

## Attention deficit disorders and gifted students: What do we really know?

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Few current topics in education have engendered as much attention, concern, and passion as Attention-Deficit/Hyperactivity Disorder (ADHD), particularly in gifted children. We recognize that giftedness is multifaceted and can be assessed in many ways other than a standardized IQ test. We will summarize and differentiate between what is known and what is assumed about ADHD in gifted students. (See our NRC/GT monograph for a complete analysis of this topic.)

### ADHD: History, Definition, and Etiology

Attention-Deficit/Hyperactivity Disorder (ADHD) is a “syndrome,” i.e., a grouping of symptoms that typically occur together. The core symptoms of ADHD are impulsivity, inattention, and hyperactivity (American Psychiatric Association, 1994). Estimates of the prevalence of ADHD among school age children vary but the median estimate across all definitions of ADHD and all types of studies is 2% in boys and girls combined (Lahey, Miller, Gordon, & Riley, 1999).

Family, adoption, and twin studies demonstrate that genetic factors are very important in ADHD, but environmental factors also play a significant role since heritability is less than 100%. Environmental factors, including premature birth, head injury, fetal alcohol syndrome, prenatal exposure to drugs of abuse, such as cocaine, lead toxicity, prenatal maternal smoking, and rare endocrine abnormalities can all cause the ADHD syndrome.

### How Is ADHD Assessed and Diagnosed?

Four subtypes of Attention-Deficit/Hyperactivity Disorder (ADHD) are recognized in the DSM-IV: Predominantly Hyperactive/Impulsive, Predominantly Inattentive, Combined, and Not Otherwise Specified (American Psychiatric Association, 1994). To meet the criteria for one of the specific subtypes, at least 6 of the 9 symptoms of hyperactivity/impulsivity, or at least 6 criteria from the 9 symptoms of inattention must be present. (Combined type means both sets of criteria are met.) The symptoms must occur *in more than one setting, must persist for at least 6 months*, and must affect the individual “to a degree that is *maladaptive and inconsistent with developmental level*” (American Psychiatric Association, 1994, p. 83).

Under optimal circumstances, a team, *including a qualified clinician*, such as a pediatrician, family physician, psychiatrist, neurologist, or psychologist should make the diagnosis of ADHD because only these types of specialists can assess the physical and psychological problems that mimic ADHD. Information about these conditions is rarely available to school personnel, no matter how observant, experienced, or well trained.

For the majority of children with ADHD, symptoms become clear-cut when their behavior can be observed regularly and compared to other children over a sustained period. The classroom teacher, therefore, is typically the best person to make such comparisons, especially when systematic behavioral checklists or rating scales are employed. When the child in question is gifted, an individual who specializes in giftedness should also be included in the process to provide information about the child’s behavior in comparison to other children of similar abilities (Silverman, 1998).

### ADHD or Gifted: Either or Both?

In recent years, several authors (Baum, Olenchak, & Owen, 1998; Cramond, 1995; Freed & Parsons, 1997; Lind, 1993; Tucker & Hafenstein, 1997; Webb & Latimer, 1993) have expressed concern that giftedness is often misconstrued as ADHD and that the diagnosis of ADHD among the gifted population has run amok. We acknowledge for the purposes of this discussion that there are cases of mistaken diagnosis, although as of this writing, we have found **no empirical data** in the medical, educational, or psychological literature to substantiate the extent of this concern.

The lack of scientific data heightens our dismay over the wave of skepticism that appears to prevail about the existence of ADHD in gifted children. Specifically, we are concerned that the question “ADHD or gifted?” dismisses the possibility that the two conditions may coexist. Prudent attempts to avoid over-diagnosis must be balanced against a child’s need for evaluation and treatment in the context of inevitable uncertainty when medical diagnoses are invoked.

, In this context, Silverman (1998) notes that some professionals erroneously assume that a child who demonstrates sustained attention, such as a gifted child engaged in a high-interest activity, cannot have ADHD. It is understandable that an observer might discount the possibility of ADHD because from all appearances the child is so absorbed in a task that other stimuli fade into oblivion. While this state of rapt attention is often described as “flow” (Csikszentmihalyi, 1990), it can also be ascribed to “hyperfocus,” which is a similar condition that individuals with ADHD frequently experience (Hallowell & Ratey, 1994).

