# 1 What Is Attention-Deficit/Hyperactivity Disorder (ADHD)?

ADHD is one of the most publicized and controversial psychiatric disorders in the United States and one of the most studied of all psychological disorders in children (Barkley, 1995). Although our knowledge of ADHD is still incomplete and the diagnosis remains controversial, it is important that in your role as a school counselor you have a clear understanding of the disorder and the potential effects it has on the students that you will work with. Much of the confusion that you will find comes from the fact that so many experts are involved and their opinions regarding the diagnosis and treatment of ADHD vary widely, resulting in uncertainty about the status of this disorder and whether it should or should not be treated and, if so, how (Lougy & Rosenthal, 2002). Despite the fact that the definition of ADHD has been a "highly changeable definition, creating confusion among practitioners and the public" (Robin, 1998, p. 13), you will find that the needs of these students, whatever the label or definition, remains the same. The need for understanding, support, acceptance, and positive esteem remains unchanged. As the school counselor, you may be the only avenue that can provide this much needed support in the school setting.

As a knowledgable expert on ADHD and on the needs of your students, you will find that you are equipped to run interference to provide students with these much needed supports. We hope that you will find yourself equipped not only to support students in navigating through their school year but provide them with the tools they need to become successful adults. To play this all important role, the school counselor must have a clear understanding of what ADHD is, how it is manifested in children

and adolescents, and how to educate parents, school staff, and other support providers on these characteristics. Most importantly, a better understanding of this disorder will prepare you to better to understand, accept, and establish a positive rapport with the young clients with ADHD that you will work with.

## Is ADHD a Mythical Disorder?

ADHD is not just a temporary state that a child will outgrow or a normal phase of childhood that will pass in time. It is not behaviors caused by parental failure to discipline the child or willfulness caused by bad temperament but a real disorder that can be confusing, heartbreaking, and nerve-wracking to the child and the family that surrounds them. Even though there are no outward signs that a handicap is present, ADHD, like other disabilities, can bring significant challenges to the child and his or her family (Barkley, 1995).

It is important to note that ADHD is not a mythical disorder recently fabricated by the American Psychiatric Association (APA) or pharmaceutical companies for personal gain, as suggested by some groups and writers. As Anastopoulos and Shelton (2001) note, "There is little justification for claiming that ADHD is merely a 'disorder of the 90s'" (p. 21). Descriptions of behaviors that are indicative of ADHD go back to the year 1902. The scientific community has researched the disorder for many years, both in the United States as well as in the international mental health community.

## Theory Versus Scientific Fact

Some educators and parents can become confused when hearing that ADHD is "just a theory" by outspoken critics against the current trend in diagnosing children with ADHD. In popular usage, the concept of "a theory" often implies rather weakly supported thought. However, in science, the term theory is a much stronger term. In science, theories are proposed, then tested, and tentatively accepted or discarded. If attempts to falsify a theory fail, the theory is considered likely to be correct—but it is still called a theory (Comings, 2008).

The importance for correcting this misconception is that, if not changed, it can give ballast to those educators who see ADHD as a myth and educational accommodations as unfair. Most educators are aware today that ADHD is not a theory but a scientific fact. However, authorities on ADHD, like Dr. Robin (1998), write that the question "does ADHD really exist?"

surfaces regularly in the media in the United States. He also suggests that many educators are familiar with Thomas Armstrong, an outspoken critic of ADHD, who wrote *The Myth of the ADHD Child* (1995). Dr. Armstrong has credibility in the educational community because of his previous work—particularly multiple intelligence. Dr. Robin writes, after presenting a four-step response to Armstrong's arguments against the scientific validity of ADHD, that his book is disconcerting in that "there are sufficient half-truths, distortions, and inaccuracies in this book, which, if seriously adhered to, would hurt the plight of many youngsters who continue to need lifelong interventions for ADHD" (p. 44).

