

ADHD and Gender

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Attention Deficit Hyperactivity Disorder, better known as ADHD, is increasingly heard in the walls of elementary schools today. From 2007 to 2011, the total number of school-age children diagnosed with ADHD in the United States showed an increase of 4%. The Center for Disease Control reported, according to a 2016 study, “About 6.1 million children in the United States (9.4 %) between ages 2 to 17 are estimated to have ever been diagnosed with ADHD” (CDC, 2016). This statistic can further be broken down into categories of young children, school-age children, and adolescents. It was reported that 2.4 million school-age children (ages six to eleven) had ever received an ADHD diagnosis at the time when the study was completed.

While the number of children receiving an ADHD diagnosis is growing, a component gaining increased attention is the prevalence of ADHD diagnoses, or lack of, in males and females. According to the same study done by the CDC, “boys are more likely to have ever been diagnosed with ADHD than were girls (12.9 % and 5.6 %, respectively)” (CDC, 2016). The discrepancy in the rate of diagnoses between males and females is jarring. When looking at the difference between the likelihood of a male receiving a diagnosis compared to a female, some may begin to wonder what factors lay behind these percentages. I hypothesize that there are vast differences in how males and females experience ADHD, and those differing experiences have led females to not receive an ADHD diagnosis or to be misdiagnosed. To gain a better perspective on this presumption the presentation of ADHD symptoms, the diagnosis process, and the treatment of ADHD will be looked at and compared between genders.

When a child is beginning the process of evaluation for an ADHD diagnosis, providers follow the guidelines put out in the DSM-5. This handbook is “used by healthcare professionals in the United States as the authoritative guide to the diagnosis of different mental disorders” (American Psychiatry Association). The DSM-5 has determined that, in order to receive an

ADHD diagnosis, the person “must show a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with the persons functioning or development” (DSM-5, 2013). For all three presentations of ADHD (ADHD-I, ADHD-H, and ADHD-C which will later be explained) it is stated “six or more symptoms for children up to age 16 must have been present for at least 6 months to an extent that is disruptive and inappropriate for the person’s developmental level” (DSM-5, 2013).

The DSM-5 explains ADHD inattentive symptoms to present as the following: failure to pay attention to details or make careless mistakes in school work, trouble holding attention on tasks or play activities, not appearing to listen when being directly spoken to, not completing directions given, loses focus, easily side tracked, trouble with organization, avoids tasks that require an extended period of mental effort, frequently misplaces items, easily distracted, and often forgetful. According to the DSM-5, ADHD hyperactive-impulsive symptoms present as follows: fidgets or taps hand or feet, squirms in seat, struggle to stay in seat when required, unable to play quietly, talks excessively, frequently blurts answers, trouble waiting their turn, and frequently interrupts/intrudes on others. In addition to the previously stated, ADHD inattentive and hyperactive criteria in the DSM-5 also states “several inattentive or hyperactive-impulsive symptoms must be present before age 12. These symptoms must present themselves in two or more settings, clear evidence must be provided that the symptoms interfere with the quality of the person’s functioning, and the symptoms are not better explained by another mental disorder” (DSM-5, 2013).

A 2013 study completed by BioMed Central stated “Attention-deficit/hyperactivity disorder (ADHD) is one of the most common childhood neuropsychiatric disorders, characterized by problems with inattention, hyperactivity and impulsivity” (BMC Psychiatry,

2013). The DSM-5 also recognizes these different ways the ADHD may present itself. These different presentations are ADHD-I (inattentive type), ADHD-H (hyperactive type), and ADHD-C (combined type). When the criteria of the DSM-5 are met, and a person is evaluated on the symptoms of inattentive and hyperactivity-impulsivity, the diagnosing health care provider looks at the break down of the symptoms and if the majority fall under the inattentive or hyperactivity-impulsivity presentation.

