Attention-Deficit-Hyperactivity Disorder and Conduct Disorder: A Critical Review

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Attention-Deficit-Hyperactivity Disorder and Conduct Disorder are each currently subjects of much debate and controversy, particularly as they pertain to childhood psychopathology. The question of whether or not ADHD is a “real” disorder has been posed (Mash & Barkley, 2003), causing both the public and media to question the prevalence of accurate diagnoses of this disorder. Conduct Disorder, on the other hand, has gained attention due in part to “the ever-growing portrayal of violence in the public media” (Mash & Barkley, p. 189). This paper begins with an overview of both ADHD and CD, and then examines critical issues – gender differences and comorbidity - pertaining to each disorder. Finally, it compares and contrasts these issues and sheds light on the implications that understanding them holds for the field of child psychopathology.

Overview of ADHD

Unlike other childhood disorders, ADHD is a “disorder of performance” (Mash & Barkley, 2003, p. 124); that is, it affects how a child completes a task, answers a question, or interprets discourse rather than affecting her ability to do so. The diagnostic criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000) for ADHD is divided into three categories: inattention, hyperactivity, and impulsivity. Inattention can take the form of an inability to sustain attention during certain activities, whereas hyperactivity and impulsivity take the form of excessive talking or moving and impatience and difficulty with self-control, respectively (Mash & Barkley, 2003). According to the DSM-IV, “although many individuals present with symptoms of both inattention and hyperactivity-impulsivity, there are individuals in whom one or the other pattern is predominant” (APA, 2003, p. 87). Thus three subtypes of ADHD have emerged: Attention-
Deficit/Hyperactivity Disorder, Combined Type (ADHD-C); Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type (ADHD-PI); and Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type (ADHD-PHI). The *DSM-IV-TR* specifies that diagnoses of ADHD – regardless of subtype – should only be made when the predominant behavior has been identified as occurring for a minimum of six months and negatively affects a child’s development (APA, 2000). In addition, symptoms must be present in multiple environments and affect a child’s academic performance or social relationships in order for an authentic diagnosis of ADHD to be made.

**Overview of Conduct Disorder**

Conduct Disorder is a unique disorder in that its diagnostic criteria focus on the effect of an individual’s behavior on other people: “The essential feature of Conduct Disorder is a repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated” (DSM-IV-TR; APA, 2000, p. 93). Thus whereas ADHD is considered a “disorder of performance” (Mash & Barkley, 2003, p. 124), CD can be seen as a disorder of action and consequence. The *DSM-IV-TR* (APA, 2000) identifies four specific categories under which behaviors characteristic of CD fall: aggression toward people and animals, destruction of property, deceitfulness or theft, and serious violations of rules. The onset of CD can occur in childhood or adolescence, and behaviors characteristic of this disorder are categorized as mild, moderate, or severe (APA, 2000). Aggression, lack of empathy, low self-esteem, and irritability are behaviors often associated with CD, while school suspension, violence, early sexual experiences, and “delinquent” acts are often outcomes of these behaviors, particularly during adolescence.

**Critical Issues**
Diagnosing a child with any disorder is a complex and daunting task; this is especially true with regard to the diagnoses of ADHD and CD. Many factors that affect the identification of these disorders in children. In particular, gender differences and comorbidity are two challenges that diagnosticians face.

**ADHD**

**Gender Differences**

It is a known fact that boys are more frequently diagnosed with ADHD than girls are. Part of the reason underlying this fact may be that the diagnostic criteria for ADHD outlined in the *DSM-IV* was developed primarily based on studies involving males (Mash & Barkley, 2003). As a result, the symptoms (for example, hyperactivity and impulsivity) are more characteristic of boys’ behavior than that of girls. Further complicating the issue is that girls with ADHD often tend to exhibit internalizing behaviors that do not elicit as much attention as the more externalizing behaviors boys with ADHD exhibit, such as fidgeting and lack of impulse control. This gender difference presents a challenge in the identification process: internalizing behaviors are more difficult to identify and may cause a child with ADHD to go undetected. For example, a female student with ADHD may spend a large amount of time daydreaming in the classroom or appear distracted during group work and discussions; however, her behavior is not disruptive and therefore the teacher may not interpret her actions as warning signs. Nevertheless, this particular students’ academic performance may suffer because of her inability to concentrate. In contrast, a male student with ADHD demonstrating symptoms of hyperactivity may automatically set off red flags because his behavior is disruptive and requires intervention on behalf of the teacher.

