

ORIGINAL RESEARCH

Psychosocial characteristics of attention-deficit/hyperactivity disorder in Indian adults: a comparative analysis of self-esteem, parenting styles, and personality traits

A. P. Porrselvi* and C. R. Sneha

Department of Psychology, Unified Brain Health Care, Chennai, India

***Correspondence:**

A. P. Porrselvi,
porrselvi@ubhcare.com

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Background: Adult Attention-Deficit/Hyperactivity Disorder (ADHD) is often associated with complex psychosocial impairments that extend beyond core neurodevelopmental symptoms. This study investigated the differences in self-esteem, retrospective reports of childhood adversity, perceived parenting styles, and personality traits between adults with and without ADHD in an Indian clinical context.

Methods: A retrospective observational design was employed, utilizing deidentified clinical data from 98 adults [ADHD group ($n = 28$); non-ADHD control ($n = 70$)] from a psychology outpatient clinic in Chennai. Psychometric evaluation included the Rosenberg Self-Esteem Scale (RSES), the Parenting Scale, and the International Personality Disorder Examination (IPDE) Screening Questionnaire. Data were analyzed using independent samples t-tests, chi-square tests, and one-way ANOVA.

Results: Adults with ADHD showed significantly lower self-esteem ($p < 0.001$) and reported a higher exposure to childhood physical abuse, sexual abuse, and bullying compared to the control group ($p < 0.01$). Perceptions of early parenting experiences significantly differed; the ADHD group reported lower rates of authoritative parenting and higher rates of neglectful parenting from both mothers and fathers. The ADHD cohort demonstrated a significantly higher prevalence of schizoid, impulsive, and borderline traits (surviving Bonferroni correction), with anxious and dependent traits significant at the unadjusted level. Within the ADHD group, borderline traits were significantly more common among females, while the schizoid trait was associated with lower self-esteem.

Conclusion: The findings suggest that the diagnosis and management of adult ADHD should take into account environmental vulnerability and maladaptive personality development. These results highlight the need for trauma-informed, integrated clinical interventions that address core symptoms alongside self-concept and interpersonal functioning to optimize long-term psychosocial outcomes.

Keywords: attention deficit disorder with hyperactivity, self-concept, parenting, personality, adverse childhood experiences, India

Introduction

Attention-Deficit/Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder marked by enduring patterns of inattention, hyperactivity, and impulsivity that disrupt daily functioning (1). ADHD is not only a

childhood disorder, but it may persist into adulthood, and the manifestation of symptoms tends to shift; for example, hyperactivity may appear as restlessness, and the condition is commonly linked with comorbidities such as insomnia, obesity, mood disorders, and personality disorders (2, 3). The associations between substance use

disorder, mood disorders, anxiety disorders, and personality disorders are highly prevalent among adults with ADHD when compared to adults without ADHD (4). Empirical evidence suggests that adult ADHD is linked to lower levels of conscientiousness and inhibitory control, alongside elevated negative emotionality (5), and studies have reported considerable variations in the personality trait clusters observed among adults with ADHD (6–8). Untreated adult ADHD results in significant difficulties in life functioning, underscoring the importance of accurate diagnosis (9). Despite its widespread impact on educational, occupational, and social domains, diagnosing ADHD in adults remains challenging and complex, and it continues to be frequently overlooked (10, 11).

Other important concerns are the increased likelihood of exposure to bullying and abuse. Emotional and physical neglect, physical and sexual abuse, and witnessing family violence were highly associated with increased ADHD symptoms in adults (12). Individuals with ADHD report higher rates of emotional abuse and neglect compared to non-ADHD individuals, with females reporting greater experiences of sexual abuse and physical neglect (13). While childhood maltreatment relates to adult depression and anxiety, this pattern suggests that ADHD itself may exert a stronger influence on long-term psychosocial outcomes. These adverse experiences have significant implications for self-esteem; adults with ADHD often experience low self-esteem (14, 15). Difficulties in attention, emotional regulation, and interpersonal relationships can lead to feelings of inadequacy or failure. Evidence further suggests that untreated ADHD leads to poorer long-term outcomes in self-esteem and social functioning, whereas appropriate intervention and treatment are associated with significant improvements in these areas (16).

