

The Possibility of Misdiagnosis of Giftedness and ADHD Still Exists: A Response to Mika

Jason M. Nelson
Anne N. Rinn
D. Niall Hartnett

In a previous article, we provided a review of the literature pertaining to the potential misdiagnosis of giftedness as ADHD, as well as a small-scale study to illustrate this potential misdiagnosis. In this issue of *Roeper Review*, Mika provides several criticisms of that paper. In this article, we provide responses to her arguments by discussing the "symptoms" of giftedness; the relationship between ADHD, giftedness, and overexcitabilities; and the diagnosis of ADHD.

Jason Nelson is an assistant professor of psychology in the School Psychology Program at Eastern Illinois University. He recently completed an American Psychological Association-accredited internship at the Department of Psychological Services of Virginia Beach City Public Schools, where he worked in a middle school for gifted students. His research interests include the prevention of reading disabilities, assessment of phonological processing, affective and motivational characteristics of students with reading disabilities, and internalizing psychopathology in children. E-mail: cfjmn@eiu.edu

Anne N. Rinn is an assistant professor of psychology at Western Kentucky University. She holds a Ph.D. in educational psychology from Indiana University. Her research focuses on the academic, social, and emotional development of gifted students, particularly those at the college level, as well as the effects of gifted programming on student development as a whole. E-mail: anne.rinn@wku.edu

D. Niall Hartnett has a B.A. in psychology from Trinity College, Dublin, Ireland, and a MS in educational psychology from Indiana University. He is an academic advisor in the Department of Psychology at University of Illinois at Chicago. E-mail: fluukk@yahoo.com

In a previous article, we (Hartnett, Nelson, & Rinn, 2004) provided a review of the literature pertaining to the potential misdiagnosis of giftedness as attention deficit hyperactivity disorder (ADHD), as well as a small-scale study to illustrate this potential misdiagnosis. We argue gifted students may be referred for problems related to such characteristics as hyperactivity and inattention. According to Gordon (1990), these referrals are frequent. In fact:

Perhaps as many as half of gifted children with the diagnosis of ADD/ADHD do not have the significant impairments due to attention or hyperactivity that are required by the DSM-IV-TR to make an ADD/ADHD diagnosis. Although they do show some problematic behaviors in some settings, these behaviors can be better explained by their giftedness and its implications. In short, they are simply incorrectly diagnosed as ADD or ADHD. (Webb et al., 2005, p. 37)

We are not alone in believing in the possibility of misdiagnosis. Many authors and experts believe gifted children are wrongly diagnosed with ADD or ADHD (Webb et al., 2005), including Baum & Olenchak (2002); Baum, Olenchak, & Owen (1998); Crammond (1994, 1995); Flint (2001); Freed & Parsons (1997); Kutner (1999); Lawler (2000); Lind (1993); Lovecky (1994); Ramirez-Smith (1997); Silverman (1998); Tucker & Hafenstein (1997); Webb (2001); Webb et al.; and Webb & Latimer (1993). This list of experts suggests the possibility is more than a myth.

In her response to our article, Mika (2006, in this issue) emphasizes there is no empirical evidence to support the notion gifted children may be misdiagnosed as having ADHD. We agree with this statement, as do other researchers in the field (e.g., Kaufman, Kalbfleisch, & Castellanos, 2000). However, given the prevalence of expert opinion on the possibilities of misdiagnosis, we felt an empirical investigation was needed. Although our findings were far from being considered indisputable evidence to support the misdiagnosis of gifted children, our study may serve as a starting point for other researchers in the field who are interested in collecting empirical data regarding the diagnoses of gifted children.

Mika raised several points in her article we wish to address. Specifically, we will discuss the "symptoms" of giftedness; the relationship between ADHD, giftedness, and overexcitabilities; and the diagnosis of ADHD.

"Symptoms" of Giftedness

Mika (2006) stated:

There is no evidence of giftedness in the vignette describing Sam's behavior (see Appendix). There is, however, evidence of hyperactivity, poor impulse control, inattentiveness, carelessness, and oppositional behavior manifested in unwillingness or inability to follow rules. Are any of these behaviors signs of giftedness? Hardly...the information it does present suggests a strong possibility of ADHD and none of giftedness. (p. 238)

We agree these behaviors are more characteristic of ADHD. However, they can in fact also be characteristic of some gifted children. Behaviors associated with ADHD are not necessarily characteristic of gifted children, nor are they a requirement to be identified as gifted. Not all gifted children will display these behaviors, but some gifted children will, as illustrated in the following brief review of the literature.

