ADHD and Generalized Anxiety Disorder

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While discriminating between disorders within a category of the Diagnostic and Statistical Manual - fourth edition (DSM-IV) can be challenging, generally the child's symptoms will match one disorder more than another, and selection of a single disorder can be determined. However, it is often more difficult to distinguish between disorders of two different categories than within a category since many of the disorders have similar symptoms which may occur for differing reasons. Determining whether symptoms are more reflective of one disorder than another, if meeting criteria for one disorder is the result of another disorder, or if comorbidity exists of the two disorders can be a humbling experience.

Two disorders in which such questions often arise are Attention Deficit Hyperactivity Disorder and Generalized Anxiety Disorder, or overanxious disorder, (GAD). The term ADHD may also be referred to as ADD-H (Hyperactive-Impulsive Type) and/or ADD-WO (Inattentive Type) throughout this article when referring to research using the terms. According to several research investigations, children with ADHD and children with anxiety disorders often exhibit similar behaviors. However, since parents and teachers appear to have a greater awareness of ADHD, they generally refer the child to a psychologist in order to evaluate for ADHD who in turn requests them to complete rating scales. With the symptoms characteristic of ADHD in mind, the parents and teachers may inadvertently skew behavioral ratings toward a diagnosis of ADHD; thus, children with anxiety may be misdiagnosed as ADHD or children with both disorders may only be treated for ADHD. The distinction between the two disorders is important as the treatment modalities implemented are typically quite different. Currently, common interventions for children with ADHD include behavior management and stimulant medication; whereas, interventions for Generalized Anxiety Disorders consist of relaxation techniques, counseling services, and anti-anxiety medication such as benzodiazepine.

Using the DSM-IV criteria, some symptoms are listed under both disorders, including restlessness and difficulty concentrating; moreover, a child need exhibit only one of the symptoms in order to meet criteria for a generalized anxiety disorder. While not listed as criteria under anxiety, several of the ADHD symptoms may be seen in children who are anxious, such as fidgeting, talking excessively, and making careless mistakes. Thus, children with anxiety disorders may present as a child with ADHD. The presence of externalizing symptoms are often viewed as characteristic of ADHD-Hyperactive/Impulsive Type; however, children with
anxiety may interrupt or move about excessively because they are anxious. The distinction is even more vague between ADHD-Inattentive Type and anxiety since a child may be distracted due to his/her worries, or a child may worry because they have difficulty attending. Furthermore, the presence of internalizing symptoms, including anxiety, are often viewed as characteristic of ADHD-Inattentive Type, although the DSM-IV states that it must be determined that the symptoms are not better accounted for by an Anxiety Disorder.

Research

Previous research in identifying characteristics of the two disorders indicates a high incidence of comorbidity, but does not clearly address how the two disorders may be distinguished from one another. In fact, questions have been raised regarding the validity of ADHD-Inattentive Type and whether or not the majority of children meeting criteria for this type can be accounted for by an anxiety disorder (Lahey & Carlson, 1991). A study of 119 children who were referred for an evaluation of ADHD confirmed that only 45 children had the disorder, while a large number of cases had anxiety disorders, suggesting an overinclusion of children being referred for ADHD (Desgranges, Desgranges & karsky, 1995).

The validity of ADHD without hyperactivity has been questioned since its appearance in the DSM-III, and its diagnosis can be difficult. As mentioned previously, evidence from a number of studies has shown anxiety to be a common characteristic of children diagnosed with ADHD-Inattentive Type, along with other internalizing symptoms, such as depression and social withdrawal, as compared to the Hyperactive-Impulsive Type. Thus, the question is raised of whether these children are presenting as ADHD due to their anxiety or if the anxiety is a result of having ADHD or if the two disorders simply co-occur. While several studies have distinguished differences between the two subtypes of ADHD, few have distinguished between ADHD (of either type) and anxiety. One study found that children with ADHD showed significant differences in inattention and impulsivity as compared to children with anxiety or disruptive disorders other than ADHD; however, activity levels were indistinguishable across all three groups (Halperin, Newcorn, matier, & Sharma, 1993). Another study of 47 children with ADD-H found significantly higher anxiety levels than in normal children (Jensen, Shervette, Xenakis & Richters, 1993). This group of children exhibited more externalizing symptoms as compared to a clinical population with a variety of other disorders; however, on self and parent ratings, the group was indistinguishable on depressive and internalizing symptoms such as anxiety.

