

Attention-Deficit/Hyperactivity Disorder and Problematic Romantic Relationships in Adulthood: A Review of the Literature

Jan Alexander Wozniak

Toronto Metropolitan University

Corresponding author: alexander.wozniak@ryerson.ca

ABSTRACT

Attention-Deficit/Hyperactivity Disorder (ADHD) is one of the most prominent neurodevelopmental disorders worldwide. Although viewed as a childhood behavioural disorder, longitudinal research has shown that ADHD symptoms frequently persist into adolescence and adulthood. Although previously overshadowed in the research literature, more attention is now being given to the connection between ADHD and romantic relationships in adults. This inattention can be attributed to the prioritization of child and adolescent populations and the emphasis on psychoeducational, cognitive, and behavioural problems. However, with the emergence of executive function (EF) models, more researchers are exploring the breadth of possible ADHD-related problems. In the past five years especially, studies have been pursuing the relational and emotional challenges faced by those with ADHD and their partners. Given the prevalence and extent of ADHD-related challenges, it is vital to identify how relationship problems emerge and provide effective psychosocial coping strategies for romantic partners to mitigate relationship dissatisfaction and turnover. This literature review evaluates research studies on ADHD and romantic relationships by exploring factors such as divorce rates, marital satisfaction, relationship length, negative emotions and habits, and distinctions between ADHD subtypes. This analysis identifies potential gaps in the literature and problems concerning replicability, generalizability, and sample representation in ADHD-related research studies. It then concludes by providing intervention suggestions for those involved in ADHD relationships.

Keywords: Attention-Deficit/Hyperactivity Disorder (ADHD); neurodevelopmental disorders; clinical psychology; romantic relationships; psychosocial interventions

1. Introduction

Attention-Deficit/Hyperactivity Disorder (ADHD) is a prevalent neurodevelopmental disorder that is estimated to affect 5-7% of children and youth (Polanczyk et al., 2007; Meppelink et al., 2016) and 2.5-4% of the adult population globally (Skounti et al., 2007; Simon et al., 2009). Though it has been commonly viewed as a childhood behavioural disorder, it is now well established that ADHD symptoms persist into adolescence and adulthood (Barkley et al., 2008; Simon et al., 2009; Kessler et al., 2010). According to Fischer et al. (1990), longitudinal research has shown that upwards of 70-80% of children diagnosed with ADHD will meet DSM diagnostic criteria in adolescence, while Kessler et al. (2010) and Simon et al. (2009) found persistence rates as high as 45.7% and 66% into adulthood. As ADHD is the most common neurodevelopmental disorder, researchers should be concerned with the psychopathological risks of significant portions of global populations. (Polanczyk et al., 2007). For example, research has shown an average decreased life expectancy of 9 to 13 years in ADHD populations, with a 25- year decrease in the most severe cases of the disorder (Barkley & Fischer, 2019). However, because previous research has focused mainly on cognitive and educational factors pertaining to the disorder, many experts believe that the conceptualization of ADHD is incomplete, negligent, and often trivializes a disorder with adverse mental and physical health risks (Barkley, 2006; Brown, 2013). The public perception of the disorder often views ADHD in terms of hyperactive children being unable to sit still and focus in classroom settings but fails to acknowledge how the condition contributes to pervasive forms of dysfunction (Barkley, 2006; Brown, 2013).

In contrast to widely held public presuppositions, researchers in the field contend that ADHD negatively impacts both executive functioning (EF) and emotional regulation (Fischer et al., 2011; Stern et al., 2020). Dominant EF models view the dysfunction of ADHD extensively, as executive function

deficits adversely influence nearly all life domains (Barkley & Fischer, 2019). According to Barkley (2006) and Brown (2013), executive functioning refers to a range of cognitive processes that include the regulation of planning, organizing, motivation, focus, alertness, effort, emotions, working memory, and self-action. Researchers believe that one critical area of the brain affected by ADHD is the prefrontal cortex (PFC), although other areas including the limbic system, basal ganglia, and reticular activating system, also play a role in the disorder (Barkley, 2006; Brown, 2013; Forde et al., 2017; Saletin et al., 2019). Those with ADHD often experience inhibited dopaminergic and norepinephrineric activity in the frontal lobes. Stimulant medications, the first-line treatment for ADHD, block dopamine reuptake and inhibit norepinephrine transport (Connor, 2006; Brown et al., 2018). Dopamine and norepinephrine are chemically linked pathways, and as such, play a cooperative role in executive function in the PFC (del Campo et al., 2011). These catecholamines are integral for mood, reward, expectation, attention, and movement, and if dysregulation occurs, individuals often experience significant challenges in day-to-day functioning.

