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Thinking Positively

How Some Characteristics of ADHD Can Be Adaptive and Accepted in the Classroom

Attention deficit/hyperactivity disorder (ADHD) has received much attention over the past several years in both the scientific literature and the popular press, yet confusion still exists with respect to the origin of the disorder, factors that trigger or aggravate it, the trajectory of symptoms, and treatment options, particularly for young children (Gimpel & Kuhn, 2000; Mash & Wolfe, 1999). Entering the term “ADHD” into a popular search engine revealed 624,000 hits on the Web, highlighting the diversity and overwhelming range of information available to those seeking to learn about this condition. Most, if not all, sources describe ADHD as a “disorder,” and list the various deficits and difficulties that children with ADHD experience. Parents, teachers, health care professionals, and the children themselves can become discouraged as they learn about the negative aspects associated with a diagnosis of ADHD. This article reviews the challenges associated with ADHD, as well as more recent discussions that center around a positive view of this “disorder.”

ADHD occurs in 3 to 5 percent of school-age children (MTA Cooperative Group, 1999), making it the most common psychiatric disorder among children (Sciutto, Terjesen, & Bender Frank, 2000). ADHD’s characteristics can be broken down into specific subtypes that capture differences in children who display predominantly hyperactive and impulsive behaviors, inattentive behaviors, or a combination of both (American Psychiatric Association, 2000). Because some children will exhibit mainly inattentive behaviors and some children will exhibit mainly hyperactive behaviors, not all treatments work equally well with all children diagnosed with ADHD. Most children with ADHD will continue to experience symptoms into adulthood (Mercugliano, Power, & Blum, 1999), although the behaviors tend to change over the course of development. The disorder often manifests in difficulties in school, trouble creating and maintaining social relations, low self-esteem, and deficits in the area of executive functioning (Barkley, 1998). Executive functioning refers to goal-directed, future-oriented behaviors, including planning, organized searches, inhibition, working memory, set-shifting, strategy employment, and fluency (Welsh & Pennington, 1988; Welsh, Pennington, & Grossier, 1991). Barkley (1998) proposed a model of executive functions in children with ADHD that includes deficits in inhibition, working memory, and self-regulation, which relates to the deficits children with ADHD typically demonstrate on tasks requiring split attention and organization (Zentall, 1993).

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After reviewing the literature related to academic deficits in children with ADHD, Zentall (1993) noted that children with ADHD selectively attend to stimuli that are salient and/or novel in some way, such as color or movement. This characteristic may compromise performance on tasks in which selective attention is required for stimuli that are subtle or neutral. Selective attention is required to learn most new tasks, whereas tasks that are practiced and have a fairly constant level of performance, such as reading, require sustained attention. Thus, attention problems can interfere with both the learning of new tasks and the rehearsal of tasks requiring sustained attention, such as reading and writing. Teaching children with ADHD to read and write may be optimized when modifications address the unique needs of children with the disorder. Rief (2000) suggested numerous strategies for helping these children read, including paraphrasing, limiting distractions, and scanning for chapter headings and outlines. Writing can be enhanced by using such graphic organizers as flow charts, providing models of written work, and aiding in self-editing. The author also noted that most children with ADHD will need additional help with studying and organizational skills. Rief further noted that most teaching strategies found to be useful for children with ADHD are actually ideal for the entire classroom.

Changing the Way We Think of ADHD

Despite the negative attitudes toward behavior consistent with a diagnosis of ADHD, not all of those characteristics should be thought of negatively. In fact, many researchers now view some ADHD behaviors as potentially adaptive in some situations and contexts (Hartmann, 1996, 2003; Jensen et al., 1997), and they believe that parents, teachers, and health care professionals may need to reconsider the way they view the disorder. The very name, which includes the word “disorder,” does not reflect the variability among children diagnosed with ADHD, and may bias individuals against realizing the potential, strengths, and gifts that many children with ADHD have. Similarly, Hallowell and Ratey (1994), both psychiatrists who happen to have ADHD, state that the diagnosis can become a way of life, and they place a more optimistic spin on the topic than is found in typical medical discussions on ADHD.

