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ABSTRACT

This brief paper on gifted children with attention deficit hyperactivity disorder (AD/HD) focuses on the special educational needs of this population. Emphasis is on four major conclusions: (1) gifted children with AD/HD differ from average children with AD/HD in cognitive, social, and emotional variables (e.g., the gifted child is likely to show high level functioning in at least one academic area and is more likely to show developmental asynchrony); (2) gifted children with AD/HD differ from other gifted children (e.g., they have more difficulty completing work assignments and lack behavioral self-control; (3) assessment of gifted children needs to be done by those knowledgeable about both giftedness and AD/HD (e.g., misdiagnosis is likely and such children need to be evaluated in comparison with gifted peers in a stimulating environment); and (4) recommendations about Individualized Education Program or Section 504 planning need to consider both AD/HD problems and the effects of being gifted (e.g., these children may need acceleration at the same time they need to learn metacognitive skills to support more advanced achievement). (DB)

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GIFTED CHILDREN WITH AD/HD

There are a number of reasons for considering gifted children with AD/HD. The dual exceptionality of being both gifted, and AD/HD, often means that such children are not recognized as having either exceptionality, and thus, their needs for an appropriate education are not met. AD/HD, in this paper, refers to the mixed type, those children with symptoms of both inattention, and hyperactivity. AD/HD is considered to be a deficit in ability to inhibit responding with consequent deficits in self regulation and self monitoring of behavior. The underlying deficit in AD/HD is hypothesized to be biological, and based on differences in neurotransmitter regulation of dopamine. Most affected are the areas of the brain that deal with the executive functions, that is the ability to regulate, modulate, produce on demand, organize, and sustain focus.

Giftedness, for the purpose of this paper, is defined as an IQ of 120+ or outstanding achievement in one or more academic areas. However, it should be noted that some children with full scale IQ's in the average range may also be gifted but AD/HD can decrease some scores enough that giftedness may not be readily expressed in this way, especially in older children with years of failure behind them.

Gifted children with AD/HD differ from more average children with AD/HD in a number of ways that impact assessment of both giftedness and AD/HD, and which affect planning and treatment for these children. Based on years of assessments of several hundred gifted children with AD/HD at the Gifted Resource Center of New England, data have been collected on both an anecdotal and more formal basis. Anecdotal data have led to conclusions about the social, emotional and cognitive status of gifted children with AD/HD. More formal data explore how these children differ from other gifted children and from average children with AD/HD on the Wechsler Intelligence Scale for Children and on neuropsychological assessments (Lovecky, 1999).

Gifted children with AD/HD differ from average children with AD/HD in cognitive, social and emotional variables.

On tests of intelligence and achievement, gifted children with AD/HD, mixed type, show a greater degree of inter and intra-test variability. They miss many easier items and are correct on much more difficult items. They have greater amounts of scatter with performance usually ranging from average to highly gifted. In addition, highly gifted children (IQ 150+), particularly those who are mathematically gifted, are so adept at recalling, using and hearing numbers that arithmetic and digit span subtests may be among their highest scores. For these children, the freedom from distractibility factor of the WISC-III scale simply does not measure the problems they do have with sequential processing. Thus psychologists who rely exclusively on the Wechsler tests to determine AD/HD patterns will miss many gifted children (Lovecky & Silverman, 1998).

The gifted AD/HD child is also likely to show higher level functioning in at least one subject area. Abstract reasoning ability in particular is often well developed and in advance of other more basic skill levels.

Gifted children with AD/HD, while deficient in many of the supporting work skills needed to succeed in school (note taking, outlining, organization of ideas, writing skills), are often more proficient at learning things rapidly than age peers. Compared with age peers with AD/HD, these gifted children also exhibit more mature use of metacognitive strategies such as grouping by category, using mnemonic devices, using recall of one thing to trigger another, organizing by pattern or spatial characteristics. What gifted children with AD/HD have trouble doing, compared to other gifted children, is using these strategies as efficiently. They know them; they forget to use them. When they remember to use these strategies, their work is outstanding. When they forget, their work quality drops. This produces some of the variability seen across tasks and on different days with gifted children with AD/HD.

Gifted children with AD/HD may also differ from more average children in the greater degree of asynchrony (differences in degree of development across cognitive, social and emotional areas compared to age and IQ) they show. They may behave less maturely than average peers some of the time, but more maturely at other times, for example, making airplane noises in school at age 7 and 8, but on the other hand,

having advanced ideas about how to play complex games. They also can be far more emotional than age peers with AD/HD. Sensitivity is an important aspect of giftedness, and gifted children with AD/HD show their sensitivity in awareness of the external environment, internal states and feelings, projective identification with aspects of their field of interest, in empathy and compassion for others and in passionate feelings for people and causes. When feelings are negative, gifted children with AD/HD can become overwhelmed by worries that would never occur to the more average child.

Gifted children with AD/HD often have more specialized interests than age peers, and perform similar activities in more complex ways. Gifted children with AD/HD need and like more complexity than age peers, and seek it out in activities and interests. Interests may be pursued over a number of years and to an intense degree. Some also pursue many activities over the course of years, and become proficient in several diverse areas of accomplishment.

Friendships tend to reflect both the giftedness and the AD/HD of the child. These children have advanced needs for complexity in friendships, want to share complex interests, and have more advanced understanding of rules, games and strategies than age peers; however, they also exhibit deficits in social behavior, misreading social cues and showing poor timing and lack of understanding of group goals and group dynamics. Often concerns about fairness are paramount and reflect the gifted child's advanced moral reasoning ability, while immature emotional development is shown in the child's inability to act on these same moral issues. Thus, the child insists on fairness in game rules, until he or she starts to lose. Then fairness becomes less salient than winning.