According to the DSM-5 explanation of symptom presentation in order to receive an ADHD-I (Predominantly Inattentive Diagnosis) the person presented with enough symptoms of inattentive, but not hyperactivity-impulsivity, over the previous six months. The diagnosis of ADHD-H (Predominately Hyperactive-Impulsive Presentation) is given when the person presented with enough symptoms of hyperactivity-impulsivity, but not inattention, over the previous six months. Finally, the diagnosis of ADHD-C (Combined Presentation) is made when a person exhibits symptoms to meet the criteria for inattention and hyperactivity-impulsivity in the past six months.

While the DSM-5 makes no correlation to any of the ADHD presentations being linked to one gender over the other, researchers around the world have worked to fill in the gaps. A study done by Julia Rucklidge explained that though ADHD has been proven to exist in both male and females “when girls are diagnosed with ADHD, they are more often diagnosed as predominately inattentive than boys with ADHD” (Rucklidge, 2014). Over the last twenty years there has been a rise in ADHD diagnoses, specifically ADHD-I. Many researchers, like Rucklidge, attribute the rise in ADHD-I diagnoses to the rise in females receiving an ADHD diagnosis. At this time, the number of reliable and valid studies done on this remains low. However, as more females receive an accurate diagnosis more research will have the opportunity to be collected.

Another study done explained the significantly smaller percentage of female ADHD diagnoses does not mean males are more likely to have ADHD. It simply means males are more likely to have their ADHD symptoms displayed in a manner that more effectively captures the attention of an adult in their life, leading to the referral for an ADHD evaluation. Regardless of the differing in presentation, females still struggle with ADHD. In fact, one study showed “ADHD females struggle significantly compared with non-ADHD females in all areas of functioning” (Rucklidge, 2008). With males being three times more likely to receive an ADHD diagnosis due to the prevalence of hyperactive-impulsive symptoms, it can be concluded that the factor of differentiation in diagnosis depends on the ability of those in the lives of a person struggling with ADHD symptoms being able to see all the symptoms, and recognize the effect they are causing the person and their environment.

The idea of a person presenting their symptoms in a more outward display, versus a more inward display is a well-developed concept. These differing displays of one’s symptoms is referred to as internalization and externalization. While the link between gender and ADHD-I and ADHD-H is not well researched, there has been extensive research done to prove that those diagnosed with ADHD-I present with stronger internalization of their symptoms while those diagnosed with ADHD-H present with stronger externalization of symptoms. In addition, one study looked at the internalization and externalization of ADHD symptoms in reference to gender and found that “Boys with ADHD have been found to have more externalizing disorders, while females tend to show more internalizing disorders” (BMC Psychiatry, 2013).

With this, it can be hypothesized when it comes to diagnosing ADHD in children, the roles of internalized and externalized symptoms subconsciously impact who gets referred for evaluation. Those who externalize their symptoms, are more likely to disrupt their environment,

increasing their chances of referral and ultimately diagnosis than those who internalize. This subconscious impact of presentation indicates males are more likely than females to receive an ADHD diagnosis due to their higher probability of externalization.

The internalization of symptoms can appear as becoming withdrawn, having a low self-esteem, anxiety, inattentiveness, trouble focusing, and struggling to follow in conversation. Perhaps this helps to explain why females typically receive a diagnosis later in life, if at all. In the study completed by BMC Psychiatry it was reported these symptoms are often times attributed to other areas of struggle, or overlooked, because the presentation is not disruptive to the environment. The internalization of symptoms frequently leads to overcompensating for the ADHD symptoms. Internalizer's are often times seen as perfectionists who find an area of success and hyper fixate to the point of burnout. This hyper fixation and perfectionism often lead those who internalize their ADHD symptoms to excel in school, taking away any concerns a teacher or adult may have had.

The externalization of symptoms presents itself in a way that is sometimes impossible for teachers and other adults to ignore. When someone externalizes the symptoms of ADHD they fall more frequently into the hyperactive category. This may present itself as being in continuous movement, acting out of impulse, and demonstrating struggles with self-control. These behaviors are harder to dismiss. With these differences in presentation it makes sense that boys are often times diagnosed five years earlier than girls. It was determined that boys average age of diagnosis was seven where the average age for girls was twelve. In addition, the study found "that up to 75 percent of girls with attention problems are undiagnosed" (Griffin, 2021).