Parenting style plays an essential role in shaping both behavioral outcomes and emotional development in individuals with and without ADHD. Authoritative parenting styles were associated with lower ADHD symptom severity, while authoritarian and permissive styles may increase the symptoms of ADHD, and uninvolved parenting is least associated (17). Parenting styles of ADHD individuals were characterized by criticism and rejection, which are associated with attentional difficulties, heightened anxiety, and challenges in emotional regulation (18). Parents of children with ADHD perceive more stress related to a lack of emotional closeness and affective bonding with their children, as well as feelings of sadness that can drain energy for parental responsibilities (19).

Despite growing links with adverse psychosocial outcomes, including low self-esteem, maladaptive parenting experiences, and distinct personality trait profiles among adults with ADHD, the interplay among these factors in adulthood remains insufficiently understood. The present study seeks to investigate psychosocial differences between adults with and without ADHD, with particular emphasis

on self-esteem, parenting styles, and personality traits. Additionally, the study aims to explore how these factors interact within adults diagnosed with ADHD, specifically examining whether parenting style, personality traits, and abuse history predict self-esteem within the ADHD group.

Methodology

A retrospective observational study was done with the clinical data collected from individuals who sought services between July 2022 and January 2025 at an outpatient psychology clinic in Chennai, India. The study was reviewed by the Institutional Ethics Committee (IEC) at the Women's Christian College, Chennai, on 23rd January, 2025, and was deemed exempt from full ethical review (WCC/IEC/2024:186). Informed consent was obtained from all individuals during their clinical visit, permitting the use of their deidentified data for research purposes. All data were deidentified at source.

Participants had to be Indian nationals who were 18 years of age or older and were able to use technology to complete the questionnaire. The dataset was classified into two groups: the non-ADHD group included individuals who sought service for concerns other than ADHD, like adjustment issues and marital discord and had no known history of neurodevelopmental disorders; and the ADHD-diagnosed group included individuals who had received a confirmed diagnosis of ADHD from a clinical psychologist or a psychiatrist after the age of 18 years. Diagnostic reports were reviewed to confirm the inclusion and validity of the data.

Measures

Parenting styles were assessed using the Parenting Scale (20). The scale consists of 48 items equally divided into two dimensions: responsiveness and control and assesses four parenting styles: authoritative (high responsiveness and control), authoritarian (low responsiveness, high control), indulgent (high responsiveness, low control), and neglectful (low responsiveness and control). Each item is rated on a 5-point Likert scale, ranging from very wrong to very right. Separate scores are calculated for both mother and father on both dimensions, and parents are classified into one of the four parenting styles.

The Rosenberg Self-Esteem Scale (RSES) (21) was used to evaluate an individual's overall self-worth by measuring both positive and negative feelings about the self. It is a 10-item self-report measure, which is responded to on a scale ranging from "strongly agree" to "strongly disagree." Each item is rated on a 4-point Likert scale, with a total ranging from 0 to 30, with higher scores indicating higher self-esteem.

Personality traits were assessed using the International Personality Disorder Examination (IPDE) Screening

Questionnaire (22) in collaboration with the World Health Organization. This self-report instrument is designed to identify traits associated with various personality disorders, including paranoid, schizoid, dissocial, impulsive, borderline, histrionic, anankastic, anxious, and dependent personality. Each item is answered in true or false, and scores are summed within each trait domain. A cut-off score of four or more in any domain suggests a potential presence of clinically relevant personality traits. Although the self-report version of the IPDE does not provide formal diagnostic conclusions, it functions as a reliable screening tool for identifying personality disorder traits in both clinical and research contexts.