With low or hypo-dopaminergic neurotransmission in the PFC, those with ADHD struggle to regulate their attention, stay motivated, regulate behaviour, and complete complex tasks (Barkley 2006; Barkley et al., 2007). Dopamine and norepinephrine get released in the PFC, but having too much or too little while engaged in particular tasks negatively impacts performance and sustained attention. (Hosenbocus & Chahal, 2012). Some research suggests that those with ADHD exhibit polymorphisms in dopamine transporter (DAT) genes, including DRD4 and DAT1 (Dougherty, 1999; Spencer et al., 2007). Consequently, those with ADHD have abnormalities in how the brain utilizes particular catecholamines. Common stimulant medications raise extracellular dopamine in the brain (Madras et al., 2005), thereby improving impaired DAT and dopaminergic neurotransmission (Spencer et al., 2007). In terms of life outcomes, those with ADHD experience lower gradu-

ation rates (high school and postsecondary education), self-esteem scores, and employment rates, as well as greater susceptibility to loneliness, suicide, and comorbid mental health conditions, including bipolar disorder, depression, anxiety, and autism (Barkley, 2006; Gu et al., 2018). Barkley (2006) has also found that those with ADHD are at greater risk of automobile accidents, arrest, divorce, alcohol, tobacco, and drug abuse, as well as a significant decrease in life expectancy. Given the complexity of the disorder, researchers are now paying greater attention to the connection between ADHD and romantic relationships in adults, which is a topic that has been largely overshadowed by psychoeducational, cognitive, and behavioural concerns, especially in younger demographics. This research is significant because romantic relationships impact not only the person with ADHD, but also their partners and families as well. Therefore, it is crucial to identify how interpersonal problems develop and consider effective intervention strategies to mitigate these outcomes. This review examines the potential risks and implications that ADHD can have on romantic relationships in adult populations. Due to a lack of research in this area, this review uses available studies from around the world. As ADHD is the most common neurodevelopmental disorder, there are many individuals at-risk in global populations who may not be receiving the assistance they require. For this reason, it is imperative to know not only the biological and psychological

outcomes of the condition, but also the interpersonal dimensions that play a fundamental role in development, social well-being, and overall physical and mental health.

2. ADHD Diagnosis, Subtypes, and Rates in Males and Females

With the introduction of the DSM-V in 2013, ADHD diagnoses are now classified as one of three possible subtypes: predominantly inattentive (ADHD-I), hyperactive-impulsive (ADHD-H), and combined presentation (ADHD-C) (American Psychological Association, 2013). To receive an ADHD-I diagnosis, children have to present six or more symptoms in the inattentive category, while adults require five or more symptoms. To receive an ADHD-H diagnosis, children would have to present six or more symptoms in the hyperactive-impulsive category, while adults require five or more symptoms. And to receive an ADHD-C diagnosis, children must present at least six symptoms in both the inattentive and hyperactive-impulsive categories, while adults require five or more symptoms in each. Moreover, classifications are also further organized based on the severity or number of symptoms, which include mild, moderate, and severe ADHD (APA, 2013). To receive an ADHD diagnosis, the symptoms must be present before the age of twelve and negatively affect life at home, school, work, and one's social interactions (APA, 2013).