With such a vast difference in onset, presentation, and diagnosis some researchers are taking a closer look at the influence of both genetic and environmental factors; how nature and

nurture play a role in ADHD and its subsequent diagnosis. Canadian Medical Association did a research study in 2012 that used private health data in the United States. In their study it was reported “that date of birth was a predictor of diagnosis and treatment of ADHD based on the age at which the patient started school” (CMAJ, 2012). This study went on to explain that due to the differing cut off dates that determine a child’s grade level when entering school, a single classroom could have one year of age in between the oldest and the youngest student in the same class. The study went on to discuss “children who were relatively younger than their peers within the same grade were more likely to receive a diagnosis or a pharmacological treatment of ADHD” (CMAJ, 2012). This idea has since been defined as the relative age effect. The results of this study continued to follow the patterns shown by other studies when looking at the rate of diagnosis based upon gender. While the results for both males and females showed increase in ADHD diagnosis and treatment with each birth month, beginning in January and ending in December, boy’s overall likelihood was still increased when compared to females likelihood of diagnosis.

It has been established that although males are no more likely than females to have ADHD, they are significantly more likely to be diagnosed. The diagnosis is just the beginning of the journey for those with ADHD. The treatment of ADHD can look different depending on the severity of symptoms. Typically treatment of ADHD includes medication and/or behavior therapy. When medication is used to treat ADHD, it is either a stimulant medication or a non-stimulant medication. Stimulants are well known for their treatment of ADHD. It is estimated that “between 70-80% of children presented with fewer ADHD symptoms when taking the fast-acting stimulant medication” (CDC, 2013). With a high percentage a symptom relief, it would be expected to see the use of stimulant medication in the majority of treatment plans. However,

stimulant medications can have devastating side effects for those taking them. Some kids reported trouble sleeping, lightheadedness, nervousness, and decrease in appetite. Which at a glance, these side effects may not seem detrimental. However, overtime they can increase the likelihood of developing an additional mental disorder. A non-stimulant medication is often used when the patient struggles with the side-effects of the stimulant medication.

Another treatment for ADHD is therapy. It is recommended by the AAP that treatment for ADHD included both medication and therapy. When therapy is used, either with medication or instead of medication, a child is able to work with a licensed professional to identify their areas of struggle and areas of strength and how to mesh the two. Therapy can be especially beneficial to help those with ADHD due to the high rates of co-existing mental disorders. It is estimated that 32.7% of those diagnosed with ADHD are also diagnosed with anxiety, and 16.8% of those diagnosed with ADHD also struggle with depression. Those with ADHD also have increased rates of ODD, eating disorders, anger management, mood swings, perfectionism, and emotional dysregulation. When left to sort through these emotions independently a child may only feel their symptoms of ADHD heighten. Working with a therapist allows a healthy environment to learn proper coping skills. Time was spent looking for research on the impact gender in selecting a treatment plan but none of validity or relation to this study were located.

Through the exploration of the differing presentations of ADHD, the symptoms of ADHD, and the idea of internalization and externalization research has found a clear path to proving that there are major differences in how males and females experience ADHD. It also can be determined that females are more often left to overcompensate for their ADHD symptoms due to their tendency to internalize symptoms. The underdiagnoses and misdiagnosis of females with ADHD is a major concern in the realm of mental health.

While there have been improvements over the last ten years in closing the gender gap of ADHD recognition and diagnosis, the gap still remains. The definition of ADHD and the criteria for which it is diagnosed upon have made positive changes for all with ADHD we, as a society, need to do better for females with ADHD. Some argue that the diagnostic criteria favor the hyperactive sub-type which in turn favors male diagnoses. Others argue the inattentive symptoms are not as clear to identify or attribute as ADHD or another mental disorder causing no diagnosis. Regardless of the reasoning, it is imperative for research to be continued in the area of ADHD, in gender's relation to ADHD, and the differing presentations of ADHD. This needs to be done in order to ensure proper supports can be implemented at the earliest opportunity following onset of symptoms to give each person the supports which will best help them find successes in their life's endeavors.

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