Analysis

Data analysis was conducted using Jamovi version 2.7.24 (23). Descriptive statistics were used to explain the demographic characteristics. Group comparisons between ADHD and non-ADHD individuals were done using independent samples t-tests for continuous variables (age, self-esteem) and chi-square tests of independence for categorical variables (education status, abuse history, parenting style, and personality traits). Within the ADHD group, t-tests and chi-square tests were conducted to examine gender differences in self-esteem, parenting style, and personality traits. One-way ANOVAs were done to examine the effect of parenting style on self-esteem, t-tests to assess differences in self-esteem based on personality traits and abuse history, and chi-square tests of independence were done to explore whether parenting styles were associated based on the abuse history and the presence of specific personality traits. Fisher's exact test was applied when expected cell counts were low, thereby violating the assumptions of the chi-square test. To control for the increased risk of Type I error due to multiple comparisons, a Bonferroni correction was implemented. Accordingly, the adjusted significance threshold for the omnibus chi-square analysis of the nine personality traits was set at $\alpha = 0.05/9 = 0.006$. Post hoc pairwise comparisons were conducted using Cramér's V for chi-square tests.

Results

Data from 98 individuals were included, of whom 28 belonged to the ADHD-diagnosed group and 70 to the non-ADHD group. The sample consisted of 48% ($N = 47$) male and 52% ($N = 51$) female genders in each group. The overall mean age was 28.7 ($SD = 5.59$), with a mean age of the general group of 29.5 ($SD = 5.40$) and a mean age of individuals with an ADHD diagnosis of 26.5 ($SD = 5.53$). A significant difference ($p = 0.013$) was found between the mean age of the

ADHD and the non-ADHD group, with more people in the ADHD group being younger.

Table 1 represents the results of educational and psychosocial characteristics of individuals with and without ADHD. Individuals with ADHD reported significantly more difficulties/challenges faced in education than non-ADHD individuals, $\chi^2(1, 98) = 29.4$, $p < 0.001$. This suggests that individuals with diagnosed ADHD are associated with greater challenges in the academic environment and are more likely to drop out of school/college compared to non-ADHD individuals, $\chi^2(1, 98) = 4.69$, $p = 0.030$. ADHD-diagnosed individuals were more likely to report a history of substance use, $\chi^2(1, 98) = 3.92$, $p = 0.048$, and were more likely to be formally diagnosed with mood or behavioral disorders, $\chi^2(1, 98) = 13.8$, $p < 0.001$, when compared to non-ADHD individuals.

Reports of physical and sexual abuse during childhood were significantly higher among individuals with ADHD compared to those without ADHD, $\chi^2(1, 98) = 8.60$, $p = 0.003$. Reports of other emotionally traumatic events were significantly higher among ADHD individuals than individuals without ADHD, $\chi^2(1, 98) = 4.33$, $p = 0.038$. Bullying at school was significantly more prevalent among individuals with ADHD compared to non-ADHD individuals, $\chi^2(1, 98) = 7.35$, $p = 0.007$, and at home, $\chi^2(1, 98) = 11.4$, $p < 0.001$.

The overall mean of self-esteem on the RSES was 15.3 ($SD = 6.31$). The mean score among those with ADHD was 11.1 ($SD = 6.29$) and 16.9 ($SD = 5.56$) for non-ADHD individuals.

An independent sample t-test was conducted to compare the self-esteem between individuals with ADHD and those without ADHD. The results indicated a statistically significant difference between ADHD and non-ADHD groups, $t(96) = 4.46$, $p < 0.001$, with a mean difference of 5.76 ($SE = 1.29$) as shown in **Supplementary Table S1**.

Table 2 represents the distribution of parenting style among mothers and fathers for both the ADHD-diagnosed group and the non-ADHD group. Of the mothers of the individuals included in the study, the authoritative parenting style was more commonly reported by those in the non-ADHD (47.1%) group when compared to the ADHD group (14.3%). A negligent parenting style was more frequently observed among mothers of the individuals diagnosed with ADHD (64.3%) compared to non-ADHD individuals (35.7%).

Similarly, among the fathers of the individuals included in the study, the authoritative parenting style was more prevalent among those of the non-ADHD individuals (51.4%) compared to those of the ADHD individuals (28.6%). In contrast, the negligent style of parenting was more frequent among fathers of individuals diagnosed with ADHD (53.6%) compared to those of non-ADHD individuals (20%), and the indulgent parenting style was more common among fathers of non-ADHD individuals (17.1%) compared to those of ADHD individuals (7.1%), as seen in **Table 2**.

TABLE 1 | Educational and psychosocial characteristics of individuals with and without ADHD.