Hyperactivity

Hyperactivity can occur in both gifted children and children with ADHD (Barkley, 1990; Clark, 1992; Guenther, 1995). However, hyperactivity may be manifested in different ways, whereby the gifted child may show focused energy and the child with ADHD is largely unfocused (Leroux & Levitt-Perlman, 2000), as we mentioned in our previous article. Hyperactivity, though, is the first characteristic a diagnostician will see. To illustrate, consider entering a room with either a hyperactive, gifted child, or a hyperactive child with ADHD. You will likely notice the hyperactivity as the most salient feature of the child. Whether or not that hyperactivity is focused or unfocused is a secondary concern. Without the knowledge of the potential high-activity levels of gifted children, a diagnostician could easily make an error. Mika supports this notion by saying, "the randomness or goal-directedness of an activity is in the eye of a beholder" (2006, p. 240). This is exactly our point.

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Oppositional Behavior

Apparent oppositional behavior in gifted children versus children with ADHD may have a different manifestation. Gifted students are often curious, seek stimulation, and have high energy levels, all of which make these students less inhibited than other students. When an environment is restrictive, gifted students may find themselves pushed to an extreme level of disinhibition to meet their own needs (Baum, Olenchak, & Owen, 1998), the likes of which may resemble oppositional behavior or poor impulse control. Children with ADHD may demonstrate true oppositional behavior. In addition, both gifted children and children with ADHD may challenge authority. Gifted children may challenge authority because they are unwilling to accept the judgment of others due to heightened intellectual perception (Vail, 1987). Children with ADHD may challenge authority because they are oppositional (Leroux & Levitt-Perlman, 2000).

Inattentiveness

As mentioned in our first article, in a study of 871 gifted elementary-, middle-, and secondary-school students, at least half of the students reported core subjects were not challenging (Gallagher & Harradine, 1997). Likewise, a national study revealed much of the educational curriculum is repetitive for gifted students (Reis et al., 1993). Thus, the likelihood of a gifted child being bored in school is high. When the curriculum is perceived as boring, routine, and dull, behaviors such as hyperactivity, inattention, and impulsivity will likely increase (Baum, Olenchak, & Owen, 1998). As stated in our article, the authors of the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR*; American Psychiatric Association, 2000) also acknowledges this occurrence: "Inattention in the classroom may also occur when children with high intelligence are placed in academically understimulating environments" (Hartnett et al., 2004, p. 91).

ADHD, Giftedness, and Overexcitabilities

Mika (2006) suggested our, as well as many experts', discussion of psychomotor overexcitabilities is based on misinterpretation. A psychomotor overexcitability, which is part of Dabrowski's theory of positive disintegration, is usually manifested by a high level of energy, rapid

speech, impulsive behavior, and a love of movement among other behaviors (Piechowski, 1986). We and many others (e.g., Piechowski & Colangelo, 1984; Tucker & Hofenstein, 1997) believe a psychomotor overexcitability may resemble hyperactivity. Thus, a gifted child with a psychomotor overexcitability could erroneously be labeled "hyperactive," which could lead to a referral for ADHD. Indeed, psychomotor overexcitabilities may be common among the gifted (Tolan, 1994).

Mika (2006) further argued that Dabrowski's illustration of a psychomotor overexcitability is nearly the same as our current understanding of ADHD, which did not exist at the time Dabrowski formulated his theory of positive disintegration. This further supports our exact point. The characteristics of a psychomotor overexcitability and that of hyperactivity in ADHD are very similar. Thus, a child with a psychomotor overexcitability, whether that child is gifted or not, could be misdiagnosed with ADHD due to the "symptom" of hyperactivity.

This is not to say all children with overexcitabilities are gifted, as Mika suggested we believe. We clearly stated in our original article "some studies have provided partial support for Dabrowski's theory applied to gifted children...but more investigation is required to make conclusions about its validity" (Hartnett, Nelson, & Rinn, 2004, p. 73). Mika omits our inclusion of this point in her response. Children who are gifted, children who have ADHD, children who are gifted and have ADHD, and children who are average could all experience overexcitabilities in some form.