Gifted children with AD/HD differ from other gifted children.

These children show a greater degree of asynchrony among cognitive, social and emotional areas of development., and much greater variation in their ability to act maturely.Cognitive deficits, compared to other gifted children, are shown in less ability to think sequentially, to use working memory adequately, to solve problems using part to whole relationships, and to reason inductively especially since they have trouble picking out the main or salient feature among data. Gifted children with AD/HD, compared to gifted peers, complete less work, tend to try to hurry through it, often change topics on projects, or take inordinately long to complete simple exercises.

They find it particularly difficult to work in groups, even groups of gifted children. Gifted children with AD/HD also find completing tasks less rewarding than do other gifted children, that is, for many, the intrinsic reward of completion is not as satisfying to them. On the other hand, when working on a self-chosen activity, gifted children, with and without AD/HD, are able to immerse themselves in the task and work for long hours without much external reinforcement. This ability to hyperfocus, the falling into "flow" (Csikszentmihalyi, 1996), is what makes creative work so satisfying to so many gifted children, whatever their other problems.

In terms of social and emotional development, gifted children with AD/HD tend to show more difficulty with self-control and self-monitoring of behavior, less ability to judge situations for their salient features, less ability to predict cause and effect in behavioral situations and difficulty inhibiting action.

Assessment of gifted children needs to be done by those knowledgeable about both giftedness and AD/HD.

Misdiagnosis of AD/HD can occur in two directions. Highly energetic gifted children can be seen as AD/HD, and some gifted children who can concentrate for long periods of time on areas of interest may not be seen as AD/HD even when they are. Thus, knowledge about what is giftedness and what is AD/HD is vital in assessing AD/HD, and in ensuring that gifted children are not misdiagnosed. This is particularly the case for those children who are very inappropriately placed academically and who receive little academic stimulation (Baum, Olenchak, & Owen, 1998). For many gifted children with mild AD/HD, a stimulating school environment coupled with small classes will significantly decrease symptoms of AD/HD (Hartmann, 1996). In fact, for some children with very mild AD/HD, the stimulation of a specialized gifted class may help them organize their energy significantly. These children can utilize the stimulation of the class, with their own abilities to hyperfocus, well enough so that they can achieve impressive results. Many of these children have the ability to self-reflect on their own behavior, something more severely affected AD/HD children do not have. This reflection can allow mild AD/HD gifted children to compensate for deficit areas while using their AD/HD abilities to their advantage.

Children with AD/HD symptoms at moderate to severe levels are unlikely to be helped enough if the only intervention is changing classroom parameters to more

meet their stimulation needs. AD/HD is not only a school problem. It often affects social and emotional areas as well. Children may need multiple interventions in all of these areas in order to function better. This is particularly the case for those AD/HD gifted children whose asynchrony is much greater than that of other gifted students, because the ability to meet demands across a variety of situations is diminished by the greater asynchrony. Changing the school environment then is necessary, but not sufficient for gifted children with moderate to severe AD/HD. It is also not sufficient to meet the needs of even mildly affected children who lack the skills to learn compensatory mechanisms themselves. Often these are students whose AD/HD will show as more involved than previously thought as the demands of academic requirements increase.

In assessing AD/HD, gifted children need to be compared to gifted peers in a stimulating environment rather than average children in regular classes. Checklists and teacher observations need to be considered in the context of the type of classroom in which the child is placed. Thus, a profile of strengths and weaknesses needs to be collected from various sources including home, school and other activities. These then should be compared to the child's own mean, rather than to absolute age norms. Deficit areas of gifted children with AD/HD can be overlooked if only age norms are used as a measure of ability or achievement. This applies also to tests of executive functions, memory and processing when used to determine areas of strength and weakness. Furthermore, intelligence should not just be based on the Wechsler scores. Use of the Stanford-Binet LM as a supplementary test should be considered when two or more verbal subtests of the Wechsler are in the SS 17+ range. Use of the Stanford-Binet LM in this manner provides a better estimate of intellectual potential since the Wechsler test may have too low a ceiling for some gifted children (Silverman & Kearney, 1992). The Stanford-Binet V, when available, will provide a better assessment of strengths and weaknesses of gifted children in general.

Recommendations about IEP or 504 planning need to consider both the AD/HD problems and the effect of being gifted.

School programs need to consider both strengths and weaknesses, and work to provide environments that maximize stimulation and interest at the appropriate level

for children. This is because gifted children with AD/HD have underlying deficits in executive functions that require intervention, but accommodations needed will be different from those recommended for more average children with AD/HD. A good example is acceleration. Gifted children with AD/HD may need acceleration at the same time that they need to learn metacognitive skills that will support the higher level of functioning required. Thus, they will need a differentiated program, not just placement in an advanced class. Gifted children without AD/HD may pick up the support skills quickly, can skip ahead and keep up with older students. Average children with AD/HD will not need this kind of accommodation but may need resource help to build skills to function in the regular classroom doing the regular work.

Gifted children with AD/HD will need academic programs that allow them to go ahead in areas of strength while building on weaker areas. They may need to be specifically taught study and organizational skills, in the context of higher level work, that gifted peers acquire without difficulty. Also, gifted children with AD/HD need access to mentors to work in areas of strength. Without work that meets their cognitive needs for stimulation and complexity, gifted children with AD/HD develop less ability to focus and sustain attention, poorer work habits and less advanced achievement. They also may lose their interest in learning and develop behavioral and emotional problems secondary to their lack of investment in achievement. Thus, working with gifted children with AD/HD requires a team approach in which specialists with expertise in both giftedness and AD/HD pool resources to meet these children's unique needs.

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