	Count		Percentage (in %)		χ^2	p-value
	Diagnosed ADHD (N = 28)	Non-ADHD (N = 70)	Diagnosed ADHD	Non-ADHD		
Currently studying	16	12	57.1	17.1	15.7	<0.001***
Face Challenges in education	24	18	85.7	25.7	29.4	<0.001***
Drop out from school/ college	7	6	25	8.6	4.69	0.030*
Currently employed	14	45	50	64.3	1.70	0.192
History of substance use	12	16	42.9	22.9	3.92	0.048*
Formal diagnosis of mood or behavioral disorder	12	7	42.9	10	13.8	<0.001***
Physically abused as a child	11	9	39.3	12.9	8.60	0.003**
Sexually abused as a child	11	9	39.3	12.9	8.60	0.003**
Bullied at school	18	24	64.3	34.3	7.35	0.007**
Bullied at home	11	7	39.3	10	11.4	<0.001***
Other emotionally traumatic event	16	24	57.1	34.3	4.33	0.038*

Note: *p < 0.05, **p < 0.01, ***p < 0.001.

TABLE 2 | Distribution of the parenting styles of mothers and fathers reported by ADHD and non-ADHD individuals.

Parenting style	Mother		Father	
	ADHD (N = 28)	Non-ADHD (N = 70)	ADHD (N = 28)	Non-ADHD (N = 70)
Authoritative	4 (14.3%)	33 (47.1%)	8 (28.6%)	36 (51.4%)
Authoritarian	2 (7.1%)	5 (7.1%)	3 (10.7%)	8 (11.4%)
Indulgent	4 (14.3%)	7 (10%)	2 (7.1%)	12 (17.1%)
Neglect	18 (64.3%)	25 (35.7%)	15 (53.6%)	14 (20%)

Fisher's exact test was conducted to examine differences in parenting styles of mothers and fathers between diagnosed ADHD and non-ADHD groups due to low expected cell counts (**Supplementary Table S2**). The results indicated a significant difference between the parenting styles of the parents of ADHD-diagnosed individuals and non-ADHD individuals for both mothers ($p = 0.012$) and fathers ($p = 0.012$).

Table 3 presents the distribution of individuals who have scores above the cutoff (22) and a comparison of personality traits between the ADHD and non-ADHD groups. Individuals with ADHD exhibit a significantly different prevalence of schizoid, impulsive, borderline, anxious and dependent traits compared to those without ADHD, at the unadjusted level. A significant difference was found between individuals with ADHD and those without ADHD, following the Bonferroni correction (adjusted at $\alpha = 0.006$) in schizoid personality trait, $\chi^2(1, 98) = 12.8$, $p < 0.001$, Cramer's $V = 0.362$, impulsive personality trait, $\chi^2(1, 98) = 12.1$, $p < 0.001$, Cramer's $V = 0.351$, and borderline personality trait, $\chi^2(1, 98) = 7.96$, $p = 0.005$, Cramer's $V = 0.285$, all indicating moderate effect sizes. Anxious personality trait, $\chi^2(1, 98) = 6.27$, $p = 0.012$ and dependent personality trait, $\chi^2(1, 98) = 6.42$, $p = 0.011$ did not survive the Bonferroni correction. The presence of

ADHD is not significantly associated with a difference in the prevalence of paranoid personality trait, $\chi^2(1, 98) = 0.038$, $p = 0.845$, dissocial personality trait (Fisher's Exact, $p = 0.349$), histrionic personality trait, $\chi^2(1, 98) = 0.353$, $p = 0.552$, and anankastic personality trait, $\chi^2(1, 98) = 0.480$, $p = 0.488$, between the groups.

Within ADHD

The diagnosed ADHD group consisted of 28 individuals, with 15 females and 13 males. An independent sample t-test was conducted to compare the self-esteem between females and males within the ADHD group. The results (**Supplementary Table S3**) indicated that there is no statistically significant difference between gender and RSES scores, $t(26) = -0.72$, $p = 0.475$. Fisher's exact test (**Supplementary Table S4**) was conducted to examine the difference in parenting styles between males and females within the ADHD group due to low expected cell count. The results indicated no significant difference in parenting styles between genders within the ADHD-diagnosed group, for both mothers ($p = 0.520$) and fathers ($p = 0.928$).