It is important that school counselors, before moving on, be ready to address any questions as to the scientific validity of ADHD. ADHD, as will be outlined in this chapter, has been studied and researched by the scientific community both in the United States and the international community and is today recognized as a neurobiological disorder by a number of medical associations: American Medical Association, American Psychiatric Association, and American Pediatric Association, to name but a few.

## ADHD Is a Complex Set of Behaviors

Research has shown that a *complex set of behaviors* has been observed in children and adolescents identified with ADHD. There is general consensus by experts that both children and adolescents exhibit similar *core symptoms* (i.e., inattention, hyperactivity, impulsivity) to various degrees (Anastopoulos & Shelton, 2001; Barkley, 1995; Comings, 2001; Robin, 1998; Teeter, 1998). To a lesser degree, in addition to the core symptoms, children with ADHD also have primary difficulties in following rules and display tremendous variability in task performance (Barkley, 1997).

Although the core symptoms (inattention, hyperactivity, impulsivity) have been called the "holy trinity" of ADHD, Russell Barkley (1997) proposes that behavioral inhibition or poor regulation of behavior is the hallmark of ADHD. He writes that

> continuing to refer to this disorder as simply an attention deficit may be a gross understatement of what has become increasingly evident in contemporary research: ADHD represents a developmental disorder of behavioral inhibition that interferes with self-regulation and the organization of behavior toward the future. (p. 3)

As a consequence, affected children's behaviors tend to be unplanned, unreasoned, and emotional and seem to be lacking organization,

purpose, and intent—which can and does adversely affect their academic performance, school productivity, family relationships, and social and emotional development.

## Diagnostic Criteria

The APA's *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-IV-TR;* (2000) notes that "the essential feature of Attention Deficit/Hyperactivity Disorder is a persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequent and severe than is typically observed in individuals at a comparable level of development" (p. 85). To be diagnosed with ADHD, "some impairment from the symptoms must be present in a least two settings (e.g., at home and at school or work) [and] there must be clear evidence of interference with developmentally appropriate social, academic, or occupational functioning" (p. 85). If the behaviors are only seen in one setting, then the behavior is more likely a result of the environment rather than ADHD. The affected child must manifest persistent patterns of ADHD behaviors that are "more frequent and severe," unlike an unaffected child, who may show ADHD-like behaviors only at certain times. The *DSM-IV-TR* (2000) also notes that

> signs of the disorder may be minimal or absent when the person is under very strict control, is in a novel setting, is engaged in especially interesting activities, is in a one-on-one situation . . . or while the person experiences frequent rewards for appropriate behavior. (pp. 86–87)

The context-related variability of the disorder, where a child will manifest behaviors indicative of ADHD is one setting and not another, is often taken to mean that it isn't present (Anastopoulos & Shelton, 2001).

In a school setting, there are many environmental factors that can cause a child who may not have ADHD to exhibit ADHD-like behaviors. A lack of classroom structure and routine, unclear teacher expectations, lack of engaging lessons, and poor behavior management may create behaviors in otherwise normal children that may be misconstrued as ADHD. In these environments, children are unclear about behavioral, academic, and social expectations and, in the absence of clear expectations, find themselves lost, anxious, and out of control. This kind of environment, often accompanied by clutter, too much downtime, unstructured free time, and boring tasks will create a structural vacuum where children will create their own structure, often including attention-seeking behaviors, acting out behaviors, and

uncontrolled movement around the classroom. This teacher may report these behaviors as ADHD like, but when investigating these behaviors further, the counselor or student study team (SST) team may find that these behaviors do not occur at home or in other educational settings because the parents or teachers provided clear behavioral, academic, and social expectations. In this case, it is the teaching environment that has caused the behaviors, not an ADHD disorder.

