-old boy who begins drinking with friends at parties. Approximately once every month for the past 6 months, George has drunk at least five or more alcoholic beverages while partying with friends. He drinks in order to “have fun” and has never gotten into trouble or put himself in dangerous situations while intoxicated. Consider also a 14-year-old girl, Maria, who is dieting to lose weight. Although Maria’s weight is average...
for a girl her age and height, she is very dissatisfied with her body and feels like she needs to lose at least 15 lbs. Whether we regard George and Maria’s actions as abnormal depends partially on whether their behaviors are atypical of adolescents their age or inconsistent with the environmental demands they face. Knowledge of normal development can assist us in identifying and treating children’s problems.

Developmental psychopathologists also believe that abnormal behavior can shed light on normal child and adolescent development. Youths who clearly show delays in mastering developmental tasks or failures in meeting environmental demands can teach us how development typically proceeds. For example, children with autism show unusual deficits in perceiving and interpreting other people’s social behavior. By studying these deficits, researchers are beginning to understand how the ability to process social information develops in typically developing infants and children (Burt et al., 2016; Masten & Cicchetti, 2016).

Summary:

- Developmental psychopathologists believe that development is shaped by multiple factors (e.g., biological, psychological, social), it is probabilistic rather than predetermined, and it is transactional (i.e., the result of factors influencing each other over time).
- Developmental psychopathologists view behavior as either adaptive or maladaptive. Thoughts, feelings, and actions that promote children’s competence, and help them meet important developmental tasks, are adaptive.
- Adaptive and maladaptive behaviors can be understood only in the child’s developmental and environmental context. A behavior that was adaptive in one situation, or in the past, may be maladaptive in another situation or at another time.

Are Childhood Disorders Stable Over Time?

Developmental Pathways

Developmental psychopathologists liken child development to a journey along a path. Indeed, they often refer to children as following certain developmental pathways, or trajectories, toward either healthy or unhealthy outcomes (Pickles & Hill, 2006). Consider Carter, a boy heading down a problematic developmental pathway (see below).

CASE STUDY

A Pathway to Trouble

Carter was a 13-year-old boy who was referred to the psychologist at his school because of fighting. Although Carter’s most immediate problem was getting into fights with other boys at lunch and after school, the psychologist knew that Carter’s problems began much earlier. As a preschooler, Carter was physically abused by his mother’s live-in boyfriend. Like many children who experience maltreatment, Carter developed problems trusting adults—especially men. He was reluctant to develop close emotional ties with others or to rely on others when he was sad, scared, or in need of comfort and reassurance. Instead, Carter became distrustful of others and often expected others to be angry or hurtful toward him. These early experiences placed him on a developmental path strewn with many obstacles toward a healthy view of himself and others.

Carter’s early experience of maltreatment also taught him that physical aggression can be an effective, short-term strategy for expressing anger and solving interpersonal problems. Instead of learning to avoid arguments or to regulate his emotions, Carter tended to solve disputes by yelling, pushing, or punching. These aggressive actions interfered with his ability to develop more adaptive, prosocial problem-solving strategies and led him further along a path to long-term problems.

Now in middle school, Carter has few friends and is actively disliked by most of his peers. Because of his social rejection, Carter spends time with other peer-rejected youths who introduce him to more serious, disruptive behavior: truancy, vandalism, and alcohol use. Carter is following a path blazed by many youths who show conduct problems and antisocial behavior in adolescence.

Luckily, it is not too late for Carter. His school psychologist might help him find ways to reconnect with prosocial peers. Maybe Carter can join a sports team or after-school club? The psychologist might also be able to teach Carter new strategies to regulate his emotions and solve social problems so that he does not have to rely on fighting. Most importantly, perhaps the psychologist’s actions and empathy can convince Carter to trust other adults. Interventions like these can help Carter find a new path to adulthood that is characterized by behavioral, social, and emotional competence.
As children grow, they face certain developmental tasks or challenges along their paths (see Table 1.2). These tasks depend largely on the age and developmental level of the child. Erik Erikson (1963) outlined some of the most important social and emotional tasks facing individuals as they progress from infancy through old age. For example, the primary developmental task facing infants is to establish a sense of trust in a loving and responsive caregiver. Infants must expect their caregivers to be sensitive and responsive to their physical, social, and emotional needs and to see themselves as worthy of receiving this care and attention from others. A primary developmental task of adolescence is to establish a sense of identity. Adolescents must develop a coherent sense of self that links childhood experiences with goals for adulthood. Adolescents usually accomplish this task by trying out different social roles during the teenage years.