**Comorbidity**
Another challenge associated with the diagnosis of ADHD is the issue of comorbidity. Several disorders have been identified as frequently occurring alongside ADHD, including depression, anxiety, learning disabilities, and both oppositional defiant disorder and conduct disorder (Mash & Barkley, 2003). Co-occurring disorders often have overlapping symptoms. For example, lethargy, an inability to concentrate, and difficulty with impulse control are symptoms that are characteristic depression, anxiety, and ODD, respectively; however, they are also characteristic of ADHD. Overlapping symptoms make determining a causal pathway difficult. For example, is the distractedness that a child with comorbid ADHD and anxiety exhibits a result of ADHD itself, or is it the result of the comorbid disorder? If this symptom is a result of the comorbid disorder, the question of whether or not this particular child has ADHD is raised. Consideration of this question is particularly important especially given the prevalence of ADHD and the debate surrounding accurate diagnoses. Are children being misdiagnosed with ADHD because the symptoms of this disorder are characteristic of other disorders? Finally, in terms of the intensity of symptoms, researchers have also questioned if the symptoms that a child with ADHD presents with are exacerbated as a result of comorbidity (Newcorn et al., 2001).

**Conduct Disorder**

**Gender Differences**

Aggressive behavior is usually associated with boys; not surprisingly, more male children than female children are diagnosed with CD (Mash & Barkley, 2003). According to Mash and Barkley (2003), “most investigations appear to have underestimated the prevalence of aggression among girls, given the assumption that their behaviors would be identical to those exemplified by males” (p. 183). The way in which males and females present with the symptoms of CD varies.
Studies suggest that in early childhood, differences in boys and girls’ behavioral differences with regard to this disorder do not generally exist (Mash & Barkley). As children grow older, however, variation in aggressive behavior exhibited by each of the sexes becomes more pronounced. Whereas adolescent boys’ aggressive behavior generally takes the form of bullying, verbal aggression, and violence, adolescent girls’ CD symptoms frequently take the form of more covert acts such as relational aggression, truancy, and substance abuse (Mash & Barkley, 2003). In fact, it has been suggested that during adolescence, CD diagnosed in females is often viewed in terms of a mental health issue (Mash & Barkley, 2003) as opposed to aggressive or destructive behavior targeted at other people. The diagnostic criteria outlined in the DSM-IV-TR, however, relates more to “male” CD symptomatology, which is problematic concerning the diagnosis of females with this disorder (Mash & Barkley, 2003).

Comorbidity

Like ADHD, CD has also been found to have high comorbidity rates with disorders such as anxiety and depression (Mash & Barkley, 2003). Comorbidity between CD and ADHD, however, is a particularly critical issue as “overlap with ADHD occurs in approximately 50% of [CD] cases” (p. 170). One explanation behind this phenomenon is that symptoms of ADHD – particularly hyperactivity and impulsivity – have a strong association with aggression (Mash & Barkley, 2003). Another theory holds that ADHD-like behavior interacts with the child’s environment to create stress and – subsequently – aggressive behavior (as cited in Mash & Barkley, 2003). Several studies have also suggested that ADHD symptoms may precede the development of antisocial behavior, thus implicating ADHD as a potential causal mechanism (Mash & Barkley, 2003).
Children with comorbid CD and ADHD deserve particular attention because exhibiting symptoms of both disorders is problematic insofar as their development is concerned. First, these children are more likely to experience academic and social difficulties as a result of their symptoms (Mash & Barkley, 2003). They are also more likely to have parents who suffer from psychopathological disorders such as depression or substance abuse (Mash & Barkley, 2003). As a result, children with overlapping symptoms of ADHD and CD have an increased risk of experiencing adverse parent-child interactions and, consequently, “negative outcomes in later life” (Mash & Barkley, 2003, p. 167). Early identification of CD, particularly with comorbid ADHD, is therefore critical.