Having ADHD can be viewed either as a disorder defined by deficits, or as an advantage defined by unique characteristics and strengths that, in the appropriate contexts, are adaptive and advantageous (Hartmann, 2003). Had he lived today, the famous composer Wolfgang Amadeus Mozart might have been diagnosed as having ADHD, as his behaviors contribute to his description as being: “impatient, impulsive, distractible, energetic, emotionally needy, creative, innovative, irreverent, and

a maverick” (Hallowell & Ratey, 1994, p. 43). These behaviors worked together in a beneficial manner for the musical genius, and may be part of what makes ADHD “powerfully positive” (Hallowell & Ratey, 1994, p. 43). Although Hallowell and Ratey believe that ADHD is a serious condition that should be treated sensitively and appropriately when diagnosed, they also point out that many historical figures, including Albert Einstein, Edgar Allan Poe, Salvador Dali, and Henry Ford, displayed characteristics consistent with ADHD, and that every individual with or without ADHD carries within him or herself extraordinary potential. It is this process of identifying potential, capitalizing on unique strengths, and encouraging physical, academic, and social/emotional development that is especially important to apply with every child who is diagnosed with ADHD.

Some researchers and authors do not believe that ADHD is a negative diagnosis at all, but rather it is society’s perception of the diagnosis that is negative. Hartmann referred to ADHD as a *trait* rather than a *disorder*, and outlined an argument in which ADHD characteristics are associated with a specific gene, which he called the “Edison gene” after the inventor who is believed to have had ADHD. The trait, Hartmann claimed, is associated with behaviors and skills that worked to the advantage of hunter-gatherer societies and has been passed down over the course of evolution. He described how many of the symptoms of ADHD, including short attention spans, poor planning skills, daydreaming, and impatience, can be viewed as adaptive characteristics. That is, these characteristics were perhaps vital to the survival of hunter-gatherer societies. For example, what might be considered “short attention span” and “poor planning” also could be described as continually monitoring the environment and being flexible, ready to change strategies and react instantly to new sights or sounds. These characteristics stand in contrast to what so-called “farmer” societies possess. Farmers exhibit such characteristics as patience, being purposefully organized, and focusing on tasks until completion. Although being alert to changes in surroundings and reacting quickly may be advantageous to hunters, farmers fare better when they plan ahead, are patient, and maintain focus until goal completion.

Unfortunately for children with hunter-like traits, modern North American cultures typically favor farmer characteristics over hunter traits, particularly in the classroom. Children are expected to sit at their desks quietly and keep their hands still as they listen to the teacher; they must work on projects or topics for prolonged periods of time; homework must be completed after school hours; and information is typically absorbed through reading, listening, or seeing as opposed to doing. Children with farmer characteristics often perform well under these “normal” conditions.

Children with ADHD characteristics, on the other hand, often find it difficult to achieve academic goals and obey classroom rules. Learning about how ADHD can be a positive trait in the classroom, however, can affect how educators deal with students diagnosed with ADHD, and, in turn, can benefit such students' academic, social, and behavioral outcomes.

The manner in which ADHD is viewed can affect the strategies that teachers employ in the classroom. Alcock and Ryan (2000) state that ADHD could be thought of as a gift, despite its negative reputation. They suggest that teachers should attempt to identify the unique ADHD characteristics of each child, and tailor their instruction and teaching behaviors to emphasize the child's strengths and abilities. ADHD can give children an advantage in that they are "polyactive"—that is, they are able to work on numerous tasks—and that they are often excellent brainstormers (Alcock & Ryan, 2000, p. 9). The notion of being polyactive, however, may refer more to the tendency to pursue multiple activities, rather than the ability to coordinate and process numerous tasks simultaneously. That is, although children with ADHD may be able to carry out various tasks sequentially and with great energy and enthusiasm, their ability to pursue multiple tasks simultaneously typically is compromised. Often, children's attention to one task is diverted to new tasks or stimuli, resulting in fragmented attention rather than processing numerous task demands at one time. Alcock and Ryan recommend techniques for making use of students' excess energy, such as allowing these children to do classroom errands. Such errands can include walking notes from the teacher down to the school's administrative office, putting chairs up on desks at the end of the day, and helping the teacher put supplies away or hanging up visuals. They also suggest that teachers establish quiet zones, create times for one-on-one interactions, and listen to students' needs and solve problems together. Based on the research, teachers may consider valuing and exploiting students' natural energy by engaging them in numerous activities, both academic and otherwise. Yet, they also must realize that being polyactive may not equate to success and appropriate focus on all the tasks simultaneously.