Developmental tasks present forks in life’s path. The child can either successfully master the developmental task or have problems with its successful resolution. Mastery of developmental tasks leads to social, emotional, and behavioral competence, placing children on course for optimal development. For example, infants who establish a sense of basic trust in caregivers may have greater ability to make and keep friends in later childhood (Image 1.5). Unsuccessful resolution of developmental tasks, however, can lead to problems in later development. For example, failure to establish a sense of trust in caregivers during infancy

<table>
<thead>
<tr>
<th>Table 1.2 Developmental Tasks in Childhood and Adolescence</th>
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</thead>
<tbody>
<tr>
<td><strong>Infants, Toddlers, and Preschool-Aged Children</strong></td>
</tr>
<tr>
<td>• Attachment (basic trust) to one or more specific caregivers</td>
</tr>
<tr>
<td>• Learning to sit, stand, walk, and jump</td>
</tr>
<tr>
<td>• Acquiring functional language</td>
</tr>
<tr>
<td>• Obedience to simple commands and instructions of adults</td>
</tr>
<tr>
<td>• Toilet training</td>
</tr>
<tr>
<td>• Appropriate play with toys and other people</td>
</tr>
<tr>
<td>• Achieving a sense of autonomy from parents</td>
</tr>
<tr>
<td><strong>School-Aged Children</strong></td>
</tr>
<tr>
<td>• Learning reading, writing, mathematics</td>
</tr>
<tr>
<td>• Attending and behaving appropriately at school</td>
</tr>
<tr>
<td>• Following rules for behavior at home, at school, and in public places</td>
</tr>
<tr>
<td>• Getting along with peers at school</td>
</tr>
<tr>
<td>• Making friends with peers</td>
</tr>
<tr>
<td><strong>Younger Adolescents</strong></td>
</tr>
<tr>
<td>• Attending and behaving appropriately at school</td>
</tr>
<tr>
<td>• Learning to solve advanced problems with numbers, algebra</td>
</tr>
<tr>
<td>• Learning required language, history, and other subjects</td>
</tr>
<tr>
<td>• Completing secondary schooling</td>
</tr>
<tr>
<td>• Getting along with peers in school</td>
</tr>
<tr>
<td>• Making and maintaining close friendships</td>
</tr>
<tr>
<td>• Obeying the laws of society</td>
</tr>
<tr>
<td><strong>Older Adolescents</strong></td>
</tr>
<tr>
<td>• Working or preparing for future higher education</td>
</tr>
<tr>
<td>• If working, behaving appropriately in the workplace</td>
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<tr>
<td>• If in school, meeting academic standards for courses or degrees</td>
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<tr>
<td>• Forming and maintaining romantic relationships</td>
</tr>
<tr>
<td>• Obeying the laws of society</td>
</tr>
<tr>
<td>• Transitioning from parents, living independently</td>
</tr>
</tbody>
</table>

At each stage of life, children are confronted with developmental tasks that they must master. This infant must develop a sense of trust in her primary caregivers. Mastery of early tasks can set the stage for competence later in development.

Context in which the structure is created is also important. Just as temperature, wind, and rain can affect the construction of a building, so, too, can the child’s social–cultural climate affect his development. Certain social and cultural conditions can promote the child’s psychological integrity; high-quality schools, safe neighborhoods, and communities that protect and value children and families. Other social and cultural factors, such as exposure to poverty and crime, can compromise child development.

**Continuity vs. Change**

When children are first diagnosed with a mental disorder, parents often want to know this: How long will it last? Some disorders tend to be developmentally transient; they rarely persist into adolescence or adulthood. For example, most children with elimination disorders (e.g., bed-wetting and soiling), experience problems only during their school-age years. In contrast, other disorders show homotypic continuity—that is, they persist into adolescence or adulthood relatively unchanged. For example, young children with intellectual disability or autism will likely continue to show these disorders as adults (Maughan & Rutter, 2010).

Most childhood disorders, however, show heterotypic continuity—that is, children’s symptoms change over time, but their underlying pattern of behavior remains the same. To understand heterotypic continuity, consider Ben, a 6-year-old boy recently diagnosed with ADHD. Like most young boys with ADHD, Ben’s most salient problem is hyperactivity; he frequently leaves his seat during class, talks with his neighbors, and fidgets with his clothes and belongings. By middle school, however, Ben shows more problems with inattention than hyperactivity. He has difficulty staying focused during class, remembering to complete homework assignments, and ignoring distractions during exams. Finally, as a young adult, Ben continues to experience underlying symptoms of ADHD, but he is most bothered by problems with organization, planning, and prioritizing activities at home and at work. Although Ben’s most salient symptoms have changed, his underlying problems with attention and inhibition have persisted over time (Barkley, 2016).

Another example of heterotypic continuity can be seen in Emma, an extremely shy preschooler. Approximately 15% of infants inherit a temperament that predisposes them to become shy and inhibited when placed in unfamiliar situations (Fox, Snidman, Haas, Degnan, & Kagan, 2015). Emma, who inherited this tendency, developed extreme anxiety when separated from her mother. She would cry, tantrum, and become physically ill when her mother would leave her at preschool. Although Emma’s separation anxiety gradually declined, she began experiencing problems with chronic worrying in middle school. Now, as a young adult, Emma continues to experience problems with both anxiety and depression. Although Emma’s symptoms have changed over time, her pattern of underlying distress has persisted into adulthood.

