

As clinicians have grown to appreciate the far-reaching effects of childhood problems and the importance of early intervention in treating most disorders, they have become more interested in understanding the diversity of severe problems experienced in early life. Timmy was diagnosed with “autism” (now referred to as *autism spectrum disorder*) in the early 1970s. More than four decades later, we know more—although still not enough—about how to help children who have autism spectrum disorder. Who can say what the prognosis for Timmy might be today, especially if he were diagnosed and treated at age 2 instead of at age 7?

What Is Normal? What Is Abnormal?

Before we discuss specific disorders, we need to address the broad topic of development in relation to disorders usually first diagnosed in infancy, childhood, or adolescence. What can we learn from children like Timmy, and what effect do the early disruptions in their skills have on their later lives? Does it matter when in the developmental period certain problems arise? Are disruptions in development permanent, thus making any hope for treatment doubtful?

Recall that in Chapter 2 we described developmental psychopathology as the study of how disorders arise and how they change with time (Nigg, 2015). Childhood is considered particularly important, because the brain changes significantly for several years after birth; this is also when critical developments occur in social, emotional, cognitive, and other important competency areas. These changes mostly follow a pattern: The child develops one skill before acquiring the next, and subsequent skills often build upon one another. Although this pattern of change is only one aspect of development, it is an important concept at this point because it implies that any disruption in the development of early skills will, by the very nature of this sequential process, disrupt the development of later skills. For example, some researchers believe that people with autism spectrum disorder suffer from a disruption in early social development, which prevents them from developing important social relationships, even with their parents (Durand, 2014). From a developmental perspective, the absence of early and meaningful social relationships has serious consequences. Children whose motivation to interact with others is disrupted may have a more difficult time learning to communicate; that is, they may not want to learn to speak if other people are not important to them. Researchers don’t know whether a disruption in communication skills is a direct outcome of the disorder or a by-product of disrupted early social development.

Understanding this type of developmental relationship is important for several reasons. Knowing what processes are disrupted will help us understand the disorder better and may lead to more appropriate intervention strategies. It may be important to identify children with attention-deficit/hyperactivity disorder, for example, because their problems with impulsivity may interfere with their ability to create and maintain

friendships, an important developmental consideration. Similarly, identifying a disorder such as autism spectrum disorder at an early age is important for these children so that their social deficits can be addressed before they affect other skill domains, such as social communication. Too often, people see early and pervasive disruptions in developmental skills (such as you saw with Timmy) and expect a negative prognosis, with the problems predetermined and permanent. Remember, however, that biological and psychosocial influences continuously interact with each other. Therefore, even for disorders such as attention-deficit/hyperactivity disorder and autism spectrum disorder that have clear biological bases, the presentation of the disorder is different for each individual. Changes at the biological or the psychosocial level may reduce the impact of the disorder.

One note of caution is appropriate here. There is real concern in the profession, especially among developmental psychologists, that some workers in the field may view aspects of normal development as symptoms of abnormality. For example, *echolalia*, which involves repeating the speech of others, was once thought to be a sign of autism spectrum disorder. When we study the development of speech in children without disorders, however, we find that repeating what someone else says is an intermediate step in language development. In children with autism spectrum disorder, therefore, echolalia is just a sign of relatively delayed language skills and not a symptom of their disorder (Roberts, 2014). Knowledge of development is important for understanding the nature of psychological disorders.

With that caveat in mind, we now examine several disorders usually diagnosed first in infancy, childhood, or adolescence, including *attention-deficit/hyperactivity disorder*, which involves characteristics of inattention or hyperactivity and impulsivity, and *specific learning disorder*, which is characterized by one or more difficulties in areas such as reading and writing. We then focus on *autism spectrum disorder*, a more severe disability, in which the child shows significant impairment in social communication and has restricted patterns of behavior, interest, and activities. Finally, we examine *intellectual disability*, which involves considerable deficits in cognitive abilities. Communication and motor disabilities, which are also considered neurodevelopmental disorders, are described in Table 14.1.

Attention-Deficit/Hyperactivity Disorder

Do you know people who flit from activity to activity, who start many tasks but seldom finish one, who have trouble concentrating, and who don’t seem to pay attention when others speak? These people may have **attention-deficit/hyperactivity disorder (ADHD)**, one of the most common reasons children are referred for mental health services in the United States. The primary characteristics of such people include a pattern of inattention, such as being disorganized or forgetful about school or work-related tasks, or of hyperactivity and impulsivity. These deficits can significantly

TABLE 14.1 Common Communication and Motor Disorders.