Due to the high rates of comorbidity, a subtype of ADHD with anxiety has been proposed; however, few studies have addressed whether one disorder may be the result of the other. many studies have compared children with only ADHD to children with ADHD and anxiety.
Children diagnosed as ADHD with anxiety were found to be less impulsive and/or hyperactive than those with only ADHD, indicating they are more likely to parallel the ADHD-Inattentive group (Pliszka, 1992). Biederman & Steingard (1989) proposed three symptoms of ADHD found among adolescents: those with conduct disorder, those with depression, and those with anxiety. The authors found that subjects in the ADHD with anxiety group had higher levels of life stresses and parental symptoms than subjects with only ADHD. The authors also recommended prescribing clonidine, a medication prescribed to anxiety patients, to subjects in the ADHD with anxiety group rather than methylphenidate (MPH) because the effectiveness of MPH tends to decline with this group. This suggests that a different area or pathway in the brain may be affected in children with ADHD with anxiety as compared to children with ADHD only, and that the affected area may be more closely linked to that of children with anxiety only.

In a study of 73 males between 6 and 17 years of age diagnosed with ADD/WO or ADD/H, 30% also met criteria for an anxiety disorder, with 60% of those children diagnosed with an overanxious disorder (Biederman, Faraone, Keenan, Steingard & Tsuang, 1991). The same study compared familial risks of children diagnosed with ADHD only and those diagnosed with both ADHD and an anxiety disorder. Questions were raised as to whether or not children who had an anxiety disorder were misdiagnosed as ADHD with anxiety; however, family members of both groups were equally at risk for developing ADHD. Both groups had a higher familial risk for anxiety disorders than the control group, but only the ADHD with anxiety group reached a level of significant difference from controls. The risk for one or more anxiety disorders, but not ADHD, among relatives was higher in the ADHD with anxiety group than the ADHD only group. For both groups, the presence of ADHD in a relative increased the risk for an anxiety disorder in that relative from 11 to 33 percent. No differences were found across SES groups for the risk of anxiety among relatives. In summary, the risk of ADHD was similar for both groups, and significantly higher than controls, the risk of anxiety was higher for the ADHD only group than controls, but the relatives of the ADHD with anxiety group were at twice the risk of anxiety disorders than the ADHD only group.

In comparing children with only ADHD to those with ADHD with anxiety with regard to treatment, MPH seems to decrease activity levels in both groups; however, the medication increases working memory in the ADHD only group, but not in the group with anxiety (Tannock, Ickowicz & Schachar, 1995). Additionally, MPH increases heart rate, systolic blood pressure, and diastolic blood pressure in both groups, although the diastolic blood pressure is significantly increased further in the ADHD with anxiety group (Urman, Ickowicz, Fulford & Tannock, 1995). This finding further suggests physiological differences between the two groups, supporting evidence of this group representing either a subtype or having a different disorder (i.e. anxiety). Additionally, Buspirone was found to not only improve worry and anxiety in a group of children diagnosed with an anxiety disorder, but also to improve behavior and decrease hyperactivity in children with both ADHD and anxiety, suggesting a physiological link between the two diagnostic groups (Simeon, Knott, Dubois & Wiggins, 1994).
Assessment

In the diagnosis of either ADHD or anxiety, using a battery of a variety of measures is recommended which includes direct observation, behavior checklises, and parent, teacher, and self rating scales. Some instruments are designed to aid in differential or dual diagnosis, while others are designed to further analyze a specific disorder. In addition, several standardized cognitive and neurological instruments have been used to aid in the diagnosis of ADHD.