## Manifestations of ADHD

ADHD is a disorder that is often misunderstood by teachers because of the many different manifestations of ADHD in children. Not all children present ADHD in the same manner or to the same degree, making it difficult for the classroom teacher to clearly identify the behaviors that truly are a manifestation of the disorder. The current diagnosis of ADHD is divided into four categories. The precise category that a child's diagnosis will fall under will depend on the component that is most representative of the child's behavior. The four subtypes of ADHD are as follows.

### 1. Combined Type (ADHD-C)

This diagnosis applies to children who present predominantly with inattention and hyperactivity but not significant impulsivity (*DSM-IV-TR*, 2000). These are fidgety children who have difficulty staying seated, struggle finishing classroom assignments, often lose assignments, are easily distracted by extraneous stimuli (like noises in the hallway), and often forget the daily routines without reminders.

### 2. Predominantly Inattentive Type (ADHD-I)

This diagnosis applies to children who present with inattention but neither hyperactivity nor impulsivity (*DSM-IV-TR*, 2000). These children are often seen as daydreamers or as underachievers and are inattentive and unfocused. Their distractibility is many times internalized and is not always recognized by teachers. These children also struggle with organizational skills and have difficulty finishing work.

### 3. Predominantly Hyperactive-Impulsive Type (ADHD-HI)

This diagnosis applies to children who present with hyperactivity and impulsivity that is maladaptive and inconsistent with their developmental

level. These children do not usually present with inattention (*DSM-IV-TR*, 2000). This population of children typically has the most difficulties with schools and outside agencies (e.g., law enforcement or social services). In the classroom, these children seem to be constantly on the go, not seated, talking all the time, and are involved in behaviors that may not be safe or logical. Their high impulsivity often leads to problems on the playground and with peers.

### 4. Not Otherwise Specified (ADHD-NOS)

This diagnosis applies to "disorders with prominent symptoms of inattention or hyperactivity/impulsivity that do not meet the criteria for attention-deficit/hyperactivity disorder" (*DSM-IV-TR*, 2000). This population, typically adolescents and adults, still present some of the symptoms and are often diagnosed with either ADHD-NOS or *ADHD in partial remission*. Therefore, even though an adolescent or adult may no longer meet the criteria for a diagnosis of ADHD, she or he can still present functional impairment in school and work.

One remaining category sometimes referenced is *late-onset ADHD*, where all criteria are met except for onset prior to seven years of age (*DSM-IV-TR*, 2000, pp. 85–93). Often, the late-onset ADHD population presents similar patterns of psychiatric comorbidity (mood and anxiety disorders) and functional impairment (school problems, legal problems, driving problems) as the full ADHD population (Faraone et al., 2006). For these students, the symptoms may not become apparent until puberty when teacher demands and expectations in school require more focused attention, greater organization skill, and more independent study skills. Poor executive functioning, which may have always been present, does not become an issue until tasks that tax the executive functions become a part of the middle and high school experience. This change in demand for organization and multitasking and the need to develop and stick to a long-range plan makes the ADHD symptoms of inattention more apparent. Teachers and parents often report that around puberty they begin to see an increase in irritability, mood swings, and academic difficulties in their children later diagnosed with ADHD (Nadeau, Littman, & Quinn, 1999, p. 43).

## Prevalence of ADHD

ADHD is a disorder that affects 3% to 20% of the population, depending on the information source. Most experts accept a range of 3% to 7% as the percentage of the population diagnosed with ADHD (Vaughan &

Kratochvil, 2006). Findings of studies conducted in New Zealand, Canada, and Germany show an overall prevalence rate of 3% to 7%, similar to prevalence rates in the United States (Hoagwood, Jensen, Feil, Benedetto, & Bhatara, 2000). A report from the 2003 National Survey of Children's Health stated that approximately 4.4 million children ages 4 to 17 years in the United States had a history of ADHD diagnosis (Bukstein, 2006). The male to female ratio is 4:1 for the predominantly hyperactive type (ADHD-HI) and 2:1 for the predominantly inattentive type (ADHD-I). ADHD may be underidentified in girls (Sadiq, 2007). Girls have often been overlooked because they often lack the classic symptoms of hyperactivity and impulsivity. Typically, girls do not disrupt classes, but they have clinically meaningful levels of inattention and underachievement, related, in part, to poor self-esteem (Thurber, Heller, & Hinshaw, 2002). Affected girls often have more problems with focused or selective components of attention. In the classroom, they often appear sluggish and less accurate in information processing and struggle with memory retrieval problems. These girls have more anxiety, mood disorders, and are often seen as shy, withdrawn, reticent, or apprehensive (Nadeau, Littman, & Quinn, 1999, p. 46). These behaviors make them seem unengaged and uninterested in learning.

