



**Original Article:**

**Frequency of Parental Psychopathology in Children with Attention Deficit Hyperactivity Disorder**

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**Abstract:** Parental mental health concerns place children at a significantly greater risk of lower social, psychological and physical health than children in families not affected by mental illness. Several studies have examined the extent to which psychopathology in children are closely related to parental substance use disorders or to other mental disorders. This study intended to investigate the frequency of occurrence of parental psychopathology in children with Attention Deficit/Hyperactivity Disorder and compare the characteristics of children with and without parental psychopathology. Fifty children between 7-14 years of either sex fulfilling the ICD-10 criteria for ADHD comprised the sample of this study. It would be a chart review of in-patients and out-patients who have consulted at Kasturba Hospital, Department of Psychiatry, Manipal over a two year period. Parents diagnosed with Substance Use Disorders (SUD) and other psychiatric morbidity according to ICD-10 was compared with those parents without any psychiatric illness on various Sociodemographic, clinical characteristics. Most of the parents were in the second or third decade of their life. Of the fifty patients 41(82%) were males and 9 (18%) were females. In 36(87.0 %) of the fathers had a history of substance use disorder and 5(13.0 %) it was absent. Other morbidities were also present in both parents. The findings are discussed in light of the implications.

**Key Words:** ADHD; Parental psychopathology; Substance use; Alcohol Dependence Syndrome

**Introduction:**

Attention deficit hyperactivity disorder (ADHD) is a chronic and pervasive condition characterized by developmental deficiencies in sustained attention, impulse control, and the regulation of motor activity in response to situational demands.[1] ADHD also carries with it a variety of comorbid disorders. These include oppositional behaviors and aggressive-spectrum disorders, learning disorders, depression and anxiety. Unfortunately, each comorbid condition has its own associated difficulties and impairments. When present, ADHD very often can be highly disruptive, adversely affecting many areas of child psychosocial functioning.[2] For example, virtually all children with ADHD display significant academic underachievement.[3] As many as 65% may exhibit aggressive behavior or oppositional defiant tendencies as well.[4] Low self-esteem, anxiety, depression, and other emotional complications also are quite common.[5] So too are peer relationship problems.[6-7]

Although a direct causal connection has yet to be firmly established, there is correlational evidence suggesting that ADHD

impacts far more than the functioning of the child. Parent functioning may be affected as well. Of particular clinical significance is that parents of children with ADHD very often experience considerable stress in their parenting roles.

The presence of ADHD in children is associated to varying degrees with disturbances in family and marital functioning, disrupted parent-child relationships, specific patterns of parental cognitions about child's behaviour and reduced parenting self-efficacy, and increased levels of parenting stress and parental psychopathology.[8-9] Importantly, while all parents experience stress to some degree, parents of children with externalizing behavior problems report significantly more stress than parents of children without externalizing behaviour symptoms. Parents of children with externalizing behaviour problems view themselves as having less parenting knowledge, less parental competence, and less social support.[10]

Parent psychopathology, including parental depression, anxiety, substance abuse, personality disorders, and ADHD, has been shown to be related to children's behavior development.[11]

Another detrimental effect that the stress of having a child with ADHD can have on the parents is increasing their rate of alcohol consumption. Pelham and Lang (1999) [12] examined how interacting with a child with ADHD would affect alcohol consumption in adults. They based this study on the assumption that if stress in general could increase alcohol consumption, then it may be possible that parenting stress could also lead to increased alcohol consumption. They found that when college students interacted with a child who had externalizing behavioural problems, the students increased their rate of alcohol consumption. When they replicated this study using parents of children with ADHD as their subjects, they found an interesting result. They found that interacting with a child with externalizing behaviour problems was related to increased drinking only when the parents had a significant family history for alcoholism.[12] This suggests that while parents of ADHD children who have a family history of alcoholism may cope with their stress by drinking, parents without this family history find more productive ways to cope with their stress.

Studies examining the frequency of occurrence of parental psychopathology in children with ADHD are almost modest hence the aim of this study was to determine the extent to which parental psychopathology associated with children with ADHD and to compare the characteristics of children with and without parental psychopathology.

**Materials and Methods:**

This was a retrospective chart review of child cases seen in Child Guidance Clinic, diagnosed with Attention Deficit Hyperactive Disorder according to ICD-X, in Dept. of Psychiatry at Kasturba Medical College Hospital, Manipal. The sample comprised of fifty children from 7 to 14 years, with ADHD with/without other co morbid psychiatric illness (ICD-10).