Direct observation in a variety of settings, either formally or informally, allows the examiner to note specific behaviors that occurred or did not occur and in what context. For example, when trying to differentiate between the two disorders or determine whether one, both, or neither disorder is present, it is helpful to note behaviors such as whether the child was squirming in his/her seat throughout the entire class period or only when s/he anticipated being called on, whether or not the child had difficulty maintaining attention during both structured and unstructured tasks, and whether the child often missed instructions because of external influences such as the child sitting beside him/her was constantly talking.

Common rating scales used to help differentiate between anxiety and ADHD, among other disorders, include the Behavioral Assessment System for Children (BASC) and the Child Behavior Checklist (CBCL). Both measures include a parent and teacher report with can be compared to one another, as well as a self report. However, caution is given with regard to administration of the CBCL for differential diagnostic purposes since it does not clearly define behaviors between disorders, but rather the scale clusters together similar behaviors while can be seen in a number of disorders (Reynolds & Kamphaus, 1990). For example, the scale does not separate behaviors related to anxiety and those related to depression; it also does not provide a distinct scale for hyperactivity. In addition, caution was raised regarding the insensitivity of the CBCL scale for diagnosing ADHD-Inattentive Type since such children may appear within normal limits due to items not reflective of attention difficulties which are included in the Attentional dimension, such as cannot sit still, clumsy, and acts young (Dumas & Guevremont, 1994). On the other hand, the BASC provides a more accurate scale for differentiating between anxiety and ADHD because it includes more distinct behaviors related to a specific disorder, as well as distinguishes among the disorders so that there is a separate scale for anxiety, a scale for attention problems, and a scale for hyperactivity (scales for other disorders are also included). Another benefit of the BASC is the inclusion of a lie scale to detect invalid responses.
Specific behavior rating scales which are used to gain additional insight regarding each disorder include the Attention Deficit Disorders Evaluation Scale (ADDES), and the Reynolds Manifest Anxiety Scale (RMAS). Such scales are generally administered following the more comprehensive behavior scales, such as the BASC, when significant areas of concern have been detected. With regard to ADHD, the ADDES presents a list of behaviors linked to the DSM-IV criteria and provides both a Home Version and a School Version to determine if the child meets criteria and if so, to pinpoint for which subtype. A number of other scales such as the ACTers, the CAAS-H, and the Conners are also used to aid in diagnosing ADHD. However, the ADDES was rated as one of the most favorable tools because it uses specific descriptors and observable behaviors; whereas, other scales tend to be vague, require the rater to draw conclusions, and/or include items unrelated to ADHD (Sharp, 1993). With regard to anxiety disorders, the RMAS provides an overall score which is derived from three subscales: Physiological, Worry/Oversensitivity, and Social Concerns/Concentration. Thus, critical areas can be determined from the subscales with regard to the nature of the anxiety. A lie scale is incorporated to indicate the validity of responses.

Several cognitive and neurological tests are often used in the evaluation of ADHD; however, there are minimal reports regarding the performance of children with anxiety disorders on these measures. Among the most common measures are the Processing Speed subtests on the Wechsler tests (WISC-III and WISC-IV), the Woodcock Johnson Tests of Cognitive Abilities, the Stroop Color-Word Test, Continuous Performance Tests (CPT), and the Wisconsin Card Sorting Test. A number of studies have shown that children with ADHD generally perform more poorly on all the above measures in comparison to normal control groups. The small number of studies that have analyzed the performance of individuals with anxiety disorders on selective attention tasks indicate that these individuals also have difficulty maintaining focus and may perform similarly to the ADHD group (Fox, 1993, mattia, 1993). Thus, such objective measures may not distinguish between the two disorders, although further research is needed.

References