Reports have consistently identified three aspects of ADHD where there are significant gender-related differences (Reid et al., 2008).

- There is a difference in symptom patterns between boys and girls. Girls are generally less impulsive while boys present with more discipline problems.
- There is a difference in distribution of ADHD subtypes. Girls are more likely to have ADHD-I.
- There is a difference in associated conditions. Girls are less likely to have a learning disability and have less risk for depression, conduct disorder, and oppositional-defiant disorder (ODD) than boys with ADHD.

Over the last three decades, the number of children diagnosed with ADHD has been increasing. According to the U.S. National Ambulatory Medical Care Survey, the number of children who received a diagnosis of ADHD increased 250% from 1990 to 1998. Kelleher, McInerny, Gardner, Childs, and Wasserman (2000) reported that pediatricians identified ADHD in 9.2% of children in 1996 compared to 1.4% of children in 1979, an increase of 657%. Do these statistics represent an epidemic or a heightened awareness of the problem, or are there a variety of forces at work pushing this diagnosis?

We believe there are a variety of reasons for the increase in the number of children diagnosed with ADHD. First, there is a greater awareness by

the general public about ADHD. Second, over the last decade, preschool and adolescent children are increasingly being identified with ADHD, whereas in the past, preschool children were rarely identified and professionals felt that most children outgrew ADHD by the time they had reached adolescence. Today, we know that both age groups can be appropriately identified and diagnosed. Third, because of insurance guidelines and restrictions, most children today are initially diagnosed with ADHD by pediatricians and family physicians, who may not have true expertise or knowledge of ADHD and proper diagnosis protocols. Because there are still very few *developmental* pediatricians, referrals to mental health specialist (such as a child and adolescent psychiatrist) are often made only if a child is presenting significant mental health concerns in addition to ADHD. Unfortunately, the consequence can be that a child may be misdiagnosed either because of limited time for assessment or because of inadequate expertise in ADHD by a pediatrician or family practitioner.

Robin (1998) offers other possibilities to explain the increase in the diagnosis of ADHD in the United States. He attributes the fast-paced, 15-second sound bite mentality of our culture, which tends to encourage ADHD-like behaviors, and the pressure in many middle-class circles for high achievement and the keen importance in finding good jobs. Because of these stresses, parents may look to a diagnosis such as ADHD and treatments such as medication to help their children climb the academic and economic ladder. Last, the recognition that ADHD is a life-span disorder has increased the number of adolescents and adults seeking evaluations (Robin, 1998, p. 28). Although overdiagnosis does occur, the reality is that most teachers will have a least one child with ADHD in their classroom (Barkley, 1990; Scahill & Schwab-Stone, 2000).

There is little debate that once ADHD has been diagnosed the disorder persists throughout childhood in the majority of cases (Teeter, 1998). Research literature and follow-up studies on ADHD show that prominent symptoms and impairment related to ADHD persist into adulthood approximately one-half the time (Biederman, Mick, & Faraone, 2006; Faraone et al., 2000). Current epidemiologic data estimate the prevalence of ADHD among adults at 5% in the United States population (Biederman, Seidman, et al., 2008). Also ADHD persists into adulthood in approximately 50% to 70% of affected adolescents (Barkley, Fischer, Edebrook, & Smallish, 1990; Weiss, Hechtman, Milroy, & Periman, 1985), with 90% to 95% of adolescents and adults with ADHD manifesting the inattention cluster of symptoms at least as a component of their disorder (Millstein, Wilens, Biederman, & Spencer, 1997). Presenting adults also typically have poor self-discipline, a short temper, difficulty establishing and keeping a routine, and difficulty thinking clearly (Wolf, & Wasserstein, 2001) as well as self-reporting lifelong