Figure 1

DSM-V ADHD Symptom Checklist	
Inattentive Symptoms	Hyperactive-Impulsive Symptoms
1. Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or during other activities 2. Often has difficulty sustaining attention in tasks or play activities 3. Often does not seem to listen when spoken to directly 4. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace 5. Often has difficulty organizing tasks and activities 6. Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort 7. Often loses things necessary for tasks or activities 8. Is often easily distracted by extraneous stimuli 9. Is often forgetful in daily activities	1. Often fidgets with or taps hands or feet or squirms in seat 2. Often leaves seat in situations when remaining seated is expected 3. Often runs about or climbs in situations where it is inappropriate 4. Often unable to play or engage in leisure activities quietly. 5. Is often "on the go," acting as if "driven by a motor" 6. Often talks excessively. 7. Often blurts out an answer before a question has been completed 8. Often has difficulty waiting his or her turn 9. Often interrupts or intrudes on others

Note: Items replicated from *DSM-V* (APA, 2013)

Overall, males are more likely to receive an ADHD diagnosis than females based on the presentation of their symptoms (Barkley, 2006). Research indicates that male to female ADHD diagnosis ratios range from 2:1 to 16:1 (Cantwell, 1996; Nøvik et al., 2006; Ramtekkar et al., 2010). However, interestingly, these disparities seem to decrease as individuals reach adulthood (Solberg et al., 2018). Nussbaum (2011) suggests that this may be due to differences in male and female socialization. Moreover, as Nussbaum (2011) indicates, females receive more encouragement to ask for help when they are in need and are typically more effective at expressing their thoughts and emotions, which leads to more adult diagnoses. Gaub and Carlson (1997) theorize that females with ADHD are better at masking their symptoms in clinical settings, which means that their condition evades detection in childhood and adolescence. This capacity for 'masking' or 'camouflaging' is also higher in females with autism spectrum disorder (ASD) (Hull et al., 2019). Another explanation is that because males are more prone to hyperactive-impulsive symptoms, the externalization of their behaviours is easier to detect than inattentive subtypes (Arnold, 1996; Quinn, 2008). These types of behaviours can be particularly disruptive, especially in educational settings, which often leads to behavioural intervention and clinical diagnosis.

With that said, even though females may present higher rates of inattentive ADHD, they still show higher rates of disruptive behaviours than their non-ADHD peers (Neuman et al., 2001). Moreover, females with ADHD are also at a greater risk of being diagnosed and misdiagnosed with anxiety disorders, depressive disorders, and bipolar disorder (Geller et al., 1995; Hinshaw, 2002; Neuman et al., 2001). Nussbaum (2011) has suggested that females with ADHD are a greater risk of misdiagnosis, with ADHD-I often being classified as depression and dysthymia. According to Nadeau and Quinn (2002), females with ADHD-C are often diagnosed with bipolar disorder due to symptoms of hyperactivity, impulsivity, elevated energy levels,

and aggression, which are often mistaken for signs of hypomania and mania. Given the underdiagnosis of female populations and the persistence of the disorder from childhood to adolescence and adulthood, Biederman et al. (2006) identify this as a significant health risk. Unfortunately, most research on ADHD has focused on male samples, so it is challenging to identify whether outcomes, including interpersonal and romantic relationships, are the same for both males and females with ADHD.

3. Murphy and Barkley (1996)

Based on the history of ADHD research, Murphy and Barkley (1996) provide some of the earliest accounts of romantic relationship outcomes. To explore the consequences of adaptive impairments in ADHD in adult populations, Murphy and Barkley (1996) sampled an ADHD group ($n = 172$) and a non-ADHD group ($n = 30$). Although the researchers investigated a variety of measures, the primary aim was to identify differences between the two groups in terms of adaptive impairment, which is defined as the degree of difficulty an individual faces in meeting everyday environmental demands, including the capacity to care for oneself and interact with others (Mitchell, 2018). Importantly, the researchers have attempted to move away from previous models that limit ADHD to childhood. Specifically, Murphy and Barkley (1996) explicate how the condition contributes to complex impairments to one's educational, vocational, economic, legal, interpersonal, and personal well-being. Therefore, scores have been measured against a non-ADHD control to provide a comparative assessment.

