Case 2: Attention Deficit-Hyperactivity Disorder

Learning objectives

- Define attention deficit-hyperactivity disorder (ADHD), explain its prevalence and causes, and outline its development as a recognized special need.
- Describe characteristics of individuals with ADHD.
- Explain how ADHD is identified.
- Describe recommended educational practices for students with ADHD.
- Explain the perspectives and concerns that parents and families of students with ADHD may have.

Case

Louis

Louis began middle school last fall, and he and his family soon learned how different it would be from the smaller and more structured experiences of elementary school. With six class periods on an alternating-day schedule, a locker, and multiple teachers, Louis was overwhelmed. He frequently forgot exactly where his locker was, and he came to class late at least eight times during September because he either took a wrong turn in the school hallway or got distracted by conversations with his classmates. He often came to class without his supplies and without his homework. His teachers asked his parents, Mr. and Mrs. Deffenbaugh, to come to school for a conference. At that meeting the teachers explained that Louis clearly was capable of the higher expectations of middle school but that his poor organizational skills and resulting frustration were interfering with his school success. The Deffenbaughs related that Louis already "hated" middle school, reported that he felt "stupid," and had refused to complete homework that he found difficult. After the meeting, Mr. and Mrs. Deffenbaugh revisited yet again the decision they made several years ago to address Louis's ADHD without medication. After the school conference, discussions with Louis and his pediatrician, and some Internet research, they agreed that Louis should take Ritalin. After one adjustment in the dosage and several meetings with teachers to work on other supports for Louis, they noticed that he seemed to be able to concentrate on his work more readily. His teachers remarked on the improvement, too. School still was challenging for Louis, but as the spring approached he was passing in all subjects, had changed his mind about middle school and not liked it, and was planning to try out for the football team in the fall. His teachers nominated Louis for the "greatest learning growth" award for the third grading quarter.

Introduction

When you were in school, did you have classmates who could not seem to focus on their schoolwork, who were constantly getting out of their seats and distracting other students from learning? Even as a child, you realized that the active behaviors of those classmates were unusual. Have you ever had a friend who always was thinking about something else? Did it seem that every time you asked that friend a question, you had to ask it again, even after you were sure he or she was paying attention to you? Perhaps you are one of the students who displayed such behaviors, and you are reading this paragraph thinking that you could have contributed your own story to begin this topic.

Students who have attentional problems have received extensive consideration during the past two decades, both among the scholars who have made great strides in understanding the nature of this disorder (e.g., Fasbender & Schweitzer, 2006) and in the popular press through newspaper articles and special issues of magazines (e.g.,. Elias, 2006). A positive result is that parents and professionals now better understand that ADHD is a lifelong and chronic disorder. It can profoundly affect students' school career as well as their adjustment during adulthood (Deutscher & Fewell, 2005). Although ADHD is not a disability category directly addressed by the Individuals with Disabilities Education Act (IDEA), this disorder often occurs simultaneously with learning, emotional, and other disabilities. If ADHD is significant, a student also may qualify for services as other health impaired (OHI). However, many students with ADHD are served through Section 504 of the Vocational Act of 1973.

What Is Attention Deficit-Hyperactivity Disorder?

The fact that some children are so extraordinarily active that adults take notice and view them as having behavior problems has been recognized for many years. Today's thinking about these students and best practices for working with them effectively comes from decades of research and discussion.

Development of the ADHD Field

The first known formal description of ADHD was reported by British physician George Still in 1902. In a series of lectures he described children who lacked "moral control," noting that many of these children were highly intelligent and thus distinguishable from children with cognitive disabilities. He attributed their misbehavior and impulsivity to an unknown medical condition (Rafalovich, 2001). This notion that a medical condition could lead to disruptive behavior in children gained support during the 1920s with the study of *encephalitis lethargica* – that is, sleepy sickness. Physicians noticed that children who survived this serious illness often became distractible and impulsive. Their sleep patterns also changed. Eventually, these behaviors came to be attributed to neurological dysfunction. Barkley (1997) suggests that some children who had ADHD but actually had not had sleepy sickness probably were included in these early studies because the research was completed after the children had recovered and was based on reports of symptoms rather than direct evidence of having had the disease. The children were assumed to have had the illness because they displayed similar behaviors.

In the United States, Dr. Charles Bradley reported on the effect of stimulant medication to control the behavior of children who were distractible and impulsive as early as the 1930s (D. V. Martin, 2002). However, it was in the middle of the twentieth century that professional focus on children's attentional problems became widespread, and it has continued ever since. During the 1960s, physicians emphasized treating children whose behavior was described as *hyperactive*, a term still informally used today to characterize students who have ADHD. However, in the 1970s a significant shift in thinking occurred. Physicians proposed that children's excessive movement was not the only symptom of this disorder, and they began exploring the idea that, in addition to physical movement, *cognitive impulsivity*, characterized by inattention without physical movement, was also an important aspect of the disorder (Barkley, 1998; D. V. Martin, 2002). This line of research led to exploration of the brain's role in ADHD, and work in that area dominates the field today (e.g. Krain & Castellanos, 2006; Weyandt, 2006).