Childhood-Onset Fluency Disorder			
Clinical Description	Statistics	Etiology	Treatment
A disturbance in speech fluency that includes a number of problems with speech, such as repeating syllables or words, prolonging certain sounds, making obvious pauses, or substituting words to replace ones that are difficult to articulate.	Occurs twice as often among boys as among girls. Begins most often in children by the age of 6, and 98% of cases occur before the age of 10 (Maguire, Yeh, & Ito, 2012). Approximately 80% of children who stutter before they enter school will no longer stutter after they have been in school a year or so (Kroll & Beitchman, 2005).	Rather than anxiety causing childhood-onset fluency disorder, this problem makes people socially anxious (Ezrati-Vinacour & Levin, 2004). Multiple brain pathways appear to be involved, and genetic influences may be a factor (Maguire et al., 2012).	Parents are counseled about how to talk to their children. <i>Regulated-breathing method</i> is a promising behavioral treatment in which the person is instructed to stop speaking when a stuttering episode occurs and then to take a deep breath (exhale, then inhale) before proceeding (Onslow, Jones, O'Brian, Packman, & Menzies, 2012). Altered auditory feedback (electronically changing speech feedback to people who stutter) can improve speech, as can using forms of self-monitoring, in which people modify their own speech for the words they stutter (Onslow et al., 2012).
Language Disorder			
Clinical Description	Statistics	Etiology	Treatment
Limited speech in <i>all</i> situations. <i>Expressive language</i> (what is said) is significantly below <i>receptive language</i> (what is understood); the latter is usually average.	Occurs in 10% to 15% of children younger than 3 years of age (Johnson & Beitchman, 2005) and is almost five times as likely to affect boys as girls (Whitehurst et al., 1988).	An unfounded psychological explanation is that the children's parents may not speak to them enough. A biological theory is that middle ear infection is a contributory cause.	May be self-correcting and may not require special intervention (Whitehurst et al., 1988).
Social (Pragmatic) Communication Disorder			
Clinical Description	Statistics	Etiology	Treatment
Difficulties with the social aspects of verbal and nonverbal communication, including verbosity, prosody, excessive switching of topics, and dominating conversations (Adams et al., 2012). Does not have the restricted and repetitive behaviors found in ASD.	Exact estimates not yet available, but the number of cases identified appears to be rising with increasing awareness (Baird et al., 2006; Bishop, 2000).	Limited information.	Individualized social skills training (e.g., modeling, role playing) with an emphasis on teaching important rules necessary for carrying on conversations with others (e.g., what is too much and too little information) (Adams et al., 2012).
Tourette's Disorder			
Clinical Description	Statistics	Etiology	Treatment
Involuntary motor movements (<i>tics</i>), such as head twitching, or vocalizations, such as grunts, that often occur in rapid succession, come on suddenly, and happen in idiosyncratic or stereotyped ways. Vocal tics often include the involuntary repetition of obscenities.	Of all children, up to 20% show some tics during their growing years, and 1 to 10 children out of every 1,000 have Tourette's disorder (Jummani & Coffey, 2009). Usually develops before the age of 14. High comorbidity between tics and ADHD, as well as obsessive-compulsive disorder (Jummani & Coffey, 2009).	There are likely multiple vulnerability genes that influence the form and severity of tics (Jummani & Coffey, 2009).	<i>Psychological:</i> Self-monitoring, relaxation training, and habit reversal.

Adapted from (Durand, 2011)

disrupt academic efforts, as well as social relationships. Consider the case of Danny.

Danny...

The Boy Who Couldn't Sit Still

Danny, a handsome 9-year-old boy, was referred to us because of his difficulties at school and at home. Danny had a great deal of energy and loved playing most sports, especially baseball. Academically, his work was adequate, although his teacher reported that his performance was diminishing and she believed he would do better if he paid more attention in class. Danny rarely spent more than a few minutes on a task without some interruption: He would get up out of his seat, rifle through his desk, or constantly ask questions. His peers were frustrated with him because he was equally impulsive during their interactions. He never finished a game, and in sports he tried to play all positions simultaneously.