Activities that are continuously reinforcing and “automatic,” such as video or computer games or reading for pleasure, do not distinguish children who have ADHD from children who do not have ADHD, whereas effortful tasks do (Borcherding et al., 1988; Douglas & Parry, 1994; Wigal et al., 1998). By virtue of their giftedness, the range of tasks that are perceived as “effortless” is broader for gifted children, which is why their ADHD may be less apparent than in children who struggle more obviously and to lesser effect.

Recent work (Kalbfleisch, 2000) suggests that the gifted child with ADHD is particularly predisposed to exhibit this state of “flow” or “hyperfocus.” While this can be a positive aspect of task commitment and a sign of motivation, it becomes a problem when the child is asked to shift from one task to another. Therefore, while cognitively this state can have positive aspects, behaviorally it can also cause problems (Moon, Zentall, Grskovic, Hall, & Stormont, in press). Furthermore, ADHD is not characterized by an inability to sustain attention, but rather by the inability to appropriately regulate the application of attention to tasks that are not intrinsically rewarding and/or that require effort. Such tasks are, sadly, characteristic of much of the work that is typically required in school, even in programs for gifted students.

While a misdiagnosis of ADHD is undesirable, diagnostic errors of omission are just as serious and may be even more prevalent among gifted students. This difficulty occurs when a student’s over-reliance on strengths inadvertently obscures the disability. While emphasizing strengths may highlight a student’s gifts and talents, it does not eliminate the reality of the condition and can, in fact, lead to a worse predicament in which the student distrusts his or her abilities because of the struggle to maintain them. On the other hand, if a student is allowed to acknowledge and experience the disability, he or she may learn appropriate compensatory or coping skills.

We believe that acknowledging that a child can be both gifted and have ADHD and that exploring the ways in which these conditions might interact in each child is a more productive way of looking at the problem than agonizing about a false dichotomy.

Given the realities of the co-existence of giftedness and ADHD, the question should not be “ADHD or gifted?” but rather “how impaired is this student by his/her ADHD?” Some children are able to compensate in most situations for their ADHD (and neither they nor their parents or teachers may be aware of it); others are seriously handicapped. The single most relevant element that must be considered in evaluating ADHD is the degree of impairment a child experiences as a result of the behaviors.

A child whose behavior causes him/her to be impaired academically, socially, or in the development of a sense of self, should be examined from a clinical/medical perspective to exclude potentially treatable conditions, even if the behavior may be similar to the traits typically ascribed to creativity or giftedness (Cramond, 1995) or to “overexcitabilities” (Piechowski, 1997; Silverman, 1993). However, this does not mean that every child who is impaired needs medication. As many authors have noted (Diller, 1998; Flick, 1998; Hartmann, 1993; Lerner, Lowenthal, & Lerner, 1995), non-medical interventions can be used within the school and home and should be tried before more intrusive interventions are employed.

The 1999 reauthorization of the Individuals with Disabilities Education Act explicitly recognized, for the first time, ADHD (and ADD) as disorders that should be classified as Other Health Impaired, when they adversely affect a child’s educational performance. The reader is referred to [www.chadd.org/legislative/govt.htm](http://www.chadd.org/legislative/govt.htm) for further detailed information and relevant hyperlinks.

### **ADHD and Giftedness: Where Do We Go From Here?**

Clearly, there is need for additional empirical research on giftedness and attention deficit disorders. Questions such as incidence of DSM-IV subtypes of ADHD among the gifted population must be investigated before other types of research can proceed. If such research were to show that current DSM-IV criteria identify significantly different proportions of gifted students compared to the general population (over or under diagnosis), subsequent studies would be able to explore the sources and characteristics of the discrepancies. The availability of data would in turn facilitate and encourage the development of strategies for appropriate identification and curriculum. Contact the NRC/GT website ([www.gifted.uconn.edu](http://www.gifted.uconn.edu)) if you know of identical twins (ages 5-16), one of whom presents characteristics of ADHD or ADD.

ADHD is not a defect that must be “cured.” In fact, our experience of many gifted children with ADHD resonates with our colleagues’ perceptions that the condition can not only inhibit, but enhance the realization of gifts and talents.

Educators of gifted students with ADHD face a formidable task in that they must provide opportunities for students to apply their strengths while ameliorating their deficits. Although the same might be said of any sound educational program, this is more daunting for gifted students with ADHD because of the striking disparities these conditions can create. Only through consistent attention, immeasurable creativity, and enduring patience by educators, parents, and students, coupled with substantive research, can these challenges be adequately addressed.

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