However, research generally supports the notion more gifted students tend to display overexcitabilities than non-gifted students, as we indicated in saying, "[overexcitabilities] are thought to indicate advanced development" (Hartnett et al., 2004, p. 73). To illustrate, Tucker and Hafenstein (1997) found evidence of all five overexcitabilities in a group of young gifted children, and Ackerman and Paulus (1997) provided evidence gifted students score higher on measures of all five overexcitabilities than non-gifted students. Further, Kitano (1990) found a moderate relationship between intellectual abilities and an intellectual overexcitability among young children. Piechowski, Silverman, and Falk (1985) and Gallagher (1986) found intellectual abilities to be associated with intellectual, imaginal, and emotional overexcitabilities, whereas Schiever (1985) found the same three

overexcitabilities to be indicative of high creative ability. In addition, some researchers are using overexcitability assessments as a method for identifying gifted students (e.g., Ackerman & Paulus, 1997; Bouchard, 2004).

ADHD: An Easy Diagnosis?

Referring to the diagnosis of ADHD and the differentiation between ADHD and giftedness, Mika (2006) claimed this process is one of "easy diagnostic judgment" (p. 240) and that the differences between the conditions are "unmistakable and impossible to miss" (p. 239). Anyone who has conducted an evaluation of a child who exhibits behaviors characteristic of possible ADHD could see that Mika has seriously underestimated the complexity of the diagnostic process. Her position not only serves as a straw man for the points to follow, but also indicates the assumption upon which her argument rests, making it untenable.

Subjectivity of Diagnosis

ADHD is a difficult diagnosis to make, largely because it is a subjective diagnosis. When subjectivity enters the diagnostic equation, as it inevitably does, reliability decreases and error increases. A diagnostic category with strong reliability is one in which two practitioners can repeatedly look at the same data pertaining to that category and independently generate the same diagnosis. With each edition of the *Diagnostic Statistical Manual (DSM)*, the category describing attention deficit disorders has become broader, causing it to be more subjective (Goodman & Poillion, 1992). Therefore, perhaps it is not surprising that rates of diagnosis of ADHD vary between practitioners (Shaw, Mitchell, Wagner, & Eastwood, 2002) and that there is far from perfect interrater reliability for DSM categories (Werry, Methven, Fitzpatrick, & Dixon, 1983). Because terms such as "hyperactivity" and "inattention" are relative terms, "their significance varies with the observer's perception and value system and with the degree to which the characteristic is manifested" (Goodman & Poillion, p. 45). When intra-clinician factors interact with imprecise constructs, the diagnostic process is muddled with sources of error, and the possibility of misdiagnosis becomes tenable.

Several professional organizations and researchers have developed best

practice parameters for ADHD assessment (American Academy of Child and Adolescent Psychiatry [AACAP], 1997; American Academy of Pediatrics [AAP], 2000; Burcham & DeMers, 1995; Schaughency & Rothlind, 1991). Common to all of these guidelines is the promotion of the use of multiple methods (e.g., diagnostic interviews, direct observation, and behavior rating scales) and multiple raters (e.g., parents, teachers, and school counselors) across multiple settings (e.g., home, school, and athletics practice). To further support the notion of subjectivity in ADHD diagnosis and the diagnostic process, let us examine the most objective of the multiple methods: behavior rating scales.

Most behavior rating scales, for example, Conners' Teachers Rating Scale—Revised (Conners, 1997), are norm-referenced instruments that list a variety of behaviors (e.g., "Is overactive") and ask the rater to gauge the degree to which the child exhibits the behavior (e.g., never, sometimes, often, and always). The value of behavior rating scales is not in question here: They provide a good amount of information in a short period of time and significantly contribute to diagnostic decision-making processes.

Because responses to behavior rating scales are tallied, translated to some metric corresponding to the normal distribution, and assigned percentile ranks, they have the appearance of being highly objective tools. However, behavior rating scales do not measure actual behavior, but adult perceptions of behavior (DuPaul, 2003). According to Gomez, Burns, Walsh, and de Moura (2003), inherent subjectivity exists within ADHD rating scales that results in various types of variance, including trait (behavior of the child), source (perceptions of the rater), and error (unspecified and unidentified) variance. Of these, source variance is most highly responsible for variance in ADHD rating scales (Gomez et al., 2003). Examples of source variance include raters having problems remembering the children's behavior, misunderstanding the items on the scale, and allowing their biases to affect their reporting (Burcham & DeMers, 1995). The anchors (e.g., never, sometimes, often, and always) of behavior ratings scales are subjective, leaving the rater to define them in his or her own way (Burns, Gomez, Walsh, & de Moura, 2003; Schwartz, 1999). Therefore, items are interpreted differently by different raters, and, not surprisingly, the result is little agreement between different raters of

the same child. Achenbach, McConaughy, and Howell (1987) found the correlation between behavior ratings by teachers and parents was approximately .3.

