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ADHD in Women: Psychological, Academic, and Social Effects

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Introduction

Attention-deficit/hyperactivity disorder (ADHD) is a neurological disorder that involves a persistent pattern of inattention and/or hyperactivity-impulsivity which interferes with functioning or development. ADHD is commonly diagnosed in childhood and can persist into adulthood (Kok et al., 2020; Fraticelli et al., 2022). It is estimated that ADHD affects 5-7% of school-age children with a male-to-female ratio of approximately 3:1 (Kok et al., 2016). For a long time, ADHD was assumed to be primarily a male disorder, but researchers are increasingly finding that the number of males and females with ADHD is likely close to equal (Nussbaum, 2012). There is increasing evidence that females with ADHD often go undiagnosed or are misdiagnosed and are frequently diagnosed at a much later age than their male counterparts (Kok et al., 2020). Researchers have identified a few key reasons that could be responsible for the underdiagnosis or misdiagnosis of ADHD in females.

First, ADHD presents differently in females than it does in males (Young et al., 2020). ADHD can be classified in two ways: ADHD-HI (hyperactive/impulsive) and ADHD-I (inattentive). The HI presentation is more asso-

ciated with hyperactive and impulsive behaviors (i.e., externalizing behaviors) and more common in males, whereas the I presentation is more associated with inattention and withdrawal (i.e., internalizing behaviors) and more prevalent in females (Kok et al., 2020; Fraticelli et al., 2022). Given this, female symptoms of ADHD are often more difficult to spot from an outside perspective (Kok et al., 2016). The difference in presentation between the sexes was not well-known or even studied until somewhat recently. This means that the diagnostic criterium used for ADHD was developed on predominantly male samples so its generalizability to females is questionable (Nussbaum, 2012; Young et al., 2020; Haimov-Kochman & Berger, 2014).

Another possible explanation for the underdiagnosis of ADHD in females is that they tend to be better at both “masking” (hiding their symptoms) and coping with their symptoms than males (Madhoo & Quinn, 2014). It is also common for females to have comorbidities (the presence of two or more psychological disorders), such as depression and anxiety, which can mask the presence of ADHD and contribute to the commonality of misdiagnosis (Madhoo & Quinn, 2014). All these are reasons why females fail to get accurately diagnosed

with ADHD early in life. This failure to be diagnosed can result in very negative outcomes in the long run, such as the development of additional comorbidities, the development of substance abuse disorders, poor academic outcomes, and social and behavioral problems (Fraticeili et al., 2022; Madhoo & Quinn, 2014).

Although having ADHD creates challenges for all who experience it, females with ADHD are specifically at risk of experiencing comorbidities and substance abuse disorders, poor academic performance, and poor social outcomes because they are more likely to internalize their symptoms and often experience chronic stress due to a late diagnosis or a misdiagnosis of their ADHD. This literature review will first explore the ways ADHD affects females psychologically, and then it will discuss the ways in which it impacts their academic performance, and finally, it will look at the social and behavioral effects ADHD may have in their lives.

Psychological Effects

Females with ADHD are at greater risk than their male counterparts of developing comorbidities (Fraticeili et al., 2022). It is very common for females with ADHD to have one or more comorbidities, with anxiety disorders, depression, conduct disorder, and oppositional defiant disorder being some of the more common (Fraticeili et al., 2022; Madhoo & Quinn, 2014; Nussbaum, 2012). It is likely that, because comorbidities are so common

in females with ADHD, their ADHD goes undiagnosed because they only receive a primary diagnosis for an internalizing or personality disorder (Madhoo & Quinn, 2014; Fraticeili et al., 2022). It is also possible that some of these disorders emerge as a result of females being undiagnosed or misdiagnosed, as the lack of accurate diagnosis can cause high levels of stress (Fraticeili et al., 2022; Nussbaum, 2012). These high levels of stress likely play a part in the development of other disorders, such as substance abuse disorders.

In addition to the development of comorbidities, women with ADHD are at risk of developing substance abuse disorders. While both males and females with ADHD are at greater risk of developing substance abuse disorders than the general population, research has repeatedly shown that females with ADHD are at greater risk of developing substance abuse disorders than their male counterparts (Nussbaum, 2012; Young et al., 2020). The lack of accurate diagnosis means that they are unable to access stimulant medication therapy, which if implemented early in life is shown to lower the risk of substance use for those with ADHD (Dickenson et al., 2016; Nussbaum, 2012). Not having an accurate diagnosis can also lead to chronic stress and the development of other disorders, which can raise the risk of using alcohol, cannabis, and other substances as a way of coping (Nussbaum, 2012; Young et al., 2020). Females with ADHD may use these substances as a form of self-medication to handle their

symptoms, emotional turmoil, social isolation, and peer rejection (Nussbaum, 2012; Young et al., 2020). Because males are generally diagnosed much earlier in life, they are likely to receive answers, treatment, and medication early on, meaning they are less likely to participate in these forms of self-medicating when compared to females with ADHD. It is likely that if females received accurate diagnosis earlier in life, they too would be at less risk of developing substance abuse disorders.

