

Role of Early Childhood Adversity, Behaviour Problems and Academic Performance among Adolescents with ADHD: A Systematic Review

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ABSTRACT

Introduction: “Hyperactivity”, is characterised by difficulties related to task, oriented behaviour in children particularly hyperactive children also tends to be socially intrusive and immature. Attention Deficit Hyperactivity Disorder (ADHD) children have great difficulty in compatibility with their parents and their peer group. This disorder occurs majorly in boys than girls and some residual effects, such as attention difficulties may persist into adolescence.

Aim: Understanding of behavioural concerns among ADHD adolescents with their parents.

Materials and Methods: A comprehensive search in the international databases of academic search complete, Psych articles, J GATE, Psychology and behavioural sciences collection, Proquest, Science Direct, and Google scholar was conducted. Studies included in this review were prospective

studies, retrospective study, case-control study, cohort study, descriptive study, and review studies. The study consisted of 15 studies from review journals. Psycho social correlates were investigated in ADHD patients. The studies published from 2000 to 2016 were included in this review.

Results: The present review revealed that there is significant role of early Childhood Adversity (CA), poor scholastic performance and behaviour problems in the formulation of ADHD among adolescents.

Conclusion: It was concluded that there is a problem in ADHD patients related to their poor academic performances which also reflects in their adolescence, and behavioural problems with parents also. Parents with ADHD children faced more stress in comparison to parents of Non-ADHD children. There is a need to develop specific parent's intervention training and early identification of ADHD children.

Keywords: Adjustment problems, Attention deficit hyperactivity disorder, Psychopathology, Psychosocial factors, Scholastic adversity

INTRODUCTION

Attention Deficit Hyperactivity Disorder (ADHD) attributes to difficulties in behaviour faced by children- such as impulsivity, inattention and hyperactivity [1]. Children with hyperactivity face high levels of difficulties following directives and are often inattentive. Therefore, children with ADHD are less sharp than Non-ADHD children [2]. Hyperactive children are extremely talkative and intrude in others life and have below par academic performance [3]. Children with hyperactivity are not comfortable around their parents as they do not follow instructions, their problems in conducting themselves often get dissenting outlook from friends and family [4]. Hyperactive children are often not apprehensive, but their impetuous, hyper behaviour and their confusion is often understood as anxiety. Epidemiological study revealed that there is 3 to 5 prevalence of ADHD among school going children which starts at pre-adolescents age [5]. ADHD is often associated with other disorders such as oppositional defiant disorder [6]. Some other results, like problems in maintaining concentration may continue till adolescents [7].

Relationships of parents with ADHD children have a significant and arduous part, it is the duty of the parents to keep the child's moral up while being tolerated and compassionate. Better perception of the particular characteristics of the relationships between parents and children may act to better understand the role between parent child relationship and behavioural concerns in children suffering from ADHD, giving much attention to the bond between parent and child with ADHD [8]. Parents having children suffering from ADHD have to go through certain hurdles and are comparatively more tensed, than parents with children who do not have ADHD [9]; and as a result if parents are tensed than they are not enough capable of applying interventions that alter child's actions [10]. Children suffering from

ADHD face problems in adapting with the community and often lack academically. Their conduct with teachers, school behaviour and difficulties with friends and have below par relations [11]. Children suffering from ADHD often have issues with friends during school but their hyperactive and impetuous behaviour often makes them disliked by friends. Adapting of ADHD children with friends, face a number of issues: lower social liking, excess social impact, not much liked by friends, have less friends and are often despised by children who scores high among their peer group, implying a practice of getting despised by other groups [12].

Findings imply that the difficulty in relationship between the mother and son suffering from ADHD has the same implications between the child suffering from ADHD and younger siblings, these behavioural signs related with ADHD pose difficult family relationships as adjustment problems arise [13]. Children suffering from ADHD cannot control their emotions as compared to other children and are difficult to calm down and become perspective. Therefore, they get entangled in their own feelings and get demoralised. They stop doing whatever they are doing and don't do things easily. Children suffering from ADHD react more significantly to their surrounding events as compared to non-ADHD children. Reaction to negative surrounding events is much higher as compared to positive events. Due to this, however, children with ADHD are less emotionally reactive than children without ADHD [14]. Relying on past findings, it can easily be concluded that various psycho social factors such as poverty, illiteracy, employment and background play an important part in the acquiring and controlling of these children. Although, there is lack of studies on elements such as parent child relationship, emotional reactivity and adjustment, and academic performance among adolescents with ADHD. With the best knowledge of the

literature, there was not even a single systematic review on psychosocial correlates of patients with ADHD. Hence, present study was planned to fill the gap in literature with the aim, to explore the psychosocial correlates of patients with ADHD among Adolescents.