...
Of course, not all childhood disorders persist into adulthood. Why do some youths show continuity whereas others do not? Developmental psychopathologists are very interested in individual differences in child and adolescent development—that is, they want to discover what causes children's divergent developmental outcomes. Predicting individual differences in development is extremely difficult because, as we have seen, many factors interact over time to affect children's outcomes. The interactions between factors, over time, produce two phenomena: equifinality and multifinality (Hinshaw & Beauchaine, 2015).

Equifinality occurs when children with different developmental histories show similar developmental outcomes. For example, imagine that you are a psychologist who conducts evaluations for a juvenile court. As part of your duties, you assess adolescent boys who have been arrested and convicted of illegal activities, such as theft, assault, and drug use, in order to make recommendations to the court regarding probation and treatment. All of the boys that you assess have similar developmental outcomes—that is, they all show conduct problems. However, after interviewing many of the boys, you discover that their developmental histories are quite different. Some boys have long histories of antisocial behavior, beginning in early childhood. Other boys have no histories of conduct problems until their recent arrest. Still other boys’ conduct problems are limited to times when they were using drugs and alcohol. Your discovery illustrates the principle of equifinality in child development: There are many different paths to the same developmental outcome (see Figure 1.5).

The principle of multifinality refers to the tendency of children with similar early experiences to show different social, emotional, and behavioral outcomes. For example, imagine that you are a clinical social worker who evaluates children who have been physically abused. During the course of your career, you have assessed a number of children who have been sexually abused by their caregivers. You notice, however, that all adolescents who sexually abused younger children were, themselves, sexually abused in the past. In actuality, adolescents engage in sexual abuse for many reasons, not only because they were victimized themselves.

The principle of equifinality makes definitive statements about the causes of psychopathology extremely difficult. Because of equifinality, we usually cannot infer the causes of children's problems based on their current symptoms. For example, many people incorrectly believe that all adolescents who sexually abuse younger children were, themselves, sexually abused in the past. In actuality, adolescents engage in sexual abuse for many reasons, not only because they were victimized themselves.

The principle of multifinality limits the statements we can make about children’s prognoses. For example, many people erroneously believe that if a child has been sexually abused, she is likely to exhibit a host of emotional and behavioral problems later in life, ranging from sexual deviancy and aggression to depression and anxiety. In fact, the developmental outcomes of boys and girls who have been sexually abused vary considerably. Some children show significant maladjustment while others show few long-term effects. Their diversity of outcomes illustrates the difficulty in making predictions regarding development (Hinshaw & Beauchaine, 2015).

Summary:

- Developmental pathways reflect the manner by which children face important developmental tasks over time. Common developmental tasks include establishing a sense of trust (in infancy), developing basic academic competence (in elementary school), and forming close friendships (in adolescence).
- Mastery of early developmental tasks (e.g., trust in infancy) can promote mastery in later developmental tasks (e.g., friendships in adolescence).
- Some disorders, such as autism, show homotypic continuity; they remain relatively stable over time. Most disorders, such as anxiety and mood disorders, show heterotypic continuity; the overt signs and symptoms of the disorder change over time, but the underlying problem remains relatively constant.
- Equifinality occurs when children with different histories show the same outcomes; multifinality occurs when children with the same histories show different outcomes.
What Determines the Course of Children's Development?

What explains equifinality and multifinality? Why is there such great variability in children's developmental pathways? The answer is that child development is multiply determined by the complex interplay of genetic, biological, psychological, familial, and social–cultural factors. Some of these factors promote healthy, adaptive development, whereas other factors increase the likelihood that children will follow less-than-optimal, more maladaptive, developmental trajectories.

Developmental psychopathologists use the term risk factors to describe influences on development that interfere with the acquisition of children's competencies or compromise children's ability to adapt to their environments. Risk factors occur across levels of functioning: They can be genetic, biological, psychological, familial, or social–cultural (Cicchetti, 2016a; Luthar, 2006).

In general, the more risk factors experienced by children, the greater their likelihood of developing a mental disorder. In one study, researchers counted the number of environmental risks experienced by a large sample of adolescents (McLaughlin et al., 2012). Approximately 58% of adolescents experienced at least one risk factor such as parental divorce (28%), parental mental illness (16%), or economic hardship (16%). Regardless of race, ethnicity, or gender, the more risks experienced, the greater the likelihood of a mental disorder. Certain risk factors were especially predictive of mental health problems, such as parental criminal involvement, parental mental health problems, family violence, and child maltreatment.

It is noteworthy, however, that not all youths who experience these risk factors develop mental disorders. Psychologists use the term protective factors to refer to influences on development that buffer the negative effects of risks on children's development and promote adaptive functioning (see Table 1.3).

