

INTERNALIZING SYMPTOMS IN CHILDREN OF ALCOHOLICS: A HOSPITAL-BASED CROSS-SECTIONAL STUDY

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ABSTRACT

Background: A number of psychological problems have been demonstrated in Children of Alcoholics (COAs). These can be divided broadly into externalizing and internalizing symptoms. These are identified as risk factors for future psychiatric disorders, including substance use disorders. The aims of this study were to find the proportion of COAs having internalizing symptoms and to find the association of these symptoms with sociodemographic variables and severity of alcoholism.

Methods: 100 children, aged 6 to 14 years, of males with Alcohol Use Disorder (AUD) attending various departments of a tertiary care hospital were recruited. Exclusion criteria were presence of Intellectual Developmental Delay (IDD), neurological disorders, or any already diagnosed psychiatric disorder in the child; and presence of any Axis 1 disorder other than AUD in a 1st degree relative. Fathers were assessed with AUDIT (Alcohol Use Disorder Identification Test) and SADQ (Severity of Alcohol Dependence Questionnaire) for alcohol related problems. Children were assessed with CBCL (Child Behavior Checklist) (school age) for internalizing symptoms.

Results and Discussion: 57 fathers and their 100 children were recruited. There were 59 boys and 41 girls. The mean age of the children was 10.15 ± 2.82 years. The internalizing raw score of the group ranged from 0 to 39, with a mean of 5.21 ± 6.73 . The internalizing t score varied from 33 to 82 with a mean of 47.42 ± 11.94 . Prevalence of internalizing symptoms was 14%, with higher prevalence in children from middle socioeconomic status. 1st child in the family had higher chance of suffering from internalizing symptoms.

Conclusion: As our sample had a high (14%) prevalence of internalizing symptoms, early identification and timely intervention can help prevent further progression. Effective policies are to be initiated to deal with internalizing symptoms in children, at least in high risk group like COAs.

Keywords: Alcoholism, children of alcoholics, internalizing symptoms.

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INTRODUCTION

Alcohol consumption is a major public health problem. The life time risk for alcohol use disorder (AUD) is more than 15% in men and 8-10% in women.¹ Prevalence of alcoholism in India was reported as 21.4% and there is increasing alcohol intake among the young people.²

The term “children of alcoholics” (COAs) encompasses children living in families where parental alcohol abuse, dependence, and/or addiction are present. More than 20 years ago, researchers first noted that COAs appeared to be affected by a variety of problems over the course of their life span. Such problems include fetal alcohol syndrome, which is first manifested in infancy; emotional problems and hyperactivity in childhood; emotional problems and conduct problems in adolescence; and the development of alcoholism in adulthood.^{3,4}

Although researchers have, since the beginning of this century, examined the possible relationship between family history of alcoholism and its effects on the adaptation of offspring, widespread interest in the problems of COAs did not gain much momentum until the 1960's.³ By the mid-1970's, however, a sufficiently large number of empirical findings permitted to document a wide range of neuropsychological dysfunctions and psychopathology in COAs.⁴

Researchers have identified two broad classes of psychopathological symptoms in childhood: internalizing and externalizing symptoms. Internalizing psychopathology encompasses symptoms such as anxiety and depression. A number of studies show that COAs report high levels of depression and anxiety. However, it is unclear whether these adjustment problems are directly related to a parent's alcoholism, indirectly related by way of family disruption, or spuriously related.⁵

NEED FOR THE STUDY

Behavioral symptoms in children are often unnoticed till the symptoms reach a disorder level. Early detection and proper intervention would help in prevention of further progression of psychiatric disorders. COAs are potential candidates for developing psychiatric disorders in the background of strong genetic and environmental risk factors. So, it would be advisable to screen them for behavioral symptoms which might have gone unnoticed otherwise.

The aim of the study was to find out the proportion of COAs having internalizing symptoms and also to find the association of these symptoms with sociodemographic variables and severity of alcoholism.

MATERIALS AND METHODS

This study was conducted in a tertiary care hospital in north Kerala. It was a study conducted to detect behavioral symptoms in COAs. In this paper, only internalizing symptoms are discussed. To assess the prevalence of internalizing symptoms in COAs, we decided to recruit 100 COAs (The number was fixed as 100 after discussing with statistician. As of now, no prevalence study is available to make ideal calculation for sample size.), aged 6 to 14 years (This age group was taken as it was convenient to take school going children and also the scale used — CBCL [Child Behavior Checklist] — was appropriate for this age group), who are not diagnosed to have any psychiatric illness till then. For this purpose, initially men with AUD had to be identified. Men attending psychiatric outpatient or inpatient settings for alcohol related problems, and men referred from various other departments with similar problems were interviewed to diagnose AUD as per DSM IV TR criteria by the 1st author, and diagnosis was confirmed by either of the other authors. Among those diagnosed with AUD, those who were already diagnosed with any other axis I psychiatric disorder other than substance use disorders (SUD) were excluded. The men who met these criteria were enquired about their family details. Whoever had child/ children in the age

group of 6 to 14 years were informed about this study. Whoever willing to revisit our clinic with the child and the child's mother, who would be a better informant for filling the CBCL questionnaire, were given appointment to a later date without affecting the child's school timing. Those who attended again with the child were finally recruited for the study. Consent was taken from a parent and for children more than seven years old, assent also was taken. Study period was from 2015 July to 2016 July.