Definition of Attention Deficit-Hyperactivity Disorder

According to the *Diagnostic and Statistical Manual of Mental Disorders –III* (DSM-III), ADHD is:

> a pervasive pattern of inattention, impulsivity, and/or hyperactivity—impulsivity that is more frequent and sever than is typically observed in individuals at a comparable level of development. The variations of the disorder include ADHD—predominantly inattentive type, ADHD-predominantly hyperactive—impulsive type, and ADHD—combined type.

Key elements of ADHD

1. ADHD is considered *neurobiological*, (i.e., originating in the brain), and it is developmental, beginning before the age of seven.
2. ADHD is chronic, long term, and not acutely acquired (i.e., not the immediate result of an accident or injury).
3. The primary trait is an inability to attend beyond what is typical for peers of comparable age. Significant impulsivity also may be characteristic.
4. ADHD is not situational; that is, it affects the children and adults who have it across all settings. However, their symptoms may be most apparent at school because of the structure and expectations there.
5. Students with ADHD are more likely to have a *production* deficit rather than an acquisition deficit. That is, they may take information in and sometimes surprise their teachers by what they know. Their greatest difficulty often lies in production, that is, in completing their work.
6. ADHD is not caused by environmental situations or other disabilities, but it may be present with them.

Prevalence of Attention Deficit-Hyperactivity Disorder

Currently, ADHD is one of the most commonly diagnosed childhood psychiatric disorders.

In terms of gender, early research suggested that boys might be up to nine times more likely than girls to have this disorder (Arnold, 1995), but recent studies suggest that the ratio is closer to two or three to one (Neuman, Sitdhiraksa, Reich, Ji, Joyner, Sun, & Todd, 2005). Even these figures are tentative. Although girls may have the same symptoms

of ADHD as boys, research suggests they may display lower levels of these symptoms (Barkley, 2006) and so are not identified as often.

In terms of race and poverty, data generally do not suggest that ADHD occurs more or less frequently in any particular racial or ethnic group. However, differences may exist in terms of treatment (e.g., Pastor & Reuben, 2005). For example, using a large sample of health interview data from parents, Pastor and Reuben (2005) found that African American and Hispanic children were less likely than Caucasian children to receive medication for ADHD, even when factors such as income level and insurance were accounted for.

Causes of Attention Deficit-Hyperactivity Disorder

The causes of attention deficit—hyperactivity disorder have been debated for many years. In the past, some professionals claimed that ADHD was the result of permissive parenting, that children's apparently uncontrolled behavior occurred because no limits were placed on them. Other professionals proposed that ADHD was caused by diet, either food allergies or the consumption of too much sugar, or by other allergies. Although parenting skills certainly influence children's behaviors and a few children do have reactions to certain foods and other environmental elements, research on these factors indicates that neither is a causes of ADHD, nor is too much television watching or poor schooling (National Institute of Mental Health, 2006).

Recent research indicates that attention deficit—hyperactivity disorder is the result of a disorder of the brain (Fischer et al., 2005; Weyandt, 2006), but other factors also probably contribute to the severity and persistence of the symptoms, including physiological (e.g., heredity) and environmental factors (e.g., maternal prenatal smoking and alcohol consumption).

What Are the Characteristics of Individuals with Attention Deficit-Hyperactivity Disorder?

Cognitive Characteristics

The cognitive characteristics of students with ADHD are thought to be directly related to the unusual features of their brains. Interestingly, the parts of the brain that are different in individuals with ADHD are the ones known to regulate attention. Barkley (2006) considered this fact as well as all the research describing the behavior of individuals with ADHD. Using this impressive set of information, he proposed that the primary deficit in individuals with ADHD is not really attention; rather, it is **behavior inhibition** and self-regulation problems related to these neurological factors. In other words, it is not that students with ADHD cannot pay attention; it is that they cannot regulate where their attention is directed, how often it switches to other areas, or how to redirect their attention when it wanders. These problems with behavior inhibition set the stage for dilemmas related to the executive functions, or the mental activities that help them regulate their behaviors. Barkley (2006) suggests that **executive functions** can be classed into these four mental activities that operate interactively: working memory, self-directed speech, control of emotions and motivation, and reconstitution (or planning).

Academic Characteristics

Because ADHD is not related to cognitive ability, it is not surprising that the academic characteristics of students with ADHD can vary tremendously (Volpe, DuPaul, DiPerna, Jitendra, Lutz, Tresco, & Junod, 2006). For example, some students with ADHD also are gifted or talented, and educators may find that they need both to challenge these students and to assist them to focus their unique abilities (Flint, 2001). DuPaul and Weyandt (2006) have reviewed recent research on this topic and argue that these students need diverse instructional interventions and other supports to help them reach their potential.