Table 4 presents the results of chi-square analyses examining gender differences in the distribution of

TABLE 3 | Distribution and comparisons of personality traits between diagnosed ADHD and non-ADHD groups.

Personality traits	Count		Percentage (in %)		χ^2	p-value	Cramer's V
	ADHD (N = 28)	Non-ADHD (N = 70)	ADHD (N = 28)	Non-ADHD (N = 70)			
Paranoid	11	29	39.3	41.4	0.038	0.845	0.0197
Schizoid	17	16	60.7	22.9	12.8	<0.001*	0.362
Dissocial ^a	3	3	10.7	4.3		0.349	0.121
Impulsive	20	23	71.4	32.9	12.1	<0.001*	0.351
Borderline	13	13	46.4	18.6	7.96	0.005*	0.285
Histrionic	8	16	28.6	22.9	0.353	0.552	0.0600
Anankastic	18	50	64.3	71.4	0.480	0.488	0.0700
Anxious	21	33	75	47.1	6.27	0.012	0.253
Dependent	17	23	60.7	32.9	6.42	0.011	0.256

Note: χ^2 = Chi-square test of independence. Bonferroni correction was applied to adjust for multiple comparisons across nine personality traits; adjusted significance level was set at *p < 0.006.

^aFisher's Exact test was used for the dissocial personality trait due to low expected counts.

TABLE 4 | Distribution and comparisons of personality traits between females and males among the diagnosed ADHD group.

	Count		χ^2	p-value	Cramer's V
	Females (N = 15)	Males (N = 13)			
Paranoid	5	6	0.480	0.488	0.131
Schizoid	9	8	0.00691	0.934	0.0157
Dissocial ^a	2	1		1.000	0.0910
Impulsive ^a	13	7		0.096	0.362
Borderline	10	3	5.32	0.021	0.436
Histrionic ^a	5	3		0.686	0.113
Anankastic	9	9	0.258	0.611	0.0961
Anxious ^a	10	11		0.396	0.207
Dependent	10	7	0.480	0.488	0.131

Note: χ^2 = Chi-square test of independence. Bonferroni correction was applied to adjust for multiple comparisons across nine personality traits; adjusted significance level was set at *p < 0.006.

^aFisher's Exact test was used for certain personality traits due to low expected counts.

personality traits. A significant association was found for borderline personality traits, $\chi^2(1, 28) = 5.32$, $p = 0.021$, at the unadjusted level. However, following Bonferroni correction, all the traits did not show significant associations across gender at the unadjusted level.

A one-way ANOVA was used to investigate the relationship between parenting style and self-esteem scores in the diagnosed ADHD group. The analysis described in the **Supplementary Table S5** shows that there was no statistical difference for either the mother's parenting style, $F(3, 24) = 1.94$, $p = 0.151$, or the father's parenting style, $F(3, 24) = 1.17$, $p = 0.340$, on the individual's self-esteem.

An independent sample t-test was conducted to compare self-esteem between individuals who scored above and below the cutoff scores for different personality traits within the ADHD group (**Supplementary Table S6**). The results

showed that no statistically significant difference was found in the personality traits.

An independent samples t-test was conducted to examine differences in self-esteem (RSES scores) based on a history of physical and sexual abuse within the ADHD group. There was no significant difference in RSES score (**Supplementary Table S7**) between individuals with and without a history of physical abuse, $t(26) = 1.28$, $p = 0.212$, or sexual abuse, $t(26) = 0.337$, $p = 0.739$.

Fisher's exact test was conducted to examine the association between parental (mothers' and fathers') parenting styles and history of physical and sexual abuse among individuals with ADHD due to low expected cell counts. As seen on **Supplementary Tables S8** and **S9**, the association between the fathers' or mothers' parenting style of ADHD individuals and physical abuse was not

statistically significant, $\chi^2(3, 28) = 1.73$, $p = 0.631$; $\chi^2(3, 28) = 4.82$, $p = 0.185$. Similarly, the association between fathers' or mothers' parenting style and sexual abuse was not statistically significant, $\chi^2(3, 28) = 1.73$, $p = 0.631$; $\chi^2(3, 28) = 2.84$, $p = 0.416$. This finding suggests that the parenting style is not significantly related to whether the individuals reported experiences of physical and sexual abuse.