Academic Performance

Research has shown that ADHD in both males and females is associated with academic underachievement, school dysfunction, and low educational attainment (Wu & Gau, 2013; Young et al., 2020) and that adolescents with ADHD are at greater risk of repeating grades, dropping out of high school, being suspended or expelled, and failing to achieve higher education (Young et al., 2020). Early treatment of ADHD has been associated with positive educational outcomes later in life since elementary school is where basic academic skills are acquired (Kok et al., 2020; Wu & Gau, 2013; Young et al., 2020). Because females with ADHD so often go undiagnosed or are misdiagnosed, they are unable to receive early treatment that would otherwise offset future academic underachievement, meaning that they may be particularly disadvantaged,

even when compared to males with ADHD (Kok et al., 2020; Young et al., 2020).

Additionally, females may struggle academically because their ADHD is more likely to present as inattentive (related to internalizing behaviors) as opposed to hyperactive/impulsive (related to externalizing behaviors) (Young et al., 2020; Kok et al., 2020; Fraticelli et al., 2022). Externalizing behaviors, which are more common in males, have a stronger impact on in-class behavior, while internalizing behaviors, which are more common in females, have a stronger impact on motivation and ability to engage in education (Young et al., 2020). In academic settings, females with ADHD are likely to be easily distracted, disorganized, unmotivated, and overwhelmed by schoolwork (Young et al., 2020). Research has found that the inattentive presentation of ADHD is a higher predictor of educational underachievement than the hyperactive/impulsive presentation (Young et al., 2020; Kok et al., 2020). While it is true that ADHD is associated with academic underachievement in both males and females, this evidence suggests that in some ways, females are at a greater disadvantage in the long run.

Social Behaviors

Children with ADHD are more likely to suffer from bullying in school, and while males experience mainly physical victimization, females experience higher levels of cyberbullying and social-relational bullying in addition

to physical victimization (Young et al., 2020). The reasons for this increased peer victimization could come from the fact that those with ADHD display characteristics such as hyperactivity and impulsiveness, which are related to negative behaviors such as non-compliance and defiance (Kok et al., 2016). This means that the opportunities for social learning may be more limited for those with ADHD than for neurotypical children because they are more likely to have negative peer interactions, causing them to learn negative social patterns (Kok et al., 2016).

Problematic peer functioning may have a greater impact on girls than on boys due to the fact that girls generally have more intimate social networks and that their relationships generally have higher peer attachment (Kok et al., 2016). Interpersonal difficulties with peers have been associated with negative outcomes for girls such as low self-esteem, lower satisfaction in romantic relationships, and higher rates of depression (Kok et al., 2016; Young et al., 2020). The effects of impaired social functioning could very well be a part of why comorbidities often develop in females, as well as a reason why they may struggle academically (Young et al., 2020). Because females generally place more value on peer attachment than males do, impaired social functioning may have greater negative outcomes for them than for males.

Struggles with social interaction and mental health could also negatively affect females' sexual experiences, reproductive health, and romantic relationships (Wallin et al., 2022; Bruner et al., 2015). Research has shown that young adult females with ADHD engage in fewer romantic relationships than those without ADHD, and there is evidence that when they do, their symptoms negatively influence relationship quality more so than do the symptoms of males (Bruner et al., 2015). Research has shown no difference between the relationship quality of men with ADHD and men without, but females with ADHD tend to have poorer relationship quality than females without (Bruner et al., 2015). It is possible that this is because females tend to be more invested in romantic relationships than males, but research also suggests that it could be due to difficulties with emotional regulation and higher levels of conflict with their romantic partner (Bruner et al., 2015). In addition, there is evidence that when compared to neurotypical females, females with ADHD are at a greater risk of sexual victimization, risky sexual behaviors, unplanned pregnancy, and sexually transmitted disorders (White & Buehler, 2012; Wallin et al., 2022). Females with ADHD tend to report lower levels of sexual satisfaction and often have a more negative view of sexuality as a whole (Wallin et al., 2022). Research suggests this could be due to lower self-esteem, negative self-image, poor social skills, inattention, and impulsivity (White & Buehler, 2012; Wallin et al., 2022; Kok et al., 2016). It is important that these problems be

recognized and addressed so females with ADHD can be protected from harmful relationships, unsafe sex, and sexual victimization. Accurate diagnosis leads to a level of self-knowledge and self-acceptance that acts as a form of protection (Wallin et al., 2022).

Conclusion

ADHD is a very real disorder that affects millions of people worldwide. Unfortunately, for a long time, this disorder was assumed to be something that predominately affected males. Because of this, the way it presents in females is not widely known, which leads to a drastic underdiagnosis of ADHD in females. Females with ADHD are often misdiagnosed with other disorders, and on average, are diagnosed with ADHD at a much later age than males with ADHD. This naturally puts females with ADHD at a greater disadvantage than males with ADHD because they generally do not receive the same level of treatment early in life. Consequently, they are at a greater risk of developing comorbidities and substance abuse problems, having

poor academic outcomes, and struggling in social and romantic relationships. This underscores the need for greater awareness, among parents, educators, and medical professionals, of the symptoms of ADHD in females specifically. Based on research reviewed here, it is very possible that early screenings, diagnosis, and treatment could ameliorate the psychological, academic, and social outcomes for females with ADHD.

Going forward, research should focus on long-term outcomes for females with ADHD who were diagnosed in childhood, compared with the long-term outcomes for females diagnosed with ADHD in adulthood. Research into this area would illuminate which female-specific problems related to ADHD could be helped by early diagnosis and treatment. Studying the differences and similarities between these two groups would clarify which problems are caused by female-specific symptoms and which are caused by misdiagnosis or lack of diagnosis altogether.

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