effects and less satisfaction in key aspects of their lives because of their disorder (Biederman et al., 2006). Even though most ADHD adults show fairly good outcomes, Teeter (1998) references a report showing that 41% of adults had a comorbid disorder, including mood disorders, substance abuse, and antisocial behaviors.

These statistics point to the importance of early diagnosis and treatment as critical for minimizing the problems affected children will encounter in their academic activities and in their social interactions with peers and adults. Considering that ADHD is a treatable disorder and that educational and occupational deficits can often represent underattainment, early diagnosis and aggressive treatment, both medical and educational, is of critical importance. Studies have consistently documented that ADHD is associated with high levels of grade retention, need for tutoring, and placement in special classes (Biederman, Petty, et al., 2008). We can no longer assume that children with ADHD will no longer need educational accommodations to find success in school when they reach adolescence.

## What Causes ADHD?

According to the experts, ADHD is viewed as a neurodevelopmental disorder with strong evidence of family genetic risk factors that generally manifests in early childhood. The symptoms affect cognitive, academic, behavioral, emotional, and social functioning (Anastopoulos & Shelton, 2001; Barkley, 2000; Biederman et al., 1992; Comings, 2001).

There is increasing scientific awareness that ADHD is a heterogeneous disorder that carries a high risk of comorbidities, such as mood disorders and learning disabilities (Pastor & Reuben, 2002). The etiology of ADHD is unknown, although family studies of ADHD suggest a genetic basis for most forms of this disorder (Comings, 2001; Hechtman, 1996).

ADHD is often described as a *hypodopaminergic disorder* or a disorder of self-regulation, often called an *executive function dysfunction*. The most current studies suggest that ADHD symptoms are the result of diminished function of the prefrontal executive centers of the brain cortex, which are responsible for impulse control and sustained attention. In addition to ADHD behaviors, decreased activity of dopamine has been associated with increased risk for addiction (cigarette and substance abuse disorders). An imbalance in dopamine and norepinephrine, two primary neurotransmitter systems most directly involved in ADHD, contributes to the symptoms we see in ADHD (Sadiq, 2007). These two neurotransmitter systems work in concert with each other to control attention, inhibition, and motor planning. The medications used in the treatment of ADHD intervene by

regulating norepinephrine and dopamine levels, thereby normalizing brain function and improving self-control (Barkley, 1990; Shekim, Javid, Dans, & Bylund, 1983).

Other areas of the brain thought to be involved in producing atypical functioning seen in the ADHD population are the frontostriatal complex, basil ganglia, and the right anterior frontal lobe (Sadiq, 2007).

## Primary Symptoms and Common Impairments

ADHD probably represents the extreme end of a spectrum of normal human traits that we all possess, and as with other human traits, ADHD undergoes developmental changes with maturity. If ADHD represents one end of a continuum of traits, then the problem with diagnosis lies in determining the boundary between the unaffected population and those with ADHD. We all have ADHD traits, and those diagnosed with ADHD may simply represent the extreme. This disorder can be viewed like other personal traits, such as reading ability, height, weight, or intelligence. Where one falls on the continuum determines whether one's trait is considered normal or abnormal. Children with ADHD differ in how much they inherit the traits in much the same way we all differ in how much we inherit height or intelligence. No two children inherit or present identical behaviors (Lougy & Rosenthal, 2002).