Just as Hartmann (1996, 2003) and others (Jensen et al., 1997) believe that ADHD is actually an adaptive trait with a negative image, Hughes (1990) also cautions about the danger of labeling children with diagnoses that may carry prejudicial stereotypes. Hughes (1990) suggests that teachers go beyond the label of ADHD and identify the specific needs of their students. Too often, the label marks the child as somehow inadequate, rather than identifying a specific pattern of learning and behaving. Even pointing out that children with ADHD

have attention difficulties may be simplistic, because attention has many facets, including the ability to be directed, switched, divided, sustained, or withheld. Hughes recommends that teachers determine the specific characteristics and difficulties of each child and states that, with appropriate programming, children with ADHD can succeed academically, and even achieve average levels of attentional performance when tasks are self-paced. With respect to classroom instruction, the author suggests that teachers call on the students frequently, use various cues and immediate feedback, be specific about lesson goals, and emphasize the importance of setting goals.

Schirduan (2001) found that children with ADHD are successful in situations in which their unique learning patterns and strengths were identified. Specifically, Schirduan examined 87 students (Grades 2-7) from Schools Using a Multiple Intelligences Theory (SUMIT). In these schools, the curricula were designed to reflect the various cognitive profiles of the students. The author pointed out that traditional schools use curricula that reflect the dominant culture, rather than addressing individual children's learning styles, intelligences, and interests. In considering Gardner's (1993) eight intelligences (musical, bodily kinesthetic, logical mathematical, spatial, linguistic, interpersonal, intrapersonal, and naturalist), Schirduan found that most schools focus on logical mathematical and linguistic domains at the expense of the other areas (see Table 1). This focus places students whose primary areas of intelligence lie in one or some of the other six domains at a disadvantage. Schirduan found that most of the children in the program had average self-concepts, as well as average achievement levels. Because academic underachievement is a valid concern for most children with ADHD (Barkley, 1998), the results from this study were encouraging. When taught in settings that implement a multiple intelligences approach, children with ADHD perform and feel better than children with ADHD in traditional school settings (Schirduan, 2001).

Working With ADHD in the Classroom

Children with ADHD often are polyactive, excellent brainstormers, eager to please, energetic, and creative. Teachers can use these gifts in the classroom by asking students to carry out special tasks (such as those mentioned above), and creating hands-on lessons and stimuli to keep students with ADHD engaged. Teachers can capitalize on children's creativity and natural desire for exploration by setting up mini-experiments and lessons presented in various media (such as through music, art, crafts, and dance). Teachers also can enhance and capitalize on students' gifts by recognizing each child's individual learning styles, and by using a multiple intelligences approach to teaching. To help

children achieve their best academically, Alcock and Ryan (2000) suggest that educators teach demanding course work in the morning hours, keep the classroom setting structures, and use a variety of media in their instruction (such as chalkboards, overhead projectors, objects, charts, videos, etc.).

Altering perceptions and classroom practices to benefit the whole classroom is a larger goal related to reshaping our views of ADHD. Realizing that children with ADHD may have strengths that are hidden behind misleading terminology and restrictive requirements can help teachers and support staff to re-examine many of their approaches to education and behavior management. Cooper and O'Regan (2001) proposed that teachers arrange their classrooms to limit distraction and increase teacher availability to address attention and behavioral issues. Furthermore, the authors suggested that complex tasks and instructions be broken down into smaller, more manageable components. Students with ADHD may need additional support completing multiple tasks. The authors recommended that teachers should provide students with a written copy of the instructions that they can refer back to, or have students repeat instructions back to the teacher. Lerner, Lowenthal, and Lerner (1995) discussed how educators might help children with ADHD improve their organizational and listening skills, and how to sustain their attention (De La Paz, 2001; DuPaul & Stoner, 1994; Hughes, 1990). Lerner et al. (1995) state that students with ADHD often need an external structure to help them organize and prioritize assignments, including rewards for being prepared, as well as such tools as day-planners to list homework assignments and deadlines. To increase

sustained attention, the authors suggest that teachers shorten tasks and instructions, and include interesting and novel stimuli.