To meet the inclusion criteria for the ADHD group, participants completed clinical interviews and self-report questionnaires to determine their eligibility. Therefore, the individuals (i) had to meet the DSM diagnostic criteria, (ii) had to have ADHD symptoms since childhood and through adolescence, and (iii) had to not meet the criteria for comorbid mental health disorders or suffer from mental impairments, injuries, or traumas that could skew the data

(Murphy & Barkley, 1996). In this process, the researchers made sure to reduce diagnostic overlap, and therefore, reduce potential confounds (Murphy & Barkley, 1996). Individuals in the clinical setting that did not meet the specified ADHD criteria were added to the non-ADHD control group. Semi-structured psychological interviews, the Symptom Checklist 90-Revised (SCL-90-R), and Locke-Wallace Marital Adjustment Test were used to assess a variety of life measurements (Murphy & Barkley, 1996). Where available, spouses and parents provided additional information and context about the ADHD participants and their symptoms. As the results of the study showed, the ADHD group had lower marital satisfaction scores (80.6) versus the control (98.0), lower spousal marital satisfaction scores (83.2) versus the control (104.1), higher alcohol dependence or abuse (34.5%) versus the control (10%), and higher drug dependence/abuse (13.5%) versus the control (3.3%) (Murphy & Barkley, 1996).

As the researchers expected, there were significant differences in romantic relationship satisfaction between ADHD and non-ADHD populations. However, the underlying factors behind these findings were not specified, which leaves the data open to interpretation. In the majority of the measurement categories, those with ADHD had lower or less preferred scores compared to the non-ADHD group. Given that the ADHD group demonstrated significant impairments in all major areas of life, the research revealed that the disorder does persist into adulthood and should warrant intervention, especially when considering factors like substance abuse risk, which could play a significant role in spousal marital dissatisfaction. By including a control, Murphy and Barkley (1996) have provided significant data on a diverse set of impairments (including romantic relationships) that had yet to be accounted for when the study was originally published.

With that said, more evidence is needed to understand why romantic relationships are more problematic in those with ADHD than non-ADHD populations. For example, is it the direct behaviour of the ADHD subject toward their partner that is problematic? Or is greater marital dissatisfaction based on indirect outcomes of other contributing deficits and impairments? (i.e., higher unemployment, poorer financial statuses, and legal problems). Additional limitations of the study include (i) significant age differences (experiment M = 32 versus control M = 36), (ii) disproportional gender distribution (32% female versus 68% male), (iii) failure to provide a fully standardized structured interview process, which can lead to problems with interrater reliability and generalization of findings, and (iv) neglecting to blind the clinical interviewer, which can lead to detection biases in the research.

4. Canu and Carlson (2003)

Another important factor that Murphy and Barkley (1996) neglected in their research was the distinction between ADHD subtypes. In a study conducted by Canu and Carlson (2003), the researchers explored dating and sexual relationships in ADHD and non-ADHD samples. Importantly, ADHD subtypes were accounted for in this study to better understand symptom distinctions and interpersonal outcomes. The sample consisted of 64 heterosexual males (ages 17 to 22) from a southwestern US university. The average age of the participants was not accounted for in the study. Using questionnaires, rating scales, and naturalistic observation qua the Heterosocial Initiation Task (HIT), researchers measured behavioural differences between the ADHD-Combined (ADHD/C) subtype, ADHD-Inattentive (ADHD/IA) subtype, and non-ADHD control groups (Canu & Carlson, 2003). Heterosocial behaviours refer to the social interactions between participants (males) and members of the opposite sex (females) (Canu & Carlson, 2003). It was hypothesized that those with ADHD would experience briefer relationships than their non-ADHD peers. This prediction was based on factors such as peer

rejection, less romantic experience, and cognitive and behavioural deficits typically associated with ADHD subjects. Consequently, the researchers expected that this group would report more problems with romantic partners. Unlike Murphy and Barkley (1996), who investigated those with ADHD as a unified sample, Canu and Carlson (2003) hypothesized that the ADHD/C subtype would demonstrate more impulsivity and inappropriate responses, while the ADHD/IA subtype would express greater passivity than the non-ADHD sample.