The primary symptoms associated with ADHD are *inattention, hyperactivity,* and *impulsivity.* The relative degree and pattern of these primary symptoms help clinicians better index this disorder for diagnostic purposes. These primary symptoms are briefly reviewed and profiled with a focus on those ADHD deficits that interfere in an affected student's academic and social-emotional development in the next section. Chapters 4 and 5 will discuss in more detail how these primary symptoms can impact a child's learning and behavior at school.

### Inattention

Inattention is considered one of the core systems of ADHD (Anastopoulos & Shelton, 2001; Barkley, 1990; Teeter, 1998). Inattention typically refers to a complex set of processes. Sam and Michael Goldstein (1990) discussion of attention is helpful because it relates to tasks that are required at school and home.

1. A student who is having difficulty taking notes and paying attention to the teacher simultaneously would have a problem with *divided attention.*

2. A student who is described as a daydreamer, preoccupied with other activities instead of what is being talked about, would have a problem with *focused attention.*
3. A student who is distracted by outside noises, such as a door closing or a student walking down the aisle to the front of the classroom, would have a problem with *selective attention.*
4. A student who is unable to remain on a task long enough to sufficiently complete that task would have a problem with *sustained attention,* or *persistence.* An ADHD child's brain cannot delay the impulse to switch attention to other activities that catches the child's attention. This difficulty is often seen when a 20-minute assignment may take up to three hours to complete because of delays in sustained attention.
5. A student who is unable to wait for the next spelling word to be presented by the teacher would have a problem with *vigilance,* or *readiness to respond.*

Research suggests that deficits in attention are particularly evident under repetitive or boring conditions (Anastopoulos & Shelton, 2001; Barkley, 1997; Teeter, 1998), which could happen during classroom seatwork or tackling tedious homework. Furthermore, inattention may affect a child's ability to engage in free play for long periods of time or participate in organized sports, such as baseball (Pelham et al., 1990).

Difficulty maintaining effort is closely aligned with difficulty maintaining concentration and effort. The attention deficit is often verbalized by students as, "I'm bored." They become bored with most mundane, repetitive, and low-stimulation activities, especially schoolwork and instruction that is nonengaging. They will often seek out new and exciting experiences to keep their interest—having an "attentional bias toward novelty" (Robin, 1998, pp. 16–17). Sometimes this venture toward novelty can lead to high-risk behaviors in adolescence, such as sexual promiscuity, shoplifting, or drugs, to name but a few.

Often what stems from difficulties with inattention is the tendency to forget or lose important materials needed for school. They often will come to class unprepared, without paper, pen, pencil, or other necessary materials. The will often turn in assignments late or forget to turn them in at all. They often don't have the necessary books or information to do work in class or at home. Because they fail to write down homework assignments, they often have failing grades due to many missed assignments.

Inattention can also present itself at the opposite end of the spectrum—*hyperfocusing*. They tend to selectively focus on discrete things, having a

white-hot focus on things that catch their interest. A child with ADHD can become so focused on an activity or assignment they are doing that holds their interest that they will fail to recognize that transitions in the classroom have occurred and do not hear the teacher instruct them to put their reading book away and get out their math book or go to recess.

During complex tasks, attention can be described as comprising of three processes related to self-regulation (Teeter, 1998), which can have a negative impact on schoolwork if not mastered.

1. Maintaining attention over time
2. Organizing and self-directing attention
3. Investing effort to attend to tasks

Children with ADHD are challenged by all three tasks, which can contribute to their challenges and often their failures in school, resulting in poor self-esteem and resultant behavior problems.

## Hyperactivity

Although current research suggests that hyperactivity and impulsivity are different expressions of impaired behavioral inhibition (failure to inhibit the impulse for motor movement) (Robin, 1998), it is still helpful to discuss hyperactivity separately because it is the behavior teachers most associate with ADHD and where most ADHD assessment referrals are made.

When talking about ADHD with teachers, what first comes to their mind is the hyperactive child that wiggles around and disrupts their classroom. This hyperactive child is known by everyone and, some would say, pesters and annoys everyone they come in contact with. Every teacher in the school knows this child by name.