Clinicians, then, often find themselves in a complicated diagnostic quagmire rather than the situation of easy diagnostic judgment purported by Mika (2006). Not only are their seemingly objective diagnostic instruments inherently subjective to a significant degree, clinicians also must make sense of the often dramatic differences between the reports of different raters. Clinicians frequently must draw heavily upon their clinical judgment to determine which ratings deserve the most credence and whether behaviors are abnormal in relation to a variety of contextual events.

"Normal" Behaviors

Determining whether behaviors such as inattention and hyperactivity are normal or abnormal is subjective because they fall on a spectrum with no data indicating the precise point on the spectrum in which these behaviors become abnormal (AAP, 2000). Because we cited studies indicating ADHD, in part, may have a biological basis, Mika (2006) incorrectly assumes we ascribe to a categorical model of ADHD classification. The etiology of ADHD is complex and unclear, but we do not believe the possibility of a partial biological basis to the disorder, which has some empirical support (Hynd, Voeller, Hern, & Marshall, 1997), precludes the possibility of ADHD being a disorder of dimension. We agree with Mika that the behaviors associated with ADHD are exhibited to some degree by most children. Additionally, we agree that attention is dependent on context and the greater the need for focus and the less interesting the event, the harder it is to concentrate (Wolraich, 1999). But we also believe Mika has ignored a considerable body of theoretical and empirical literature that has indicated what is normal for gifted children regarding these behaviors is different than what is normal for typical children. It appears contradictory for Mika to claim that ADHD is a disorder of dimension on the one hand, and to assert distinguishing between giftedness and ADHD requires easy diagnostic judgment on the other. Because we do not know clearly the point in which normal behavior ends and clinically significant behaviors associated with ADHD begin (AAP, 2000; Campbell, 1985), the clinician is left with a complicated diagnostic puzzle requiring clinical judgment, a situation potentially ripe for

error and the possibility of misdiagnosis.

Referring to the behavior of gifted children, Maxwell (1998) asked the question, "How much is too much" (p. 1)? The answer to this question is difficult when referring to the behavior of typical children but even more difficult when referring to the behavior of gifted children. As discussed in our original article and above, gifted children's normal developmental patterns are often characterized by asynchronous development (Silverman, 1997) and overexcitabilities (Piechowski, 1986). The DSM requires that behaviors be inconsistent with developmental level if a diagnosis of ADHD is to be made. Clinicians working with gifted children need to recalibrate their perceptions of normality when determining whether behaviors meet DSM criteria.

Is Etiology Important?

When considering potential diagnoses, the behaviors of all children must be examined in relation to the context in which they are exhibited. Environmental variables potentially serve as etiological factors that initiate and/or maintain behaviors commonly associated with ADHD. Rather than assuming that problematic behaviors are due to internal factors within the child, clinicians should investigate the environment for causative influences and, once found, manipulate these contextual factors in an effort to positively affect the behaviors. In our view, consideration of etiological factors is a primary and necessary role of the clinician when making diagnoses and planning treatment. This view, however, is at odds with the stance of Mika (2006) who argued that etiology is not of primary importance to the clinician. With this argument, perhaps we can see the reason Mika believes the differentiation of ADHD and behaviors associated with giftedness to be a matter of easy diagnostic judgment. Mika's belief that etiological factors are not highly important also likely gets to the crux of the matter regarding her opposition to the possibility of misdiagnosing behaviors associated with giftedness as ADHD. When one takes such a position, "diagnosis" does become simpler. A collection of behavioral characteristics can simply be gathered and diagnostic criteria blindly applied. Unfortunately, such a process is exactly the reason many experts believe some gifted students are misdiagnosed with ADHD (Baum & Olenchak, 2002; Webb et al., 2005).

Given that gifted children spend one

fourth to one half of each school day waiting for their peers to catch up and given that their academic achievement is often two to four grade levels above their grade placement (Webb et al., 2005), ignoring the curriculum as a potential cause of attention problems in gifted children is akin to not checking a car's fuel level when it has unexpectedly stopped running. Coupled with imaginative and psychomotor overexcitabilities, the gifted student placed in an unchallenging curriculum could easily be diagnosed with ADHD if etiological factors are not considered. Mika (2006) made much of the idea that any child can exhibit behaviors associated with ADHD at certain times and therefore are not unique to giftedness. This stance, however, ignores the fact that the typical student is generally placed in an appropriate educational setting, whereas a large mismatch between gifted children and their educational environment often exists.