As the researchers predicted, the ADHD/IA group scored lower in areas pertaining to dating experience, relationship milestones, sexual escalation, and overall dating drive. However, the sexual experience SEQ results did not express strong differences between the control ($n = 24$), the ADHD/C group ($n = 27$) and the ADHD/IA ($n = 13$) (Canu & Carlson, 2003). This may be due to the fact that self-reporting on sexual experience is subject to self-desirability bias. Additionally, the researchers were correct that the ADHD/C group would score higher than the ADHD/IA group in dating scores and sexual experience, which may be attributed to the association between heightened impulsivity and higher promiscuity. The HIT naturalistic observation scores demonstrated that the ADHD/C subtype scored highest in conversation initiation, assertion, and interest, and against the researcher's hypothesis, they did not score highest in inappropriate responses (Canu & Carlson, 2003). On the other hand, the ADHD/IA subtype scored lowest in self-ratings questionnaire scores, and in the naturalistic observation, received the lowest confederate and second-rater results. Overall, the ADHD/IA group was most likely to experience heterosocial impairment and romantic relationship difficulties, including achieving dating milestones and gaining experience. With both low ratings from the researchers and self-reporting scores, those with ADHD/IA appear susceptible to increased loneliness and isolation than their peers. On the other hand, the ADHD/C group showed no deficits and even scored higher than the non-ADHD control

group in the majority of dating and relationship scores.

Based on the findings, the study by Canu and Carlson (2003) provided important insight into romantic relationships in ADHD subtypes through its cross-sectional research data. Unlike Murphy and Barkley (1996), the research study offered less variability in research outcomes by providing better control over the sample age and subject relatability (i.e., students at the same university). With that said, some research limitations should be addressed. First, the study by Canu and Carlson (2003) was a relatively small sample size, especially the ADHD/IA subtype ($n = 11$). Second, the research only focused on heterosexual males, and therefore, neglected female representation in ADHD research. Third, self-report questionnaires on sexual experience may have provided skewed results due to self-desirability bias, especially in young male populations. Fourth, ADHD university samples may not be generalizable, as those with ADHD that attend postsecondary education are probably high-functioning individuals. As Barkley (2006) and Brown (2013) have identified, most individuals with ADHD do not attend postsecondary education, and of those that do, the majority do not go on to complete undergraduate degrees. For example, Kuriyan et al. (2013) found that those with ADHD are more than twice as likely to drop out of high school and are three times less likely to hold a 4-year degree compared to their non-ADHD peers. For such reasons, college and university studies on ADHD often fail to account for the large number of individuals who never complete secondary school.

5. Ben-Naim et al. (2017)

Another concern with the research of Canu and Carlson (2003) is the fact that only ADHD subjects were analyzed and not their partners or spouses. Like most studies on ADHD and relationships, the researchers neglected the measures and opinions of those without the disorder. Ben-Naim et al. (2017) suggest that more research needs to be conducted on the perspectives of partners, as this can be used to provide a more complete representation of ADHD

relationships. In their study, 60 non-ADHD Israeli spouses reported on their marriage to ADHD partners. Similar to Canu and Carlson (2003), the focus of the research was heterosexual relationships. ADHD and relationship questionnaires were used to compare the research group ($n = 60$) and a non-ADHD control group ($n = 60$). Of the sixty members of the research group, 28 were male and 32 were female, with an age range of 30-53 years old ($M = 38.23$) (Ben-Naim et al., 2017). The researchers were specifically interested in identifying the implications that ADHD has on (i) long-term marriages, (ii) partner relationship experiences, and (iii) the role that intimacy played in moderating the happiness and satisfaction of the marriage. It was hypothesized that spouses of ADHD subjects would have lower levels of marital satisfaction and intimacy. The researchers also predicted a positive correlation between higher intimacy and marriage satisfaction scores.

Using a Marital Adjustment Scale (MAT) and intimacy questionnaire, the hypotheses made by the research team were correct (Ben-Naim et al., 2017). As the results showed, the ADHD group scored lower in both marital satisfaction (91.4 versus 123.8 for the control) and intimacy measures (169.1 versus 192.8 for the control) (Ben-Naim et al., 2017). Although ADHD symptoms pose various marital challenges, therapeutic interventions and the development of effective coping strategies may play a crucial role in helping couples work through their difficulties. One benefit of the research is the generalizability of the findings, as ADHD spouses may experience similar problems and difficulties.