Social and Emotional Characteristics

The social and emotional characteristics of students with ADHD have been the focus of extensive research. Some research has emphasized students' self-esteem and overall social functioning and the likelihood that they will experience depression.

Behavior Characteristics

Students with ADHD exhibit an array of disruptive behaviors well known to educators, such as failure to complete schoolwork, failure to pay close attention to details, failure to listen, and difficulty organizing tasks and activities (Reis, 2002).

Students with Attention Deficit-Hyperactivity Disorder—Key Points Extracted from Marilyn Friend (2008) Special Education: Contemporary Perspectives for School Professionals, Chapter 6.

How Is Attention Deficit-Hyperactivity Disorder Identified?

Deciding whether a student has ADHD requires close collaboration among physicians, psychiatrists, and other medical personnel, as well as school professionals and parents. No single test can reliably indicate whether a student has attention deficit-hyperactivity disorder.

Whether a student has ADHD is a decision made by a pediatrician or family physician. If a student does have ADHD, that doctor discusses with parents the options for treatment, including medication and behavior interventions.

What Are Recommended Educational Practices for Students with Attention Deficit-Hyperactivity Disorder?

Medication

The use of medication is controversial, and the decision to prescribe medication only indirectly involves school professionals. School personnel do not have the expertise to recommend to parents that medication be considered. In addition, it is critical to recognize that students taking medication do not automatically improve in terms of academic achievement. Teachers must recognize their roles in enhancing the success of students taking medication for ADHD by designing effective instruction for them and collaborating with parents in monitoring students' progress.

Parent and Professional Education

Regularly scheduled group parent education sessions should first address behavior management skills, including how to set consistent expectations and limits, create an effective discipline system that includes rewards and negative consequences, develop a strategy to address serious behavior problems, and identify the child's strengths to build positive self-esteem. In addition, although many teachers and other educators have accurate general knowledge about students with attention deficit-hyperactivity disorder, they also have many misconceptions. For example, they may not realize that students with ADHD often can perform better in a novel situation than in a familiar one or that these students may respond differently to their father's and mother's directions.

Environmental Supports

The classroom physical space should be organized and free of distractions, and should include the number and intrusiveness of decorations. In addition, teachers should post clear classroom rules and follow routines. The pacing of instruction is also importance.

Behavior Interventions

Teachers may teach students about self-management strategies, and may provide rewards for appropriate behaviors. You can learn how to create such a classwide reward system by reviewing the Positive Behavior Supports. It is important to note that for some students with ADHD, if you can intervene to stop an inappropriate behavior when it is minor or just beginning, you can avoid the need for more intense interventions.

Instructional Interventions: Provide clear, concise, and complete instruction

What Are the Perspectives of Parents and Families?

Being the parent of a child with ADHD can be exhausting. Even when these children are very young, they may not sleep as long or as often as other children, they may seem to move without stopping, and their behaviors may seem unfocused. One set of parents described their daughter's preschool escapades as including climbing into the cupboards over the kitchen counters, dangling from a shower curtain rod, and hiding in the oven during a game of Hide and Seek (McCluskey & McCluskey, 1999). As children with ADHD grow older, the problems do not necessarily end. Children's disruptive or inattentive behaviors may worsen with increased freedom. Parents may be faced with decisions about whether to use medication to treat their children, and they need to build positive relationships with the teachers and other school personnel educating their children.

Parents of children with ADHD also face the same dilemmas as those whose children have other special needs, and so they may experience phases of anger, denial, grief, and adjustment (Colson &Brandt, 2000).

Back to the Case

Louis

Louis's initial experiences in middle school were not positive, but his teachers could see that he had the potential to succeed in his studies. After his parents decided to see if medication would assist Louis to better manage the expectations in middle school, he seemed to improve considerably. Now, however, the Deffenbaughs have asked for an end-of-the-year meeting to address their ongoing concerns about medication and their plan to stop giving Louis medication. Using knowledge gained from reading this unit as well as other resources that you can access, what would you say to Louis's parents on the topic of medication? What is your appropriate role in discussing their concerns? How would you respond if Louis's father said, "Do you think we should continue the medication or stop it?"

Use with Caution: The contents of this file are some key points extracted from the book, *Special Education: Contemporary Perspectives for Schools Professionals*, written by Marilyn Friend (2008). These contents are only for your instruction preparation resources. If you use any information from this file in your course, please make sure that you give a clear citation in order to avoid plagiarism. In addition, if your class does not use this book as CEP240 does, printing all of the information for class use may violate copy right. It is suggested that you should use the information in this file as references or resources when developing your own course and you should give a clear citation if you use any information from this file in your course.