The Search for Pathology

In addition to neglecting environmental variables, clinicians tend to search for pathology and dysfunction within children who are referred to them (Ysseldyke, 2001). In our original study, we showed that school counselors solely took a pathology driven perspective unless given the positive suggestion of giftedness. Even with positive suggestion, the majority of participants continued to perceive the behaviors only through a pathology driven lens. Mika (2006) claimed that had we offered another alternative suggestion in place of giftedness (the hypothetical condition "Pervasive School Maladjustment Disorder"), the participants would have been swayed toward this diagnosis. Mika added that the behaviors mentioned in the vignette could also be indicative of other psychological problems, such as mood disorders and learning disabilities. We agree the behaviors mentioned in the vignette are not only characteristics of ADHD or giftedness and could be indicative of other disorders. However, despite the vignette being incomplete and therefore not indicative of any definitive psychopathology, all the alternatives (even her hypothetical condition) listed by Mika are disorders of some sort, suggesting a bias toward a pathology driven perspective. We agree with Webb et al. (2005) who argued that we should first seek the least negative explanation for such behavior.

We believe the tendency of the participants in our original study to take a

pathology-driven perspective has potentially harmful consequences to gifted students. When school personnel make referrals, they often do so because students are exhibiting behaviors that annoy or bother them, such as inattention, hyperactivity, or poor impulse control (Algozzine, Ysseldyke, & Christenson, 1983). Those who make such referrals, however, rarely attribute the causes for problems to the instructional environment. Christenson, Ysseldyke, Wang, and Algozzine (1983) found that teachers attribute 97% of the causes for problem behaviors to factors external to the instructional environment, with most causes attributed to variables internal to the child. Thus, if a gifted child was referred due to inattention, the probability of considering the likely cause of that inattention (i.e., an intellectually unchallenging curriculum) is very slim. Once referrals are made, decision makers declare nearly 75% meet the criteria for some sort of disorder (Algozzine, Christenson, & Ysseldyke, 1982). Within these decisions, however, a pathology driven bias is operating, given that when decision makers are presented a referral for a normal student, the majority determine that the student has a disorder (Algozzine & Ysseldyke, 1981). Applied to gifted students who exhibit behaviors associated with ADHD, these data suggest the strong potential of school personnel to attribute these behaviors to internal dysfunction and to classify these students as having pathological conditions once referrals are made.

Best Practices Versus Actual Practices

Because each rater and each method used in ADHD assessment inherently possesses a degree of subjectivity, best practices dictate that multiple raters and multiple methods be used across multiple settings (AACAP, 1997; AAP, 2000; Burcham & DeMers, 1995; Schaughency & Rothlind, 1991). Using comprehensive assessment techniques provides a system of checks and balances across raters and methods, and increases the chances of generating accurate diagnoses (DuPaul, 2003). Without such checks and balances, the possibility of misdiagnosis, while not inevitable, significantly increases.

Over the last decade, concern has been raised about the possible overdiagnosis of ADHD due to the drastic increase in the prescription of stimulant

medication (Safer, Zito, & Fine, 1996). The vast majority of children diagnosed with ADHD are seen by primary care physicians, such as pediatricians and family doctors (Rushton, Fant, & Clark, 2004; Wolraich, 1999). Additionally, primary care physicians prescribe the majority of stimulant medications (Rappley, Gardiner, Jetton, & Houang, 1995). Given these findings, it is not surprising AAP has set forth specific guidelines for the appropriate assessment of ADHD in children. These guidelines include the following recommendations:

- 1) In a child 2 to 12 years old who presents with inattention, hyperactivity, impulsivity, academic underachievement, or behavior problems, primary care physicians should initiate an evaluation for ADHD;
- 2) the diagnosis of ADHD requires that a child meet *Diagnostic and Statistical Manual of Mental Disorders Fourth Edition* criteria;
- 3) the assessment of ADHD requires evidence directly obtained from parents or caregivers regarding the core symptoms of ADHD in various settings, the age of onset, duration of symptoms, and degree of functional impairment;
- 4) the assessment of ADHD requires evidence directly obtained from the classroom teacher (or other school professional) regarding the core symptoms of ADHD, duration of symptoms, degree of functional impairment, and associated conditions;
- 5) evaluation of the child with ADHD should include assessment for associated (coexisting) conditions; and
- 6) other diagnostic tests are not routinely indicated to establish the diagnosis of ADHD but may be used for the assessment of other coexisting conditions (e.g., learning disabilities and mental retardation). (2000, p. 1158)

As can be seen by the AAP guidelines, best practices in ADHD assessment involve the accrual and coordination of information across multiple adults in children's lives.