Hyperactivity is not just *high activity* but *disorganized and purposeless activity.* Hyperactivity refers to a range of excessive body movements ranging from restless, incessant fidgeting while seated, to frantic running around the room for no apparent reason. In the classroom, this may be seen as wiggling, rocking, and kneeling in the desk. It may also include chair tipping and rocking, leg bouncing, kicking, pencil tapping, humming, singing, noises, and any wide variety of constant body movement. Hyperactive children are often referred to as always "on the go" and "driven by a motor" (*DSM-IV-TR*, 2000). Younger affected children often jump, wiggle, squirm, run, and find it very hard to sit still or walk calmly from one place to another. They poke, grab, and touch things, especially where they shouldn't. Also these children have difficulty playing or engaging in leisure activities,

are accident prone, can talk excessively, hang on the edge of a chair, or make excessive noises during quiet times. In a nutshell, hyperactive children have great difficulty managing their activity levels and are seemingly unable to stop without reminders (Lougy & Rosenthal, 2002).

The classic overactivity found in young children is often diminished or transformed by adolescence—transformed into "subjective feelings of restlessness" (Robin, 1998, p. 18). Even though an adolescent may not appear restless to a parent or teacher, they often feel that way, struggling to focus or control this enormous amount of pent-up energy. They manifest their restlessness in different ways from the younger child with ADHD. They will often fidget or show other signs of restlessness. Adolescents often will describe feeling confined if asked to sit in a classroom for too long or when seated at a desk to study for a long period of time. Teachers often will find nonstop talking (especially in girls) and badgering as two common manifestations of hyperactivity in adolescence. To reduce the pressure of the pent-up energy, some will aggressively provoke people around them to bring attention to a point and relieve a sense of their internal chaos (Alexander-Roberts, 1995). They can manifest great energy by channeling their energy into many activities, as well as sometimes getting as little as four to five hours of sleep at night. Their high energy can wear out their friends and family (Robin, 1998), and the teacher that works with this high level of energy daily can quickly become less tolerant of these behaviors in the classroom—resulting in many classroom removals and lost learning opportunities. The insistence and tradition that students are only seen as compliant or learning if sitting quietly in their seats creates a situation where students with ADHD are faced with an intolerable situation on a daily basis.

## Impulsivity

Impulsivity can appear in many situations that can be frustrating to teachers, parents, and peers who interact with children with ADHD. Impulsivity is often seen as difficulty waiting one's turn, blurting out before thinking, and interrupting or intruding on others' time and space, behaviors that are essentially unacceptable in most classrooms. Impulsive students can often appear demanding, inflexible, and selfish. They often start things before the directions are completed, take things without thinking, and are often seen by others as difficult to be with for any length of time. They will butt into line to get ahead of someone or take another's turn in a game because they can't wait until their turn comes again. If they raise their hand in class rather than calling out, when called on, they won't know what to say. These students have trouble keeping friends and struggle with social skills because of their impulsive behaviors. They're not invited

to parties or asked to participate in recess games or to be partners in group activities in the classroom (Lougy & Rosenthal, 2002), as they may be pushy, obstinate, and lack listening skills.

Adolescents can continue to demonstrate high impulsivity. *Behaviorally,* they often are driven by the moment and have a great difficulty with delayed gratification. They will do whatever pops into their mind without stopping to measure the consequence of their actions. They often opt for short-term gratification despite long-term pain for not completing a homework assignment or getting their chores done at home. They can be seen as irresponsible, selfish, immature, lazy, and outright rude. *Cognitively,* the impulsive adolescents rush through schoolwork, overlooking crucial details, making careless mistakes, and writing sloppily. *Emotionally,* impulsive adolescents can become easily frustrated, agitated, or moody and lose their temper quickly—sometimes accompanied by aggressive and verbal responses directed either at others or themselves (Robin, 1998).