Fisher's exact test was conducted to explore whether mothers' and fathers' parenting styles were associated with the presence of specific personality traits among the diagnosed ADHD group (**Supplementary Table S10**). The result showed that parenting style, both maternal and paternal, did not show a statistically significant relationship with the presence of any specific personality traits.

Discussion

The present study investigated the differences in self-esteem, childhood adverse experiences, reported parenting styles, and personality traits between adults diagnosed with ADHD and a non-ADHD control group. It further explored the interrelationships of these factors within the ADHD group.

It should also be noted that the ADHD group was significantly younger than the non-ADHD group (mean age 26.5 vs. 29.5 years, $p = 0.013$), and age was not covaried in the analyses. This difference may have contributed to some of the observed group disparities, particularly for age-sensitive variables such as current educational enrollment and employment status, and should be considered when interpreting these findings. The ADHD group was more likely to have a formal diagnosis of a mood or behavioral disorder, and this supports the high rates of comorbidity reported in adult ADHD populations (4, 24). The ADHD group reported higher substance use than the non-ADHD group, which aligns with prior research that suggests a higher prevalence of substance use disorder among individuals with ADHD (25). There is a significantly higher prevalence of childhood physical and sexual abuse and vulnerability to other emotionally traumatic events reported by the ADHD group. Furthermore, the ADHD group reported significantly more bullying at school and, strikingly, at home as well. These results align with previous studies (12, 26) and underscore the vulnerability of individuals with ADHD to adverse and traumatic experiences, especially in their growing years. The association suggests that the characteristic ADHD symptoms, such as difficulty with social cues, emotional regulation, and impulsivity, may place these individuals at higher risk of becoming targets for bullying and abuse, even in their homes.

The results showed that individuals with ADHD had significantly lower self-esteem compared to the non-ADHD group, which can likely result from chronic difficulties in academic, occupational, and social domains, as well as the burden of adverse experiences and comorbidities reported by these individuals. Such low self-esteem may contribute to the

individuals being more vulnerable to bullying and abuse in all areas of life (27), causing them to be less likely to strive for improving their academic or professional performance or may put them at greater risk of abusive relationships.

The parenting styles reported by the ADHD and non-ADHD groups differed significantly for both mothers and fathers. Notably, the authoritative parenting style was less common in the mothers (14.3%) and fathers (28.6%) of the ADHD group compared to the non-ADHD group (47.1% and 51.4%, respectively). Conversely, the neglectful style was more frequently reported in the parents of the ADHD group (64.3% for mothers, 53.6% for fathers). This is of interest as it highlights the need for involving parents in the psychotherapeutic care pathway for those diagnosed with ADHD, particularly since neglectful or uninvolved styles may be less supportive of a child's needs.

In the personality domain, a significantly higher prevalence of schizoid, impulsive, and borderline traits (survived Bonferroni correction) and anxious and dependent traits (significant at the unadjusted level) was found in the ADHD group compared to the non-ADHD group. It provides support for the reported shared underlying mechanisms between adult ADHD and certain personality disorders (7, 28). The high rates of impulsive and borderline traits, in particular, are frequently reported to co-occur with ADHD due to shared features like emotional dysregulation and poor impulse control (29, 30).

The only personality trait that showed a significant association with self-esteem within the ADHD group was the Schizoid trait. Although this finding did not survive a Bonferroni correction when applied across the nine within-group comparisons (adjusted $\alpha = 0.006$), it represents a clinically plausible hypothesis warranting further investigation. The core characteristics of this trait, such as social detachment and limited emotional expression, could lead to feelings of isolation and failure in interpersonal connections in this population, and mental health practitioners need to be mindful about addressing this.

Within the ADHD group, there were no significant gender differences in self-esteem or reported maternal and paternal parenting styles. However, females were significantly more likely to report borderline personality traits than males, consistent with the literature (31), a finding that is consistent with observations in clinical settings and may influence how ADHD symptoms are manifested in women and hence has to be taken into consideration during diagnosis.