How closely aligned is actual practice with best practice? The answer to this question tells us something about the possibility of misdiagnosis. If these practices are being followed, perhaps we should heed Mika's (2006) concern that we are worried about "hypothetical dan-

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gers of nonexistent problems” (p. 237). Unfortunately, the empirical data suggest the gap between best practice and actual practice in ADHD assessment is immense. Rushton et al. (2004) found that only 34.9% of pediatricians and 14.3% of family practitioners closely adhered to AAP guidelines and the majority of physicians did not even use DSM-IV criteria when making diagnoses. Only approximately 25% of physicians report using DSM criteria for ADHD diagnosis (Wolraich et al., 1990).

Other researchers have found that gathering data across adults in a child’s life and across settings is not common practice for physicians. Moser and Kallail (1995) found less than 30% of physicians use teacher questionnaires and approximately 20% use parent questionnaires during ADHD evaluations. In their investigation of the use of AAP guidelines at two clinics, Polaha, Cooper, Meadows, and Kratochvil (2005) found that behavior rating scales from multiple informants were collected for only 20 to 30% of the ADHD assessments conducted. HaileMariam, Bradley-Johnson, and Johnson (2002) found only 12% of pediatricians report receiving systematic direct observations of classroom behavior as a usual part of their ADHD assessments. These findings suggest physicians frequently perform narrow evaluations of children suspected of ADHD, perhaps relying on observations in their offices as a major method in making diagnoses, a procedure that has been found to be highly unreliable (Sleator & Ullman, 1981).

Although these data on the lack of best practice in ADHD assessment are unsettling, perhaps we need not worry about the possibility of misdiagnosis as long as we know professionals are being highly trained in the diagnosis of ADHD. Again, though, empirical data support our original concerns. In a survey of primary care physicians, Macrine and Chapman (2001) found less than 10% reported receiving instruction on ADHD during medical school. When they do receive instruction during medical school, primary care physicians receive approximately 1 month of content on developmental/behavioral pediatric issues (e.g., ADHD) (Wolraich, 1999). Perhaps it is not surprising, then, that most physicians are unable to identify the diagnostic criteria for ADHD and commonly misidentify features of other disorders as symptoms of ADHD (Shaw et al., 2002). Additionally, physicians

report low confidence in their ability to diagnose ADHD (Shaw et al.), and more physicians prescribe stimulant medication than are confident in their abilities to appropriately diagnose ADHD (Macrine & Chapman). In the context of this paucity of training, it is easy to understand researchers purporting other disorders may be mistaken for ADHD, such as bipolar disorder or conduct disorder (Kim & Miklowitz, 2002), post-traumatic stress disorder (Weinstein, Staffebach, & Biaggio, 2000), and pervasive developmental disorder (Jensen & Larrieu, 1997; Perry, 1998). Considering that professionals also receive little to no training regarding the intellectual, educational, emotional, social, and behavioral characteristics of gifted children (Webb et al., 2005), the possibility of diagnosing features associated with giftedness as psychopathology also exists.

Conclusion

Whether we are “glamorizing trouble” or not, multiple researchers and experts have raised concerns that an overlap in characteristics exists and a potential for misdiagnosis exists. Mika (2006) suggested that these concerns are “based on the myth of pervasive confusion between giftedness and ADHD, a myth that should be put to rest” (p. 242). Yet, we are entirely without evidence to support the notion the overlap in behavioral characteristics is a “myth.” If and when we are able to provide this evidence, then perhaps our concerns can indeed be put to rest. Until then, future research is needed in this area. Are gifted children being misdiagnosed as having ADHD? The question remains unanswered. Does the possibility still exist? Yes, the possibility definitely still exists.

Appendix

Vignette Used in Original Article

Sam is 7 years old and a second grader. He has been referred to you for assessment by his teacher. He has a high activity level and appears more restless than other children his age. Sam has difficulty restraining his desire to talk in the classroom and interrupts his teacher often. The teacher has repeatedly tried to change Sam’s behavior, but Sam questions authority and has a difficult time accepting rules and regulations. Sam’s homework is frequently messy because he appears careless and inattentive to details. Sam has a poor attention span, especially when he is bored. Sam’s home environment appears to be normal. (Hartnett et al., 2004, p. 75)

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