On the other hand, the study did pose several limitations. First of all, the diagnostic criteria for ADHD were limited. Only 11 individuals had been formally diagnosed by a medical professional, while the rest were diagnosed through self-reporting. Despite the Conners Adult ADHD Rating Scales (CAARS) test scores, an official ADHD di-

agnosis typically involves a lengthy testing process and thorough clinical interviewing (Ben-Naim et al., 2017). Childhood records of ADHD symptoms were not included in this process, which may be problematic if symptoms were not present before the age of twelve (APA, 2013). Consequently, when a researcher intends to study ADHD, one of the most important considerations is the accuracy of the diagnosis and the presentation of the symptoms. Second, given the questionable diagnostic criteria of the experimental group, the sample itself was quite small to reliably account for significance and effect size. Additional clinical interviewing and background information about participants should be used to enhance the accuracy and generalizability of the data. Despite the questionable diagnostic process, the research of Ben-Naim et al. (2017) still provided highly valuable insight into ADHD-related marital problems, especially when viewed in conjunction with Murphy and Barkley (1996).

6. Soares et al. (2021)

In a recent study by Soares et al. (2021), additional data on ADHD subtypes and romantic relationships were provided. Some of the findings of Soares et al. (2021) aligned with outcomes presented by Canu and Carlson (2003) on ADHD/C and ADHD/IA subtypes. Accordingly, Soares et al. (2021) explored how romantic relationships were impacted by pervasive neurodevelopmental disorders, but unlike the previous research studies, this research included both ADHD and autism spectrum disorder (ASD). One measure that was explored was passionate or romantic love scores, which the researchers defined as "an intense emotional state typical of the beginning of romantic relationships, marked by profound feelings of attraction and commitments, as well as by obsessive characteristics" (Soares et al., 2021, p. 5). This variable would be measured by their Passionate Love Scale, along with demographic and relationship history scale scores (Soares et al., 2021). Using a correlational study of 306 Brazilian adults ages 18 to 58 ($M = 31.8$), the researchers evaluated relationship and Passionate Love Scale scores

from four groups: (i) ASD (ii) ADHD (iii) non-ASD and non-ADHD, and (iv) ASD and ADHD. As the results demonstrated, those with ASD had the lowest relationship status scores and were more prone to being without a romantic partner. Similar to the results found by Murphy and Barkley (1996), those with ADHD were three times more likely to be divorced than the control group (non-ASD and non-ADHD) (Soares et al., 2021). Additionally, the ADHD group was also four times more likely to have been divorced than the ASD group (Soares et al., 2021). In terms of passionate love scores, those with both ASD and ADHD scored the highest (101.77), those with ADHD scored second highest (94.51), those with ASD scored third highest (92.43), and those in the control scored the lowest (83.27) (Soares et al., 2021). Accordingly, those with ADHD experienced more intense emotions than the control, and similar to results demonstrated by Canu and Carlson (2013), inattentive subtypes showed lower romantic happiness and expressions of love and affection (Soares et al., 2021). Furthermore, inattentive subtypes also experienced higher rejection rates, which may have reinforced unassertiveness and disinterest in romantic relationships (Soares et al., 2021).

On the other hand, those that demonstrated higher hyperactivity-impulsivity were more prone to engaging in briefer and more frequent relationships, as well as higher rates of divorce (Soares et al., 2021). This outcome may be attributed to the fact that those with higher hyperactivity-impulsivity require greater stimulation and change. Moreover, it could also be due to a higher propensity for boredom and rash decision-making (Soares et al., 2021). The researchers identified that those with hyperactive-impulsive ADHD may love more intensely but have difficulty successfully regulating long-term relationships (Soares et al., 2021). With that in mind, this research is vital for better understanding comparative differences in neurodivergent populations, especially as ASD and ADHD have high rates of comorbidity (Antshel et al., 2016). By including measures of passionate love,

the researchers have identified that those with neurodevelopmental disorders often experience stronger romantic feelings, but may struggle to either (i) find partners (in the case of those with ASD) or (ii) maintain long-term relationships (in the case of those with ADHD). Furthermore, those with ASD and ADHD may also have greater difficulty understanding and expressing their emotions (Soares et al., 2021). For example, research has suggested that those with ASD are prone to alexithymia, which is characterized by an incapacity to distinguish and describe one's subjective feelings and emotions (Caine et al., 2021). As research has suggested, severe cases of alexithymia occur in 65% of adults diagnosed with ASD (Berthoz & Hill, 2005) and only hyperactivity-impulsivity subtypes (ADHD-I and ADHD-C) are associated with alexithymia in ADHD populations (Donfrancesco et al., 2013). More research is needed to better understand how underlying mechanisms of neurodevelopmental disorders overlap and diverge from one another in terms of social and emotional challenges.