### Table 1.3 Some Risk and Protective Factors in Childhood and Adolescence

<table>
<thead>
<tr>
<th>Level</th>
<th>Possible Risk Factors</th>
<th>Possible Protective Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genetic</td>
<td>Genetic disorders</td>
<td>Genetic screening to identify potential problems</td>
</tr>
<tr>
<td></td>
<td>Genetic predisposition toward behavioral, cognitive, emotional, or social problems</td>
<td>Genetic predisposition toward behavioral, cognitive, emotional, or social competence</td>
</tr>
<tr>
<td>Biological</td>
<td>Inadequate prenatal health care</td>
<td>Good access to prenatal and postnatal care</td>
</tr>
<tr>
<td></td>
<td>Complications during pregnancy or delivery</td>
<td>High-quality nutrition</td>
</tr>
<tr>
<td></td>
<td>Inadequate postnatal health care, immunizations</td>
<td>Early recognition of medical and developmental delays or deficits</td>
</tr>
<tr>
<td></td>
<td>Malnutrition</td>
<td>Early intensive treatment for medical problems and developmental delays</td>
</tr>
<tr>
<td></td>
<td>Exposure to environmental toxins, teratogens</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Childhood illness or injury</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Abnormalities in brain development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speech, language, vision, hearing problems</td>
<td></td>
</tr>
<tr>
<td>Psychological</td>
<td>Cognitive delays or deficits</td>
<td>Enriched learning, environmental experiences</td>
</tr>
<tr>
<td></td>
<td>Hyperactivity, inattention, learning problems</td>
<td>High-quality special educational services</td>
</tr>
<tr>
<td></td>
<td>Problems regulating emotions</td>
<td>Help from therapist, school counselor, parents to remedy problems in emotional control or social functioning</td>
</tr>
<tr>
<td></td>
<td>Problems in social interactions</td>
<td></td>
</tr>
<tr>
<td>Familial</td>
<td>Parental death, separation, or abandonment</td>
<td>Close relationship with at least one caregiver</td>
</tr>
<tr>
<td></td>
<td>Parental divorce, marital conflict</td>
<td>Sensitive, responsive parenting behavior</td>
</tr>
<tr>
<td></td>
<td>Cold, distant, intrusive, or harsh parenting</td>
<td>Consistent use of parental discipline</td>
</tr>
<tr>
<td></td>
<td>Child abuse or neglect</td>
<td>Adequate parental monitoring</td>
</tr>
<tr>
<td></td>
<td>Placement into foster care, group home</td>
<td>Good relationships with peers, extended kin</td>
</tr>
<tr>
<td></td>
<td>Parental substance abuse or mental illness</td>
<td>Adoption by loving parents</td>
</tr>
<tr>
<td></td>
<td>Parental antisocial behaviors</td>
<td></td>
</tr>
<tr>
<td>Social–Cultural</td>
<td>Low socioeconomic status (SES)</td>
<td>Peer acceptance, close friends</td>
</tr>
<tr>
<td></td>
<td>Dangerous, high-crime neighborhood</td>
<td>Involvement in prosocial activities (e.g., sports, clubs)</td>
</tr>
<tr>
<td></td>
<td>Inadequate educational opportunities</td>
<td>Relationships with adult mentors (e.g., coaches)</td>
</tr>
<tr>
<td></td>
<td>Rejected by peers or association with deviant peers</td>
<td>Adequate educational opportunities</td>
</tr>
<tr>
<td></td>
<td>Discrimination</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Hayden and Mash (2013).
CASE STUDY

RISK AND PROTECTIVE FACTORS

Diverging Developmental Paths

Ramon and Rafael are brothers growing up in the same low-income, high-crime neighborhood. Ramon, the older brother, begins showing disruptive behavior at a young age. He is disrespectful to his mother, defiant toward his teachers, and disinterested in school. By late elementary school, he has been suspended a number of times for fighting and being truant. In junior high school, Ramon associates with peers who introduce him to other antisocial behaviors, such as shoplifting and breaking into cars. By adolescence, Ramon rarely attends school and earns money selling drugs. At 15, Ramon is removed from his mother’s custody because of his antisocial behavior and truancy.

Rafael, the younger brother, also shows early problems with defiance and aggression. However, these problems do not persist beyond the early elementary school years. Although Rafael does not enjoy school, he befriends an art teacher who recognizes his talent for drawing. The teacher offers to tutor him in art and help him show his work. Rafael also takes art classes at a local community center to learn new mediums. Through these classes, he meets other adolescents interested in drawing and painting. Rafael’s grades in high school are generally low; however, he excels in art, music, and draftsmanship. He graduates with his class and studies interior design at a community college.

Like risk factors, protective factors can occur across the genetic, biological, psychological, familial, or social-cultural levels. For example, parental divorce is a risk factor for the development of behavioral and emotional disorders in young children, especially in families experiencing chronic stress and economic adversity (Hetherington, 2014). However, certain factors protect children of divorcing parents from developing problems. These protective factors include the child’s temperament or innate emotional disposition (a biological factor), the quality of the parent–child relationship (a familial factor), and the degree to which parents can rely on others for social and tangible support (a social–cultural factor).