MATERIALS AND METHODS

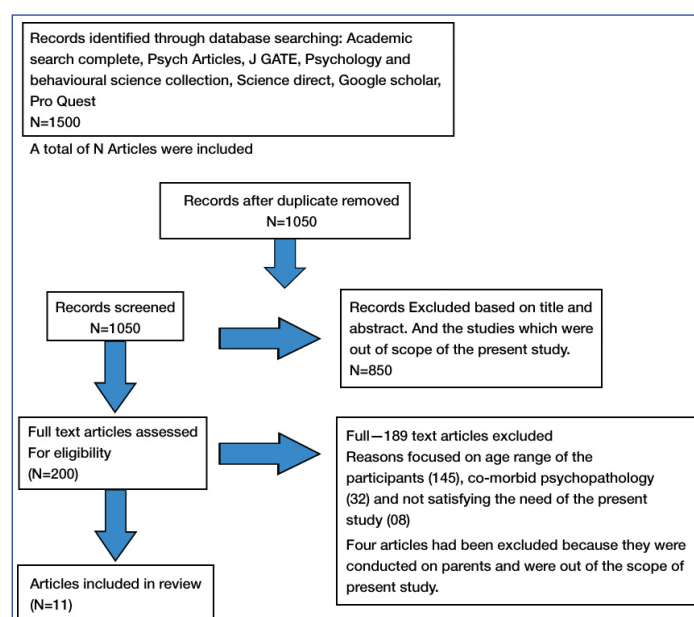
A literature search of this paper was collected online from the following sources: 1) Academic search complete; 2) Psych articles; 3) J GATE; 4) Psychology and behavioural science collection; 5) Proquest; 6) Science direct; and 7) Google scholar. The research was restricted to original and review studies in English language and studies published from last two decades. The studies published from 2000 to 2020 were included in this review. For this purpose, a literature review was planned with the key words of ADHD, Parent child relationship, Adolescents, Adjustment and Psycho social correlates.

Study Selection and Data Extraction

In the present study, a four phase process of (PRISMA STATEMENT) was used for labelling the items. The initial search with the above-mentioned keywords resulted in 1500 articles and out of them, 450 articles were excluded as they were repeatedly used. After the first phase, the examiner left with 1050 articles.

As per the information in the titles of the papers were used for the identification of the relevant studies. In this process, 850 studies were excluded because they were not relevant to the need of the examiners.

In the next step, 200 abstracts of the articles were reviewed, whose abstracts match the inclusion criteria, and which are in English language. The reading of full papers of the above mentioned articles left with total 50 articles out of 200 which match the inclusion criteria. Some were excluded, after all studies having been reviewed, hence 11 studies remained as fully relevant from this data [Table/Fig-1] which were fully extracted on the basis of quantitative and qualitative assessment. In quantitative studies the data were extracted on the basis of, methodology, context of the study, types of identification of the required content and its segregation. In qualitative studies it is based on, the aim of the studies, findings. This method enables us to find out the conclusion and results of the recent researches.



[Table/Fig-1]: Showing the flow chart of the search strategy based on the PRISMA statement.

Inclusion criteria: 1) Studies which were conducted on adolescence with ADHD; 2) studies which were conducted on adolescent age range 11 to 15 years; 3) Those studies which focused primarily on psycho social issues.

Exclusion criteria: 1) Studies which were conducted only on children; 2) Studies which were conducted on parents of adolescent with ADHD; 3) Studies which were conducted on comorbid conduct, intellectual disability, depression and anxiety these were excluded.

RESULTS

It was noted that, early adversity indexed by pre or prenatal is found to be associated with ADHD. Main finding in the present study is psychopathy traits in ADHD, associated with early adversity and emotional dysfunction. Study has shown that maternal health risks during pregnancy exert direct rather than indirect effects on outcomes [Table/Fig-2] [15].

S. No.	Author and year	Title	Result	Conclusion
1.	Fowler T et al., (2009) [15]	Psychopathy traits in adolescents with childhood attention-deficit hyperactivity disorder	It shows that total psychopathy traits were because of maternal smoking during their pregnancy, emotional dysfunction was due to birth complications and neither was associated with family adversity.	Family factors are not associated in early adversity. Whereas ADHD children show psychopathy traits but are not psychopaths.