In conclusion, the impulsive behaviors often lead to social rejection by peers, criticism from teachers, disciplinary action by the school, and exasperation and exhaustion from parents. After many years of experiencing rejection, punishment, and criticism, impulsive students can become oppositional and develop feelings of low self-esteem and victimization. They can also be challenged by comorbid (associated) disorders (learning disabilities, ODD, bipolar disorder, substance abuse, anxiety disorder, and depression) that can further impact their educational, social, and emotional development.

## Predominantly Inattentive Type of ADHD

Children with ADHD who present with the predominantly inattentive subtype may sit and quietly zone out; they are internally rather than externally distracted. They often are seen as underactive, foggy, and cognitively sluggish. Younger children who have the predominantly inattentive subtype are unlikely to be referred for professional evaluation of ADHD because they do not display more commonly recognized disruptive behavior (Barkley, 1995; Layey et al., 1998). They also have fewer problems than the child with ADHD-HI in making and keeping same-age friends or getting along with teachers and other adults. Consequently, early elementary children who do not manifest the hyperactive symptoms may be initially overlooked by the teacher, but they tend to have increased rates of academic problems as they advance in their schooling.

Inattentive behaviors manifested by these children are, however, chronic, pervasive, and problematic in their day-to-day activities. These children have difficulty attending to one thing because they often pay

attention to everything! They may constantly scan the environment around them, distracted by all things except what needs their attention. Lacking the selection control to dispose of worthless information, they can often hear the lights buzz and the clock tick, making it difficult to determine which sounds should receive attention (Levine, 2002). Internally distracted, they may even look as if they are paying attention, but instead they are attending to the clothes the teacher is wearing or the glasses on the teacher's face. With all of this information activating their sensory perceptions, they will have a difficult time attending to the important aspects of an instructional period. With so much calling for their attention, they will usually choose to attend to something that they find immediately gratifying to help block out the other input that is calling for their attention.

As a result of their sluggish and half-attending to classroom instructions, they often make more mistakes than other children in following oral and written instructions. The student with ADHD-I is often challenged by sifting through the information given during instruction—having difficulty sorting out the relevant from the irrelevant (Barkley, 1995). Barkley (1995) references a study finding that children with ADHD-I also seem to struggle with tasks involving perceptual-motor speed or eye-hand coordination and have more trouble consistently recalling information they had learned as time passed.

Last, ADHD-I appears to affect boys and girls at nearly the same rate or prevalence. Dr. Thomas Phelan (1996) also places the ratio at 1:1, because the ratio diagnosed in adulthood seems equal for males and females (Alexander-Roberts, 1995). In contrast, ADHD-HI seems to occur nearly three times more often in boys than girls (Barkley, 1995).

## Summary

We have provided an in-depth overview of ADHD symptoms because the school counselor should understand the challenges they may encounter in working with these special students.

School counselors, school psychologist, and site administrators can play an important role in providing teachers with important information and guidance when teaching children with ADHD. As school professionals, you will find that ADHD can present significant challenges to children when asked to interface with the classroom and school environment and many school tasks. Because children with ADHD can often present with comorbid executive-function deficits (see Chapter 2), they can find the school environment to be more challenging than it is for unaffected students. Children with ADHD are asked to interface with a system that

makes day-to-day school tasks nearly impossible for them. This can be especially frustrating and debilitating for students if their struggles are not understood or appreciated by their teacher, peers, or other school staff.

Melvin Levine (1993) so eloquently writes the following:

> The more we involve ourselves with disappointing children, the more we understand the risks they must take during childhood. . . . Their lives bear the scars of unjust accusation, chronic feelings of inadequacy, and shamelessly untapped talent. Understanding developmental variation, characterizing it without oversimplifying it, and intervening vigorously on behalf of developing humans experiencing inordinate failure—these are urgent needs. (p. 11)

Educating teachers and support school staff on this disorder is an "urgent need" that suggests both ethical and professional responsibility.