The reported parenting styles (mother's or father's) did not significantly influence self-esteem within the ADHD group. Similarly, the history of physical or sexual abuse did not show a statistically significant relationship with self-esteem among individuals with ADHD.

This finding contrasts with the general expectation that negative parenting and abuse would predict lower self-esteem. It might suggest that while ADHD individuals report more adverse experiences and have lower self-esteem

overall, as shown in the group comparison, the factors that differentiate self-esteem within the ADHD group may be related to more current functioning and other variables (e.g., current treatment, occupational status, relationship quality) rather than retrospective reports of childhood experiences and parenting styles.

No statistically significant relationship was found between the reported parenting styles (mother's or father's) and the history of physical or sexual abuse within the ADHD group. Additionally, there was no significant relationship between parenting style and the presence of any specific personality traits in the ADHD group. This implies that while the parenting environment of the ADHD group was significantly different from the non-ADHD group, and they reported more adverse experiences, the specific styles of parenting were not associated with abuse history or personality traits within the ADHD diagnosis.

The present study highlights that the relationship between these factors may be complex and driven by underlying neurobiological factors associated with ADHD itself, rather than a direct path from parenting style to abuse or personality traits.

Limitations

The small size of the ADHD group substantially reduces the statistical power for the within-group analyses, such as the relationship between parenting, abuse, and self-esteem. The non-significant findings may reflect insufficient power rather than a true absence of association. This study is based on a retrospective analysis of clinical data to improve services in an outpatient clinic in Chennai, which limits the generalisability of the findings. The use of a clinical control group may introduce confounding factors, and the observed age difference between groups represents an additional potential confound, as age was not controlled for in the analyses. Also, the observational study design limits the ability to infer causal relationships between ADHD, self-esteem, parenting style, and adverse experiences. The adverse experiences reported are based on retrospective self-report, which is subject to recall bias and potential distortion due to the individual's current emotional state or diagnostic status.

Future research directions

Studies with larger sample sizes and matched age groups are needed to clarify the association between the variables. Incorporating multi-informant approaches when assessing parenting styles (e.g., soliciting reports from parents or siblings or using observational measures) and childhood maltreatment might mitigate retrospective recall bias in future research.

Conclusion

This study provides compelling evidence that ADHD in adults is significantly associated with a poorer quality of life, characterized by a complex interplay of environmental adversity, detrimental parenting experiences, and challenging psychological traits. We have shown that in our cohort, adults with diagnosed ADHD exhibited significantly lower self-esteem compared to their non-ADHD counterparts. Furthermore, the ADHD group reported a higher incidence of childhood physical and sexual abuse and domestic as well as school bullying, underscoring their profound vulnerability to adverse experiences. The childhood environment was also characterized by a significantly lower rate of authoritative parenting and a higher rate of neglectful parenting for both mothers and fathers of the ADHD individuals.

The study demonstrated a meaningful association between adult ADHD and the presence of clinically relevant personality traits, particularly schizoid, impulsive, and borderline personality traits. The findings indicate the need to consider a shift in clinical practice toward a more comprehensive, trauma-informed approach in the assessment and treatment of adult ADHD.

Clinicians must routinely and systematically screen for childhood maltreatment, bullying, and comorbid personality disorder traits—particularly borderline and schizoid traits—when assessing an adult for ADHD. Borderline traits warrant special attention, given their significantly higher prevalence in females with ADHD. Preliminary evidence also suggests that schizoid traits may be associated with lower self-esteem in this population, though this observation requires replication in larger samples before firm clinical conclusions can be drawn, as management will then need to explicitly target core beliefs of inadequacy and failure that have accumulated over a lifetime of symptoms and adverse experiences. Psychoeducation for adult patients should address the impact of both the disorder's symptoms and the potential role of their early environment (parenting styles) on their current functioning, without assigning blame, but rather to foster self-compassion and insight. If possible, parents should be included as appropriate in the psychotherapeutic journey. Clinical management should be integrated, addressing core ADHD symptoms alongside emotional dysregulation and social-relational difficulties to maximize long-term psychosocial outcomes.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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