**Critical Comparisons: ADHD and CD**

**Gender Differences**

The diagnostic criteria outlined in the *DSM-IV* for both ADHD and CD focus on specific behaviors that affect an individual’s performance and social functioning. With the exception of the inattentive subtype of ADHD, the behaviors characterizing each of these disorders are generally considered “externalizing” behaviors; not surprisingly, both ADHD and CD are more frequently diagnosed in boys than in girls (Mash & Barkley, 2003). Because girls more often exhibit internalizing symptoms such as withdrawal and shyness, diagnosing them with disorders characterized by hyperactivity, impulsivity, and aggression can be difficult. Consideration of gender differences - particularly insofar as externalizing and internalizing behavior patterns are concerned - is important; with regard to ADHD and CD, it provides insight into the etiological risk factors and “developmental progressions” associated with each disorder (Mash & Barkley, 2003, p. 183).
In terms of the externalizing “male” behaviors characteristic of ADHD, Mash and Barkley (2003) turn to comorbidity as an etiological risk factor. They suggest that one of the main reasons that more males than females are diagnosed with ADHD – and, consequently, why males exhibit more externalizing behaviors - is the higher rate of comorbidity with CD presenting in males. Girls, on the other hand, “are significantly less likely to have comorbid [CD]” (Mash & Barkley, p. 95). As for the etiology of CD, studies suggest that a correlation between a child’s temperament and manifestations of CD-symptoms exist with internalizing behaviors having a stronger association with difficult temperaments in females (Mash & Barkley, 2003).

Insofar as development and ADHD is concerned, “onset is heavily dependent on the type of ADHD” (Mash & Barkley, p. 97). ADHD-PHI (predominantly hyperactive-impulsive) has the earliest age of onset (Mash & Barkley, 2003), which is significant because the symptoms characteristic of this subtype are generally exhibited by boys. ADHD-PI (predominantly inattentive) generally develops when children are between the ages of eight and twelve (Mash & Barkley); this subtype is associated with more internalizing “girl” behaviors. With regard to CD, Mash and Barkley (2003) shed light on a theory that explains girls’ internalizing behavior: “girls’ earlier development of basic psychobiological, cognitive, and emotion-regulating capacities promote socialization patterns that funnel girls into internalizing, rather than externalizing, manifestations” (as cited in Mash & Barkley, 2003, p. 183). Thus developmental differences between girls and boys diagnosed with CD create differences in the symptoms each sex exhibits (Mash & Barkley, 2003). Understanding these gender differences is integral for effectively treating both ADHD and CD.

**Comorbidity**
That both ADHD and CD have high comorbidity rates with other disorders presents challenges, not only with regard to diagnosis but also to treatment. As both disorders impact a child’s behavior and development, providing proper treatment is essential.

According to Mash and Barkley, social factors may “contribute to the forms of comorbid disorders associated with ADHD” (p. 121); however, treatment of ADHD “mainly occur[s] in the area of psychopharmacology rather than that of psychosocial treatments” (Mash & Barkley, 1998, p. 68). In the case of a child presenting with overlapping symptoms of ADHD and anxiety, for example, psychopharmacological treatment aimed solely at treating the ADHD-like symptoms may be ineffective. Instead, combined interventions or behavior management methods that involve both a child’s parents and teachers are preferable, particularly because of these treatments’ psychosocial bases (Mash & Barkley, 1998). As CD has been found to frequently occur alongside ADHD, the above implications hold true for the treatment of this disorder, too. Difficulty emerges, however, in “disentangle[ing]” (M & B, 2003) the symptoms presenting in a child with comorbid CD and ADHD. In fact, Mash and Barkley (1998) reveal that “although it is widely known that there is an extremely high rate of comorbidity between [CD] and ADHD, most interventions have been developed to deal with either CP or ADHD, not both” (p. 182). Thus professionals providing treatment for both disorders must take into consideration how treatment may vary in response to the presence of comorbidity (Newcorn, 2001). It is imperative that comorbid symptoms are treated, too.

**Conclusion**

Whereas ADHD is generally believed to be caused by neurological factors (Mash & Barkley, 2003), CD is often the result of risk factors associated with a child’s environment. Despite their etiological differences, both disorders require attention, particularly insofar as
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gender differences and comorbidity are concerned. Comparing and contrasting these critical issues as they pertain to ADHD and CD provides insight into the challenges associated with the diagnoses and treatment of each one. In addition, it sheds light on potential areas associated with each disorder that require further investigation. As far as CD is concerned, Mash and Barkley (2003) hold that “the need for sound scientific efforts directed toward understanding the roots, classification, underlying mechanisms, and treatment of ASB has never been greater” (p. 144). The same can be said to hold true for ADHD. Further research will minimize the prevalence of inaccurate diagnoses of ADHD on the one hand, all the while increasing the knowledge of parents, teachers, and other stakeholders involved in a child’s development so as to minimize diagnoses of CD on the other. Acquiring a more in-depth understanding of both ADHD and CD will ultimately revolutionize the way in which society, the media, and psychological professionals perceive these disorders. This, of course, has important implications for the children diagnosed with them.
References