The salience of a risk factor depends on the child’s age, gender, level of development, and environmental context. For example, child sexual abuse is a risk factor for later psychosocial problems. However, the effects of sexual abuse depend on the gender of the child and the age at which the abuse occurs. Boys often show the greatest adverse effects of sexual victimization when they are abused in early childhood, whereas girls often show the poorest developmental outcomes when abuse occurs during early adolescence.

Similarly, the ability of protective factors to buffer children from the harmful effects of risk depends on context. For example, many children who experience sexual abuse report considerable psychological distress and show marked behavioral impairment. However, children who are able to rely on a caring, nonoffending parent are often able to cope with this stressor more effectively than youths without the presence of a supportive parent (Heflin & Deblinger, 2003).

Protective factors are believed to promote resilience in youths at risk for maladaptive development. Resilience refers to the tendency of some children to develop social, emotional, and behavioral competence despite the presence of multiple risk factors (Hayden & Mash, 2014). Consider the case of Ramon and Rafael (above), two brothers growing up in the same impoverished, high-crime neighborhood but experiencing different outcomes.

What accounts for Ramon’s struggles and Rafael’s resilience? Although there is no easy answer, a partial explanation might be the presence of protective factors at just the right time in Rafael’s development. Ramon’s path to antisocial behavior was probably facilitated by peers who introduced him to criminal activities. In contrast, Rafael’s peer group encouraged prosocial activities and the development of artistic competence. If Rafael’s teacher did not encourage the development of his art talents until later in Rafael’s development, perhaps after he developed friendships with deviant peers, would he have followed the same developmental pathway as Ramon? Although we do not know for sure, we can speculate that these protective factors played an important role in his ability to achieve despite multiple risks (Masten & Cicchetti, 2016).

Most protective factors occur spontaneously: A teacher nurtures a special talent in an at-risk youth, a coach encourages a boy with depression to join a team, or a girl who has been abused is adopted by loving parents. Sometimes, however, protective factors are planned to
prevent the emergence of disorders. For example, communities may offer free infant and toddler screenings to identify children with developmental disabilities at an early age. Identification of developmental delays in infancy or toddlerhood can lead to early intensive intervention and better prognosis. Similarly, schools may offer prevention programs for girls who might develop eating disorders. Volunteers might teach girls about healthy eating, risks of dieting, and stress management. Even psychotherapy can be seen as a protective factor. Therapy helps children and adolescents alter developmental trajectories away from maladaptation and toward adaptation (Masten & Cicchetti, 2016). Consider Malala Yousafzai, a girl who demonstrated remarkable resilience in the face of incredible risks (see above).

As we have seen, developmental psychopathology is an emerging approach to understanding abnormal child behavior in the context of normal child development, in relation to the environment, and across time. Developmental psychopathology offers a rich and multifaceted perspective on abnormal child psychology across a number of different levels: genetic, biological, psychological, familial, and social-cultural. Throughout this book, we will use the principles of developmental psychopathology to explore the causes and treatment of child and adolescent disorders across these levels and within various developmental contexts.

Summary:
- Risk factors are influences that interfere with the acquisition of children’s competencies or children’s ability to adapt to their surroundings. Protective factors are influences that buffer children from these risks.
- Resilience occurs when children develop behavioral, emotional, and social competencies despite the presence of multiple risk factors.

1.4 INTEGRATING SCIENCE AND PRACTICE

What Is Evidence-Based Practice?

Definition

Imagine that you experience unusual pain in your stomach that does not go away with the help of over-the-counter medication. You make an appointment with your physician in the hope that she might be able to identify the cause of your ailment and prescribe an effective treatment. You would hope that your physician’s assessment, diagnostic, and treatment strategies are evidence-based—that is, that they reflect the scientific research and best available practice (Rousseau & Gunia, 2016).

Psychologists and other mental health professionals who work with children and families also strive for
Evidence-based practice. According to the American Psychological Association (APA; Brown et al., 2008), evidence-based practice is “the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences.” The purpose of evidence-based practice is to deliver the highest-quality mental health services to children, adolescents, and families and to promote mental health in the community (Hamilton, Daleiden, et al., 2015).

Clinicians who adopt an evidence-based approach to their practice consider the following three factors:

1. Scientific research: According to the research literature, what methods of assessment and forms of treatment work best for a child with this disorder?

2. Clinical expertise: According to my own professional experience and judgment, what is the best way for me to assess and treat this child?

3. Patient characteristics: How might the child’s age, gender, and sociocultural background, or the family’s expectations and preferences for therapy, affect the way I help them?

Evidence-based practice, therefore, begins with consideration of the scientific research literature. If parents request treatment for their son with ADHD, which form of treatment is most likely to be helpful? Fortunately, professional organizations have identified various evidence-based treatments that have been shown in research studies to reduce children’s symptoms and improve their functioning. For example, the Society of Clinical Child and Adolescent Psychology (2016) maintains an excellent website, effectivechildtherapy.org, that describes the most efficacious psychosocial treatments for childhood disorders. Similarly, the American Academy of Child and Adolescent Psychiatry (2016) issues guidelines to help physicians identify medications and psychosocial treatments that are effective for childhood disorders.