Socio-Demographic data, patient related variables like age of onset of ADHD, sex, developmental milestones, temperament of the child, and family history of psychiatric illness with special consideration to parental psychopathology were selected and those cases where there was no parental psychopathology were also included as a comparison group. Charts with incomplete data, those children who were adopted, separated parents or children suffering from neurological disorders were excluded. Institutional Ethics Committee clearance was obtained.

The SPSS statistical package (Windows version 11.0) used for data analysis. Descriptive statistics were used to determine categorical variables and chi square/Fisher's Exact Test was carried to find the statistical significance across genders on sociodemographic and some clinical variables.

**Results:**

Fifty children diagnosed as ADHD with complete sociodemographic and clinical details formed the sample for analysis. Of this 26(52%) parents had a psychiatric illness; out of which 19 (73%) were males and 7(27%) females diagnosed with ADHD. Twenty four (48%) parents did not meet any ICD criteria for a psychiatric illness majority i.e. 75% being males. However there was statistically no significant difference between the two groups i.e. those with and those children without parental psychopathology. Majority from both the groups hailed from middle socioeconomic status. There was statistically no significant difference across the two groups as regards the age of onset of ADHD; developmental milestones and temperament [Table 1].

Variables	Parents With illness (26)	Parents without illness (24)	Total (50)	Fisher exact DF	P value <.001
<b>Sex</b>					
Male	19	18	37	0.56 / 1	NS
Female	7	6	13		
<b>Economic status</b>					
USES <sup>1</sup>	-	-	-	0.67 / 1	NS
MSES <sup>2</sup>	19	20	39		
LSSES <sup>3</sup>	7	4	11		
<b>Age of onset of illness</b>					
7 - 10	16	16	32	0.71 / 7	NS
11 - 14	10	8	18		
<b>Development Milestones</b>					
Normal	15	12	27	0.39 / 1	NS
Delayed	11	12	23		
<b>Temperament</b>					
Easy	6	5	11	0.56 / 1	1.000
Difficult	19	20	39		

<sup>1</sup>Upper <sup>2</sup>middle & <sup>3</sup>lower socioeconomic status

The diagnostic break up of children with ADHD in both the groups i.e. children with and without parental psychopathology was not statistically significant. Children in both groups manifested with ADHD alone 11 (42.3%) in parents with illness and 9(37.5%) parents without illness. Next around 6(23.1%) in the first group and 9 (37.5% ) in the second group had SLD in addition to ADHD, about 15.4% in the first group and 16.6%in the other suffered from Mental retardation and ADHD. Other co morbid conditions along with ADHD was less common [Table 2]. In short the pattern of disorders in children across both the groups were similar..

Variables	Parents With illness [26]	Parents without illness [24]	Total [50]	Fisher exact DF	P value <.001
<b>Diagnostic break-up of children</b>				0.63 / 1	0.002 NS
ADHD*	11	9	20		
ADHD + SLD**	6	9	15		
ADHD +Tic Disorder	2	1	3		
ADHD + Mild MR***	4	4	8		
ADHD + Moderate MR	1	0	1		
ADHD+SLD +Seizure Disorder	1	0	1		
ADHD+SLD+MR	1	1	2		

ADHD-Attention Deficit Hyperactivity Disorder; SLD-Specific Learning Disability; MR-Mental Retardation

**Characteristics of parents:**

The mean age of the father in the sample was 42.3(S.D.4.3) with a minimum age of 34 and maximum of 53 with range of 19 years and that of the mother was 35.7 (S.D. 4.26); minimum of 28 and maximum of 47 with a range of 19 years. Overall mothers were about seven years younger than the fathers in the study sample.

There was no statistical significance in the characteristics of father and mothers in the two groups' current age of the parents however most of the mothers were above 30 years and fathers above 35 years. There were also no differences in the age of the mother at the time of the index child's birth across the two groups [Table 3 & 4].