Taking some simple measures, such as shortening instructions and re-arranging desks in the classroom, can help children diagnosed with ADHD reach their creative, academic, and behavioral goals. Perhaps more fundamentally, altering perceptions about the disorder, if it is in fact a disorder, is vital to unlocking the unique strengths and skills of children diagnosed with ADHD. For example, although children with ADHD often are accused of daydreaming, Hartmann (2003) suggests that teachers view such behavior as an indication that children are bored with mundane tasks and that all the students would benefit from a change. Another example is the common complaint by teachers that students with ADHD have difficulty converting ideas into words. If ADHD is in fact an adaptive trait, rather than a disorder, then teachers would do well to realize that many students are visual or concrete thinkers who can clearly visualize a goal or product, even when they do not have the words to describe it. Allowing children to represent their ideas, inventions, or emotions through other means can open up alternative means of communication and education. Many students in the classroom, whether or not they are diagnosed with ADHD, could have more success solving problems or summarizing stories by using paints, molding clay, dramatic skits, or music. In fact, Zentall (1993) proposed that teachers incorporate new activities and experiences into their lesson plans. The author found that children with ADHD behaved better while watching films and during games than when they were partaking in more mundane tasks. In addition,

Children's Strengths in Relation to Gardner's Intelligences

Intelligences:	Potential Strengths:
Linguistic	Child expresses him- or herself clearly through written or spoken language; can use language to achieve goals
Musical	Child has strong musical talents or inclinations; can appreciate musical patterns, rhythms, etc.
Logical-Mathematical	Child is good at reasoning logically, solving mathematical problems, and/or exploring issues scientifically
Spatial	Child is aware of the space, locations, and/or dimensions around him or her
Bodily-Kinesthetic	Child performs well at sports, is aware of his or her body in motion, and can use mental ability to coordinate physical movements
Interpersonal	Child has success at interacting with other people, having empathy for others' feelings, and interpreting others' motivations and desires
Intrapersonal	Child is good at interpreting his or her own feelings
Naturalist	Child knows a lot about nature; can retain facts about the environment, animals, etc.

Table 1

art provides many therapeutic benefits for children with ADHD by giving the children an opportunity to express themselves; in addition, art is associated with increased attention and decreased impulsive behavior (Safran, 2002; Smitheman-Brown & Church, 1996). When implementing curricula, teachers should select hands-on material whenever possible, use multiple modalities when presenting information, modify testing strategies in accordance to students' special needs, and introduce any new vocabulary prior to delivering lessons (Lerner et al., 1995).

To deny that students diagnosed with ADHD experience various degrees of difficulty in academic, social, and behavioral domains would be, at the very least, irresponsible. At worst, denying the challenges associated with ADHD might hinder students from receiving the attention and help they may need to achieve their potential. Although some ADHD characteristics may be adaptive and despite the fact that North American societies' overwhelming allegiance to a farmer-type behavioral system may be limiting, some genuine concerns must be addressed. In fact, some researchers vehemently oppose viewing ADHD as an adaptive trait at all, cautioning that doing so might underestimate the specific needs and limitations associated with the disorder (Barkley, 2000; Goldstein & Barkley, 1998). For example, children with ADHD frequently disrupt classroom tasks and other classmates, are often defiant, and have problems with peers and difficulty making friends (DuPaul & Stoner, 1994). Furthermore, students diagnosed with ADHD may have difficulty with selective and sustained attention (Zentall, 1993). Many teachers and educators face challenges associated with teaching children with ADHD. These students often have behavioral problems, difficulties maintaining focus in the classroom, and challenges meeting academic and social goals. Unfortunately for students diagnosed with ADHD, many teachers and health care professionals view the disorder as just that, a disorder. Yet, maintaining a positive attitude about ADHD can allow parents and educators to move beyond the diagnosis and focus on children's strengths and unique learning styles to encourage optimal development.

Conclusion

The authors are not denying that children diagnosed with ADHD do in fact face many real challenges, nor are we necessarily supporting the notion that ADHD is an evolved, adaptive trait. Rather, we argue that thinking positively about ADHD and recognizing all children's unique strengths is important for helping children reach their social, emotional, and academic potential.

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