Evidence-based treatments are typically categorized into one of five levels, depending on how well they are supported by research (Southam-Gerow & Prinstein, 2014). Figure 1.6 shows each level and its degree of research support. For example, behavior parent training is a “well-established” treatment for children with ADHD; it has been shown to reduce symptoms in several randomized controlled studies. Behavior parent training, in which parents learn to monitor their children’s behavior and reinforce appropriate actions, is considered a first-line psychosocial treatment. Neurofeedback training, on the other hand, is considered “possibly efficacious” because it has less empirical support. Although one large and well-designed study suggests that this treatment can help children regulate brain activity and behavior, the study needs to be replicated before it can be considered a first-line treatment. Finally, the research literature suggests that social skills training is not effective in reducing children’s ADHD symptoms. Most children with ADHD already know how to behave in social situations; their main problem is inhibiting their behavior long enough to implement this knowledge (Evans, Owens, & Bunford, 2014).

Evidence-based practice does not simply mean using evidence-based treatments. Clinicians must also use their expertise and experience to tailor interventions to meet the social–emotional needs of children and families. For example, imagine that a mother brings her son with ADHD to their first therapy session. The therapist might initially decide to use behavior parent training. However, the therapist soon senses that the mother needs time in the initial session to describe her own frustration with her son’s behavior and her ex-husband’s lack of interest in sharing caregiving responsibilities. The skilled therapist knows that evidence-based treatments must be modified to meet the immediate needs of families. Consequently, the therapist might see her initial goal as providing empathy and building an alliance with a mother who feels powerless or isolated as a caregiver (Rajwan, Chacko, Wymbys, & Wymbys, 2014).

Finally, evidence-based practice requires clinicians to consider the characteristics and sociodemographic backgrounds of the children and families they serve (Gonzales, Lau, Murray, Pina, & Barrera, 2016). For example, therapists sometimes have difficulty engaging fathers in parent training. Consequently, researchers have modified traditional parent training to better address the interests of fathers. A treatment called COACHES (Coaching Our Acting-Out Children: Heightening Essential Skills) allows fathers to practice parent management techniques as they play soccer with their children (see Image 1.6). Several studies show that the COACHES program not only engages fathers who might otherwise avoid therapy but also improves children’s behavior on the playing field and at home (Isaacs, Webb, Jerome, & Fabiano, 2015).

Importance

Evidence-based practice is important to provide effective, ethical care to children and families (Society of Clinical Child and Adolescent Psychology, 2016). Ethics refers to the principles and standards of a profession that (1) ensure high-quality care and (2) protect the rights and dignity of others (Hill, 2014). Two important ethical principles in psychology are beneficence and nonmaleficence. Beneficence is the ethical principle that guides psychologists to help and promote the welfare of others. Nonmaleficence is the related principle that instructs psychologists to “do no harm” (APA, 2010). Evidence-based practice is important because it increases the likelihood that psychologists’ interventions will be helpful and decreases the likelihood that their actions will be harmful (Hamilton, Daleiden, et al., 2015).

Evidence-based practice is also important to the scientific practice of psychology. Psychology is a science that
has its roots in empirical evidence and objective evaluation (McFall, 1991). Indeed, the distinction between psychological science and clinical practice is artificial. The only way clinicians can help their clients in a competent and ethical manner is to base their interventions on the research literature and on empirical investigation. Before practicing any form of assessment or treatment, clinicians must ask, “What is the empirical evidence supporting my practice?” Whenever possible, clinicians must rely on assessment strategies and therapy techniques that have scientific support.

Unfortunately, some clinicians do not ground their interventions in the research literature or empirical data (Garb & Boyle, 2004). Instead, they may base their clinical practice on other factors, including theory, clinical experience, and anecdotal information provided by others. Although theories, experience, and anecdotes can be useful when combined with empirical evidence, they are insufficient guides for clinical practice by themselves. Psychological scientists believe that empirical data provide the best evidence either for or against specific clinical interventions.

Without empirical data, clinicians might intervene in ways that are not effective. Ineffective interventions can harm clients and their families in at least three ways. First, ineffective interventions can cost significant time and money—resources that might be better spent participating in treatment with more empirical support. For example, available treatments for childhood disorders include listening to certain types of music, wearing special glasses, taking large doses of vitamins, avoiding certain textured foods, riding on horseback, swimming with dolphins, reenacting the birth experience, and doing a host of other therapies with little systematic support. Although most of
these interventions do not cause physical or psychological harm to clients, they can cost significant time, energy, and money. Furthermore, when insurance companies compensate individuals for participating in these therapies, resources available for more evidence-based interventions are diminished.