[Table/Fig-2]: Showing the details of the article which focuses upon the role of early adversity in the formulation of Attention Deficit Hyperactivity Disorder (ADHD) [15].

It was also observed that, adolescents with ADHD had significant behavioural problems in the form of violence, vulnerable to be victim and violence. They were found to be less mature and have maladjustment with their peers and parents [Table/Fig-3] [16-21].

Hyperactivity leads towards poor scholastic performance. Hyperactivity was found to be in the children with lower grades than higher grades and girls with ADHD were having significantly poor scholastic performance than boys [Table/Fig-4] [22-25].

DISCUSSION

Results of the study revealed that there is significant role of early CA in the formulation of ADHD, poor scholastic performances and behaviour problems. In present study, early CA found to be associated with ADHD and it is found to be consistent with literature, for example CA has been associated with the risk of ADHD, little is known about the effect of cumulative CAs and whether there are clusters of CAs that are more closely related with ADHD [26]. The possible explanations of the results are that CA is associated with childhood deprivation, which may lead to hyperactivity and inattention among children. If it is not intervened early, then it might lead towards ADHD, in Adolescence. Because there is role of many psychosocial factors such as parents' negligence, childhood abuse, lack of social skills and poor cognitive functions which are cause of ADHD in childhood. A study showed that children with ADHD if suffer with childhood abuse or neglect by the parents or teacher, then it will be reflected as aggression among the children, also parents abusive discipline methods will leads towards children behavioural issues [27]. Studies indicated that children with ADHD shows worse outcomes in attention and executive functioning, while doing things in wrong way, they develop a feeling of guilt and low self-esteem [28].

In the present review, poor scholastic performance was found to be associated with children with ADHD and the results of the present study is consistent with the previous literature in which they found that ADHD is associated with poor grades, poor reading and math standardised test scores, and increased grade retention. ADHD is also linked with increased rates of detention and expulsion, and eventually with moderately low rates of high school graduation and postsecondary education [29]. It is obvious among children with ADHD because of inattention and hyperactivity, they are not able to perform adequately in schools and in academics, and eventually

S. No.	Author and year	Title	Result	Conclusion
1.	Stefanini JR et al., (2015) [16]	Adolescents with attention deficit hyperactivity disorder and exposure to violence: parents' opinion	As per the ADHD parents opinion, children become victims as they suffer conflicts occurrence in the family life and conflicts in the school and community as they find it difficult to handle them, which makes them to go through with physical and psychological violence.	Family and school should develop an interpersonal relationship for ADHD children so that occurring of violence can be controlled also it is advised that nursing care and communication between health professionals and family is required.
2.	Becker SP et al., (2016) [17]	Rates of peer victimisation in young adolescents with ADHD and associations with internalising symptoms and self-esteem	Relational and physical victimisation in males and females are associated with anxiety and relational victimisation was related with depressive symptoms and lower self esteem faced, more by males than females. Whereas males experience more physical victimisation than females.	As per the findings, ADHD Adolescents faces peer victimisation and internalising problems among them.
3.	Markel C and Wiener J (2014) [18]	Attribution Processes in Parent-Adolescent Conflict in Families of Adolescents with and without ADHD	Reports indicated that adolescent parents of ADHD faces more issues than with non-ADHD parents. Fathers of ADHD adolescents faces conflicts with their sons or daughters where fathers of without ADHD adolescents are likely to report less conflicts.	Fathers of ADHD adolescents faces more conflicts than the fathers of without ADHD as they are less likely to be involved in any such kind of conflicts among them.
4.	Bunford N et al., (2018) [19]	Emotion Dysregulation is Associated with Social Impairment among Young Adolescents with ADHD	Adolescents suffering from ADHD display various signs of ED along with intense emotions and with behavioural dysfunction. ED is not different from as a function of ADHD or its co-occurring subtype or ODD and is linked with social impairment. Low threshold for anxiousness, behavioural dysfunction due to strong emotion inflexibility on the part of parents are some of the aspects of ED. Three of six indications of parents and self analysed, social dysfunctionality beyond co-occurring ODD.	ED did not differ as a function of ADHD subtype or co-morbid ODD and is linked with social impairment.
5.	Edwards G et al., (2001) [20]	Parent-Adolescent Conflict in Teenagers With ADHD and ODD	Issues involving conflict between parents and teens in the ADHD/ODD group have reported having more issues than parents-teen conflict in CC group. Parent-teen conflict in the ADHD group have issues such as more anger during conflicts, reporting to negative approach in conflicts and having dissenting communications. Teenagers suffering from ADHD/ODD demonstrate more negative behaviour during a normal discussion. Teenagers and parents of those in the ADHD/ODD group display more negative behaviour in conflicts than parents and teens in the CC group. Sex of a parent being the basis of different scales of conflicts were evident only in a few cases. Both the parents are responsible for the grade of mother-teen conflict although fathers' self-graded malice and impatience have donated to the conflicts along with the level symptoms of ADHD and ODD.	Results repeated the past studies of ADHD/ODD mother-child interconnection and broaden these results to teens suffering from these disorders and indicated that more conflicts occur in father-teen interconnections and found the level of hostility of parents. Along with this the symptoms contributed more towards these conflicts i.e., more severe contributions along with ADHD/ODD signs.
6.	Jogsan YA (2013) [21]	Emotional Maturity and Adjustment in ADHD Children	ADHD children secured higher numbers in all these areas as compared to normal children. However, in taking emotional aspect in consideration there is no significant difference between normal and ADHD children. Taking in consideration it can be said that ADHD has comparatively higher scores in all the areas except educational area than normal groups.	Concluding the study, it can be said that ADHD children were less emotionally matured and had less adjustment in comparison to normal children. To help the ADHD children achieve more emotional maturity and adjustment abilities, these findings should be taken into consideration while enrolling ADHD children in special psychological training programmes. There should be future studies in order to enhance these emotional abilities in psychological training programmes. It is found that children suffering from ADHD are more emotionally immature and terribly adjusted.