In the first group of parents with psychopathology of the 26 mothers around 8(30.8%) had a history of both medical and psychiatric illness. Diabetes mellitus and hypertension or both were the most common diagnosis and mood disorders were the psychiatric diagnosis. [Table 3]

Variables	With illness (26)	Without illness(24)	Total (50)	Fisher's Exact DF	p-value
<b>Mother's age at Birth of child</b>					
19 – 20	2	1	3	0.79 / 2	0.06
21 – 25	13	11	24		
Above 26	11	12	23		
<b>Mother's Current age</b>					
25 – 30	4	0		0.60 / 2	0.023
31 - 35	11	11			
Above 36	11	13			
<b>Co morbid condition positive</b>					
Diabetes Mellitus( DM)	2	-		0.61 / 2	>0.001
DM+ Hypertension(HTN)	1	-			
HTN	2	-			
Schizotypal Disorder	1	-			
Bipolar Affective Disorder	1	-			
Depression	1	-			

p<.0001

Among the fathers all 26 fathers suffered from psychiatric disorders rather than medical conditions. There was a high proportion with substance use disorders, around 18 of the 26 i.e. 69% with substance use disorders. Common psychiatric diagnosis included Alcohol dependence syndrome 7 (26.9%) tobacco de-

pendence syndrome 4 (15.4%); both ADS and TDS- 7 (26.9%), 3 (11.5%) diagnosed with personality disorders and mood disorders were less common [Table 4].

**Table 4: Characteristics of Fathers with and without psychopathology**

Variables	With illness (26)	Without illness (24)	Total	Fisher's Exact DF	p-value
<b>Father's Current age</b>				0.455 / 2	NS
30 – 35	2	1	3		
36 – 40	8	6	14		
Above 41	16	17	33		
<b>Paternal Illness</b>	26	0	50	0.48 / 1	<0.001
ADS*	7	-			
TDS**	4	-			
ADS + TDS	7	-			
Seizure Disorder	2	-			
Depression	2	-			
ASPD*** + ADS	1	-			
ADS + DM	1	-			
AAPD****	1	-			
BPAD <sup>1</sup>	1	-			

p-value <0.001 \*Alcohol Dependence Syndrome, \*\*Tobacco Dependence Syndrome, \*\*\*Antisocial Personality Disorder, \*\*\*\*Anxious Avoidant Personality Disorder, 1 Borderline personality disorder

In 18 (36%) both the parents of children were affected with some psychiatric disorder.

#### Discussion:

The present study examined the frequency of parental psychopathology in children suffering from Attention Deficit Hyperactivity Disorders. The finding reveals that overall 36 % in which both parents were affected and that more fathers were diagnosed than the mothers. The most common diagnosis was substance use disorders in 69% of the fathers. Studies have reported increases in mental disorders among children of parents with substance use disorders.[13-16] Children-of alcoholic parents (COAs) are at increased risk for various psychiatric, cognitive and interpersonal difficulties, as well as developing alcohol use disorders.[17]

Of particular relevance, significantly elevated rates of attention deficit hyperactivity disorder (ADHD) have been reported in COAs.[2,18-21] In addition children of fathers with substance use disorders are at increased risk for psychopathology, including conduct disorder, attention deficit hyperactivity disorder (ADHD), major depressive disorder, and anxiety disorders.[13-14,22]

The extent to which these mental disorders in children are a consequence of parental substance use disorders or more specifically associated with corresponding parental psychopathology remains an open question. Parents with substance use disorders typically have had other mental disorders. Analogous to their children, fathers with substance use disorders often have childhood histories of conduct disorder and ADHD as well as major depressive disorder and anxiety disorders.[23]

The genetic and environmental mechanisms through which paternal psychopathology and substance use disorders influence offspring outcomes have yet to be fully determined. Paternal-maternal concordance for specific mental disorders is common, in part due to assortative mating, and may increase risk in offspring for like disorders.[24-26] Most studies on parent and child psychopathology have focused exclusively on mothers, ignoring fathers.[27]

The relationship between parents' mental disorders and their children's development is complex and is influenced by the interaction between multiple factors.[28] Although some useful generalizations can be made about the effects of parental mental disorders as a whole, a detailed understanding must take into account the nature, severity and duration of the parental mental disorders, as well as social, economic and cultural factors. The

existing literature gives only a partial understanding of these complex issues.

The children of parents with mental disorders constitute a high-risk population that demonstrates abnormalities of functioning in a wide range of psychological and social domains. This is in addition to their increased rates of suffering from mental disorders during childhood and/or adult life. These high-risk children are potentially identifiable and ensuring their well-being provides a challenge and an opportunity to health and social services. In some cases, the risk to the well-being of the child is so severe that child protection measures, including alternative care, must be considered. Interventions which address parental psychopathology may yield more potent or durable effects than treatment focusing only on the child's problems.

The study has several limitations. Retrospective assessments of childhood and adolescent periods collected in adult samples (i.e., parents) may be influenced by recall bias. Parental perceptions of child behavior may also be influenced by parental psychopathology.[29-30] Further exploration of parent-child transmission of comorbid conditions may be feasible with larger samples or study designs focusing on this issue.

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