Second, families who participate in ineffective treatment can lose hope in the therapeutic process and in psychological treatment more generally. For example, many parents of oppositional and defiant children seek help to manage their children's behavior. Although a number of well-supported interventions exist to treat children's disruptive behavior, many families are given therapy that lacks empirical support. Consequently, families meet with limited success. As a result, many parents come to believe that psychological interventions will not help their children. Some parents simply give up on treatment.

Third, interventions that lack empirical support can be harmful to clients, families, and society. The history of psychology is marked by examples of clinicians harming individuals and society by practicing without empirical basis. Perhaps nowhere is this more obvious than in the treatment of autism. In the 1960s, Bruno Bettelheim suggested that autism was caused by parents who were cold and rejecting toward their children. Bettelheim's erroneous theory placed unnecessary blame on parents and resulted in a host of interventions that were completely ineffective at alleviating autistic symptoms.

Later, sociologist Douglas Biklen (1993) recommended that individuals with autism and severe intellectual disability might be able to communicate with others if facilitated by a trained therapist. The subsequent practice of "facilitated communication" involved the therapist guiding the client's hand as the client supposedly typed messages on a keyboard. In one case, a client participating in facilitated communication supposedly reported that he had been abused by his family. As a result, the client was removed from his family's custody, despite no corroborating evidence of maltreatment. Later, the technique of facilitated communication was discredited by showing that the messages typed by clients actually reflected knowledge and information provided by therapists, not by the individuals with developmental disabilities themselves.

Even more recently, physician Andrew Wakefield and colleagues (1998) suggested that the measles, mumps, and rubella (MMR) vaccine caused autism in some children susceptible to the disorder. Although his assertion was unfounded, it caused a dramatic reduction in the percentage of vaccinated children in the United States and a dangerous increase in these childhood illnesses (Taylor, Swerdloff, & Eslick, 2014). Even today, 57% of parents have concerns that vaccinations cause autism and 2% to 3% of parents refuse to vaccinate their children because of these concerns (Miller, 2015; Smith et al., 2011; see Image 1.7).

Psychologists and other mental health professionals who are engaged in evidence-based practice approach their professional activities using the principles of psychological science. From this perspective, clinical work is analogous to a research study in which the practitioner's sample size consists of one individual (i.e., the client). The clinician generates hypotheses about the source of the client's problem and the best form of treatment, based on data gathered from the client and information presented in the research literature. Then, the clinician administers treatment and evaluates the client's outcomes using objective criteria. Finally, the clinician modifies her intervention based on information from the client and his family, in order to improve effectiveness.

Psychological science informs clinical practice by helping psychologists use the most accurate assessment techniques and effective therapeutic methods possible. At the same time, the practice of assessment and therapy guides research by helping scientists focus their efforts on discovering principles and practices that have real-world applications (Drabick & Goldfried, 2000).

Summary:

- Evidence-based practice refers to the integration of high-quality research and clinical expertise to promote the welfare of children and families, in the context of their characteristics, culture, and preferences for treatment.
- Evidence-based treatments have been shown in high-quality research studies to be efficacious in reducing children's problems and improving their functioning.
- Evidence-based practice is important because it increases the likelihood that clinicians will be helpful to their clients while avoiding harm. Evidence-based practice is also essential to the scientific practice of psychology, a discipline based on empirical evidence and objective evaluation.
How Can Students Help Children in an Evidence-Based Manner?

Psychology students often find themselves providing services to children and adolescents in distress. Students sometimes act as aides for individuals with developmental disabilities; behavior therapists for youths with autism; tutors for children with learning disabilities; or psychological technicians in residential treatment facilities, juvenile detention centers, and hospitals. Students can also provide paraprofessional services through volunteer experiences. For example, many students mentor at-risk youths, provide in-services to grade school and high school students, monitor telephone crisis hotlines, and help local community mental health centers.

Because students often provide frontline services, they have enormous potential for improving the functioning of children, adolescents, and families. However, students can also contribute to the propagation of inaccurate information and the dissemination of ineffective and unsupported treatments. Although psychology students are not in a position to direct interventions, they can approach treatment from the perspective of psychological science. Specifically, students can ask the following questions:

1. What is the evidence for the intervention or service that I am providing? Is there a theoretical and empirical basis for my work? Are there alternative services that might provide greater benefits to the people I serve?
2. Am I effective? Am I monitoring the effectiveness of the services I provide to determine whether I am helping my clients? Is there any possibility that I might be harming them?
3. Am I providing ethical, time-effective, and cost-effective services? During my work, do I respect the rights and dignity of others, conduct myself in a responsible and professional manner, and represent the field of psychology with integrity? Are my activities being supervised by someone who practices in an ethical and scientifically mindful manner?

As you read this book, consider how you might use the empirical literature to inform your own understanding of child and adolescent disorders. A scientific approach to child psychopathology is not reserved for licensed psychologists or university professors. Instead, all students, parents, teachers, and individuals who work with youths are called upon to use empirical data to help improve the functioning of others.