[Table/Fig-3]: Showing the role of behavioural problems among adolescents with ADHD [16-21].

ADHD: Attention deficit hyperactivity disorder; ED: Emotion dysregulation; ODD: Oppositional defiant disorder; CC: Community control

S. No.	Author and Year	Title	Result	Conclusion
1.	Washbrook E et al., (2013) [22]	Pre-school hyperactivity/attention problems and educational outcomes in adolescence: Prospective longitudinal study	It is shown that pre-school hyperactivity and conduct problems prolonged with negative effects on academics. It is analysed that abnormal hyperactivity and inattention scores were associated with reduction of ten GCSE points in boys specifically.	Pre- hyperactivity/inattention and conduct problems causes bad academic outcomes among adolescents.
2.	Namdari P et al., (2012) [23]	Epidemiologic Feature of Attention Deficit and Hyperactivity Disorder (ADHD) in Elementary School Children	The students in grade 5 showed the lowest and those in grades 2 and 3 showed the highest ADHD rates.	There is no association between parents age, education, income and psychiatric problems in a family.
3.	Elkins IJ et al., (2011) [24]	The Impact of Attention-Deficit/Hyperactivity Disorder on Preadolescent Adjustment may be greater for girls than for boys	ADHD girls, especially with inattention subtype found to be more negatively effected in academics and among their peer group. Also, ADHD boys and girls face difficulties in all areas.	ADHD Girls with inattentive subtypes faces many challenges such as like, bullying, social isolation and academics also, this issue among ADHD Girls seems to have the consideration.
4.	DeWolfe NA et al., (2000) [25]	ADHD in preschool children: parent-rated psychosocial correlates	As per the parental ratings ADHD Pre-0 school children perceived to be as equally competent and socially acceptance by their peer group as like normal children, but children ADHD are more aggressive, demands more parenting, less social skills, not adaptable towards the environment easily.	Parents of ADHD rated themselves as less competent parent, experience restricted parenting role, parenting of ADHD child is more stressful.

[Table/Fig-4]: Showing the role of academic performance as a risk factor for adolescents with Attention Deficit Hyperactivity Disorder (ADHD) [22-25].

GCSE: General certificate of secondary education

results in drop out from the schools. On the other hand, due to their poor cognitive functions and inattention, they lose interests from

academics and focus more on the stimulus which gratifies their needs in the environment.

Limitation(s)

First, it did not include studies which have been conducted on adults as that could have been given a better insight about the prognosis of ADHD. Second, reporting bias is there because of selective outcome, as the present study has included only those articles which deals with the psychosocial issues among ADHD children. Third, the key words were pertains to only psychosocial issues, whereas in future researcher would try to collaborate biopsychosocial factors which are associated with ADHD.

CONCLUSION(S)

Behavioural problems were found to be significantly associated with adolescence with ADHD. Untreated ADHD leads towards behaviour problems and persists in adolescents. Similarly, children with ADHD have behaviour problems shows poor prognosis which leads to various psychosocial consequences among them. The present study was conducted on adolescence with ADHD and there is dearth of the study which has been conducted on adolescence with ADHD which is a methodological advantage of the study.

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