There were a few limitations within the study worth mentioning. First, given the complexity of love, clinical interviewing and qualitative research measures may be helpful in future research. Specifically, descriptive research should be used to elucidate how those with ASD and ADHD feel toward relationships. This research would be particularly advantageous for demarcating ADHD subtypes, as well as better understanding complex dual ASD-ADHD diagnoses. Interviewing would also help further explain the underlying mechanisms of ADHD subtypes and how they contribute to relationship challenges. Second, unlike other ASD and ADHD studies, this research may be difficult to generalize as 73.9% of the sample was female, and most other studies are predominantly male. Given this challenge, researchers should strive for equal distribution to effectively compare research findings. Third, though elements of the study prioritized passionate love, little inquiry or focus was given to the length of previous relationships being analyzed.

Not controlling for this variable could lead to incomplete and unclear results.

7. Sacchetti and Lefler (2017)

With research overlap with Soares et al. (2021), Sacchetti and Lefler (2017) explored the potentially harmful aspects of the passionate and impulsive ADHD temperament. However, unlike Soares et al. (2021), who identified passionate temperaments as a good indicator for romantic relationships, Sacchetti and Lefler (2017) investigated how ADHD may lead to increased frustration, anger, dissatisfaction, and intimate partner violence (IPV). In terms of negative emotionality, Murphy and Barkley (1996) identified that those with ADHD were much more likely to engage in fights (41.3% versus 24.1% for the control) and had significantly higher arrest rates (33.7% versus 17.9%). In their study, Sacchetti and Lefler (2017) sampled 176 college students (aged 18 to 25). Although most participants were between 18-19, the average age of the sample was not provided. The ADHD group consisted of 31 participants, and the non ADHD group consisted of 145 participants. Moreover, the majority of the sample (84%) was recruited through a psychology department participant pool (Sacchetti & Lefler, 2017). The remaining 16% of participants were recruited by other universities in an effort to maintain sample consistency. For this study, the subjects completed self-report measures that consisted of seven demographic, relationship, ADHD, and comorbid scales (Soares et al., 2021).

After exclusion protocols, a total of 29 participants qualified for the elevated ADHD symptom category, which had a minimum of six ADHD symptoms, and 122 participants were grouped into the low ADHD symptomology category, which had a maximum of three ADHD symptoms. Gender differences were not taken into account in the measures of this study, even though, like Soares et al. 2021, the sample was predominantly female (66.5% female versus 33.5% male). Based on the results, the el-

evated ADHD group had higher scores of trait anger, state anger, and social impairment than the low symptom ADHD group (Sacchetti & Lefler, 2017). However, unlike both Canu and Carlson (2003) and Murphy and Barkley (1996), the researchers found that ADHD was not associated with romantic relationship dissatisfaction, even in the ADHD/IA subtype. Additionally, despite the hypothesis made by the researchers, there was no correlation between ADHD and intimate partner violence (IPV). Unlike the results of Canu and Carlson (2003), inattention was found to be a more accurate determinate of trait anger than the hyperactivity-impulsivity group. According to Soares et al. (2021), ADHD/IA may lead to gradual forms of frustration and anger, while ADHD/C and hyperactive-impulsive individuals may act angrily without weighing the consequences. However, these were implied moderators rather than ones tested and verified in the research study. Overall, this research study proved to have the most problematic limitations when compared to the others. First, the ADHD sample in the elevated ADHD symptom category consisted of only 29 participants, while the control consisted of 122 participants. Consequently, these numbers do not provide a representative sample, especially as the researchers failed to account for potential gender differences in this study despite its sample distribution (66.5% female versus 33.5% male). Given that most North American studies have more male than female subjects, it is hard to compare the findings to the research of Murphy and Barkley (1996) and Canu and Carlson (2003), who had sampling distributions of 32% female versus 68% male and 0% female versus 100% male. Moreover, the researchers failed to control for the 54.8% comorbid psychological disorder rate in the ADHD research sample (Sacchetti & Lefler, 2017). This rate is a critical confound, which is why it served as an exclusion criterion for Murphy and Barkley (1996). By failing to control for this variable, it is difficult to know the impact that other psychological disorders have had on the research measures. For example, how does one differentiate between ADHD and comorbid bipolar disorder or depression in the self-report