Summary:

- Students often find themselves providing services to children in need. They can rely on evidence-based practice to guide their work in a scientific and ethical fashion.
Adaptive behavior: Thoughts, feelings, and actions that allow children to develop social, emotional, and behavioral competence over time and meet the changing demands of the environment

Comorbidity: The presentation of two or more disorders in the same person at the same time

Developmental pathways: Possible courses or trajectories of children's behavioral, cognitive, or social–emotional development over time, ranging from adaptation to maladaptation

Developmental psychopathology: A multidisciplinary approach to studying adaptive and maladaptive development across the life span. According to this perspective, development is shaped by the complex interaction of biological, psychological, and social–cultural factors over time

Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5): A compendium of mental disorders and diagnostic criteria adopted by the American Psychiatric Association and used by most professionals in the United States

Epidemiologists: Scientists who study the prevalence of medical and psychological disorders in the general population

Equifinality: Describes the phenomenon in which children with different developmental histories show similar developmental outcomes

Ethics: Principles and standards of a profession that ensure high-quality care and protect the rights and dignity of others

Evidence-based practice: The integration of empirical research with clinical expertise to help children and families in the context of their characteristics, culture, and preferences

Evidence-based treatments: Psychotherapies and medications that have been shown in well-designed research studies to reduce children's symptoms and improve their functioning

Harmful dysfunction: A definition of abnormal behavior characterized by (1) a failure in some internal mechanism to perform a function for which it was naturally selected and (2) the failure causes harm

Heterotypic continuity: The phenomenon in which symptoms change over time, but their underlying pattern remains the same (e.g., a boy's ADHD symptoms change from childhood to adulthood, but he still has underlying problems with inhibition)

Homotypic continuity: The phenomenon in which disorders persist over time relatively unchanged (e.g., a boy with intellectual disability continues to have this disorder as an adult)

Incidence: The percentage of new cases of a disorder in a discrete period of time, usually 1 year

Individual differences: Deviations among children on some psychological attribute, behavior, or disorder

Maladaptive behaviors: Thoughts, feelings, and actions that interfere with children's social, emotional, and behavioral competence or do not meet the changing demands of the environment

Mental disorder: “A syndrome characterized by clinically significant disturbance in an individual’s cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning” (DSM-5)

Multifinality: Describes the phenomenon in which children with similar early experiences show different social, emotional, and behavioral outcomes

Prevalence: The percentage of individuals in a given population who have a medical or psychological condition

Probabilistic epigenesis: A principle of developmental psychopathology, refers to the manner in which genetic, biological, and social–cultural factors interact over time to influence (but not absolutely determine) development

Protective factors: Influences on development that buffer the negative effects of risks on children’s development and promote adaptive functioning

Psychotropic medications: Prescription drugs used to treat psychological disorders, such as anxiety, depression, and schizophrenia

Resilience: The tendency of some children to develop social, emotional, and behavioral competence despite the presence of multiple risk factors

Risk factors: Influences on development that interfere with the acquisition of competencies or compromise children’s ability to adapt to their environments

Socioeconomic status (SES): A composite variable that reflects three aspects of a child’s environment: (a) parents’ levels of education, (b) parents’ employment, and (c) family income

Stigma: Negative beliefs that can lead to fear, avoidance, and discrimination by others or shame and low self-worth in oneself

CRITICAL THINKING EXERCISES

1. According to DSM-5, a mental disorder is a pattern of behavior characterized by distress or disability (impairment) that resides within the individual. What might be some limitations to this definition of “mental disorder”—especially when it is applied to children and adolescents?
2. Approximately 50% of youths in the general population who have a mental disorder have at least one other comorbid condition. However, the prevalence of comorbidity among children referred to mental health clinics is much higher—between 70% and 80%. What might explain this difference?

3. Mrs. Johnson referred her 5-year-old son, Billy, to a psychologist because Billy showed problems with oppositional and defiant behavior (e.g., crying, throwing tantrums, sassing back). The psychologist observed Mrs. Johnson and Billy during a 20-minute play session in the clinic. During the session, Mrs. Johnson repeatedly yelled at Billy, threatened to spank him, and lost her temper. How might Billy’s behavior problems be explained by the transaction between Billy and his mother?

4. Vincente is a 14-year-old boy who was sent to the emergency department (ED) of a children’s hospital following a suicide attempt. Vincente, a recent immigrant, does not speak English. After Vincente was medically stable, the psychologist at the hospital interviewed him through a translator, in order to determine whether he met diagnostic criteria for depression or another mental disorder. If you were the psychologist, what considerations might you keep in mind while interviewing Vincente?

5. Why do developmental psychopathologists describe children’s behavior as “adaptive” or “maladaptive” rather than as “good” or “bad?”

TEST YOURSELF AND EXTEND YOUR LEARNING

Videos, flash cards, and links to online resources for this chapter are available to students online. Teachers also have access to PowerPoint slides to guide lectures, case studies to prompt classroom discussions, and exam questions. Visit www.abnormalchildpsychology.org.