At home, Danny was considered a handful. His room was in a constant mess because he became engaged in a game or activity only to drop it and initiate something else. Danny's parents reported that they often scolded him for not carrying out some task, although the reason seemed to be that he forgot what he was doing rather than that he deliberately tried to defy them. They also said that, out of their own frustration, they sometimes grabbed him by the shoulders and yelled, "Slow down!" because his hyperactivity drove them crazy. •

Clinical Description

Danny has many characteristics of ADHD. Like Danny, people with this disorder have a great deal of difficulty sustaining their attention on a task or activity (Barkley, 2015c). As a result, their tasks are often unfinished, and they often seem not to be listening when someone else is speaking. In addition to this serious disruption in attention, some people with ADHD display motor hyperactivity. Children with this disorder are often described as fidgety in school, unable to sit still for more than a few minutes. Danny's restlessness in his classroom was a considerable source of concern for his teacher and peers, who were frustrated by his impatience and excessive activity. In addition to hyperactivity and problems sustaining attention, impulsivity—acting apparently without thinking—is a common complaint made about people with ADHD. For instance, during meetings at baseball practice, Danny often shouted responses to the coach's questions even before the coach had a chance to finish his sentence.

For ADHD, DSM-5 differentiates two categories of symptoms. The first includes problems of *inattention*. People may appear not to listen to others; they may lose necessary school assignments, books, or tools; and they may not pay enough attention to details, making careless mistakes. The second category of symptoms includes *hyperactivity and impulsivity*. Hyperactivity includes fidgeting, having trouble sitting for any length of time, and always

being on the go. Impulsivity includes blurting out answers before questions have been completed and having trouble waiting turns. Either the first (inattention) or the second and third (hyperactivity and impulsivity) set of symptoms must be present for someone to be diagnosed with ADHD (American Psychiatric Association, 2013). These different presentations are called *subtypes*, and they include the inattentive subtype (what some may call *ADD*, noting the absence of hyperactivity, although this is not an official diagnostic label), and the hyperactive/impulsive subtype. Other individuals meet criteria for both inattention and hyperactivity/impulsivity, and these individuals are labeled with the *combined* subtype.

Inattention, hyperactivity, and impulsivity often cause other problems that appear secondary to ADHD. Academic performance often suffers, especially as the child progresses in school. The cause of this poor performance is not known. It could be a result of inattention and impulsivity, and in some children this can be made worse by factors such as concurrent learning disabilities. Genetic research on both ADHD and learning disabilities suggests that they may share a common biological cause (DuPaul, Gormley, & Laracy, 2013). Children with ADHD are likely to be unpopular and rejected by their peers (McQuade & Hoza, 2015). This, too, may be the result of genetic factors as well as environmental influences such as a hostile home environment and gene-environment interactions. For example, some research shows that having a specific genotype (i.e., a dopamine transporter—DAT1; and a serotonin transporter) and psychosocial distress can predict ADHD in children (Barkley, 2015a; Nigg, Nikolas, & Burt, 2010).

Statistics

An important analysis of prevalence of ADHD suggests that the disorder is found in about 5.2% of the child populations across all regions of the world (Polanczyk, de Lima, Horta, Biederman, & Rohde, 2007). This finding of comparable rates of ADHD worldwide is important because debates continue to rage about the validity of ADHD as a real disorder. Some people believe that children who are just normally "active" are being misdiagnosed with ADHD. Previously, geographic differences were noted in the number of people diagnosed with this disorder. Children were more likely to receive the label of ADHD in the United States than anywhere else. For example, an analysis of data from surveying parents over the phone suggests that 11% of children in the United States aged 4 to 17 were labeled with ADHD between 2011 and 2012 (Centers for Disease Control and Prevention, 2013). This higher number may suggest that it is being over-diagnosed in the United States.

Based on these different rates of diagnosis, some have argued that ADHD in children is simply a cultural construct—meaning that the behavior of these children is typical from a developmental perspective, and it is Western society's intolerance (due to the loss of extended family support, pressure to succeed academically, and busy family life) that causes labeling ADHD as a disorder (Timimi & Taylor, 2004). The best data suggest, however, that from 5% to 7% of the worldwide population of children currently meet the criteria for ADHD and 3% to 5% have symptoms that significantly interfere with their quality of life (Roberts, Milich, & Barkley, 2015).