questionnaires? Studies have shown that 80% of those with adult ADHD have a comorbid psychiatric disorder (Sobanski et al., 2017; Torgersen et al., 2016). Another concern presented by researchers is the rate of ADHD overdiagnosis and misdiagnosis (Elder, 2010; Ford-Jones, 2015). These concerns can pose additional, unforeseen challenges for researchers that can easily skew the data.

Lastly, despite ADHD individuals being divided based on self-report questionnaires for convenience, researchers must acknowledge that diagnosis is a complex process, as even well trained clinicians with substantial training are susceptible to mistakes. In order to receive an ADHD diagnosis, the DSM-V identifies that factors such as childhood-onset (i.e., before the age of 12), the persistence of symptoms over time, and level of dysfunction in life domains must be met (APA, 2013). As the DSM-V indicates explicitly when diagnosing ADHD, “[t]he symptoms . . . are not better explained by another mental disorder (e.g., mood disorder, anxiety disorder, dissociative disorder, personality disorder, substance intoxication or withdrawal)” and that symptoms must negatively impact “the quality of, social, academic, or occupational functioning” (APA, 2013, p. 60). Therefore, to enhance interrater reliability and the generalizability of findings, strict parameters must be met when evaluating symptoms of prospective research samples, especially in studies where the research examines sensitive and potentially stigmatizing outcomes for those with the condition (i.e., anger and intimate partner violence).

8. Conclusion

Based on the reviewed literature, ADHD poses negative implications for marriages and romantic relationships. Specifically, ADHD was associated with high divorce rates (Murphy & Barkley, 1996; Soares et al., 2021), lower intimacy and marital satisfaction (Ben-Naim et al., 2017), and poorer relationship skills, social skills, disinterestedness, and anger in the ADHD/IA inattentive subtype (Canu & Carlson,

2003; Sacchetti & Lefler, 2017). With that said, the literature on ADHD and problematic romantic relationships in adult populations is limited and challenging to both interpret and generalize. First, research on the subject often utilizes small samples, making it difficult to measure the effect size accurately. Second, sample demographics, including age, sex, and background, remain inconsistent from study to study. Third, most studies fail to control for comorbid disorders, which can skew the data in ADHD research groups. Fourth, clinical interviewing and verification methods should be applied if researchers intend on accurately measuring ADHD symptoms. Fifth, self-report data and questionnaire diagnoses should be used sparingly, especially on sensitive topics pertaining to romantic relationships, sexual activity, and intimate partner violence.

Given that very little is known about the association between ADHD and romantic relationships, researchers should consider adopting qualitative research designs and interviews to provide more inclusive, intimate, and detailed representations of the disorder and its subtypes. Through this process, new research questions and concerns may emerge through a comprehensive understanding of the disorder, especially when studied alongside other neurodevelopmental disorders such as ASD. Based on the available evidence, the following recommendations can be made. Because those with ADHD often struggle with interpersonal communication and intrapersonal awareness, psychosocial interventions should be made available at earlier ages to avoid potential deficits in communication skills and social interactions. The aim should be to help those with the condition develop effective coping skills for the challenges of late adolescence and early adulthood. Additionally, when entering romantic relationships, persons with ADHD and their partners should disclose the challenges involved with the disorder and strive for open communication. Because ADHD is such a pervasive disorder as Barkley and Fischer (2019) suggest, resources should be made available to help those with the

disorder find the necessary educational, vocational, and social support that they need to succeed. Lastly, if challenges emerge in a romantic relationship, individuals should not hesitate to seek counselling and therapy services, as these may help to improve relationship outcomes and foster greater awareness and compassion for oneself and one's partner.

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