We approached around 124 patients with alcohol related problems who either came directly or were referred. All of them met criteria for AUD. Four of them were excluded due to presence of already diagnosed other axis I diagnoses (two BPAD, two Schizophrenia). Only 87 of them had child/children in age group of 6 to 14 years. Eight of them had hostile attitude when asked to participate in the study, and were hence excluded. 18 of them did not fulfill the promise of coming back with wife and child/children for assessments related to this study. Four of them were excluded as their children were undergoing treatment for ADHD. Thus, remaining 57 fathers and available 100 children of them were included in the study. 37 fathers had more than one child participating in the study.

The study was approved by the Human Ethics Committee of the Hospital. Instruments used were the sociodemographic data sheet, AUDIT (Alcohol Use Disorder Identification Test), SADQ (Severity of Alcohol Dependence Questionnaire) and CBCL (Child Behavior Checklist).

The fathers were assessed using AUDIT and SADQ for pattern and severity of alcohol use. Children were assessed using CBCL for their behavioural symptoms.

AUDIT (Alcohol Use Disorder Identification Test): Developed by World Health Organization as a simple method of screening for excessive drinking and to assist in brief assessment, the AUDIT helps practitioners to identify whether the person has hazardous drinking, harmful drinking

or alcohol dependence. AUDIT has high accuracy, sensitivity and specificity.⁶ AUDIT consists of 10 questions with scores ranging from 0 to 4. AUDIT scores 0-7 represent low risk, 8-15 represent risky or hazardous level, 16-19 high risk or harmful use and ≥ 20 represent dependence.

SADQ (Severity of Alcohol Dependence Questionnaire): The SADQ is a short, easy to complete, self-administered 20-item questionnaire designed to measure severity of alcohol dependence. There are five subscales with four items in each: Physical withdrawal, Affective withdrawal, Withdrawal Relief Drinking, Alcohol Consumption, and Rapidity of Reinstatement. Each item is scored 0-3. Thus, the total possible score is 0 to 60. Score < 16 is mild, 16-30 is moderate and ≥ 31 is severe form of dependence.

CBCL (school age) (Child Behavior Checklist): CBCL is a descriptive instrument designed to classify behavioral and emotional disorders of children aged 4 through 16 years comprehensively. Each of the 113 items is scored on a 3-step response scale — 0: not true, 1: sometimes true, and 2: often true. Similar questions are grouped into a number of syndromes. In this paper, we discuss only the internalizing symptoms. Scores were categorized based on quantiles from an age, gender and ethnicity matched normative sample.^{7,8} The calculations were done using ASEBA-PC 2015 software.

STATISTICAL ANALYSIS

Data were analyzed with SPSS version 13. Mean and standard deviation were employed to describe continuous variables, while frequency distributions were obtained for categorical data. The chi square test was used to assess the significance of associations for categorical variables. Student's t-test was used to test the associations for continuous data.

RESULTS

We evaluated 100 children of 57 fathers. There were 59 boys and 41 girls; 57 were Hindu and the

rest were Christian (Table 1). Majority of them were from nuclear family (68%) and belonged to low socioeconomic status (62%). The mean age of the children was 10.15 ± 2.82 years.

The internalizing raw score of the group ranged from 0 to 39 with a mean of 5.21 ± 6.73 . The internalizing t score varied from 33 to 82 with a mean of 47.42 ± 11.94 . The association of severity of internalizing symptoms with different variables is provided in Tables 2 and 3.

The proportion of children with internalizing symptoms was estimated to be 14%, which included both clinical and borderline as obtained from the calculations done using ASEBA-PC 2015 software in comparison with the age, gender and ethnicity matched normative quantile. This estimate had a confidence interval of 7.2 to 20.8%. Out of the 14, 11(78.6%) were boys and 3(21.4%) were girls.

DISCUSSION

Earlier Indian studies reported varying prevalence rates of psychiatric disorders in children, ranging from 2.6 to 35.6 percent.⁹⁻¹³ Hackett et al., in their study conducted in children of 8-12 years in Kerala, found a 9.4% prevalence of psychiatric disorders.¹⁴ An epidemiological study by Srinath et al. demonstrated a lower prevalence of psychiatric disorders in Indian children when compared to studies on Western children.¹⁵ Prevalence studies on psychiatric morbidities and behavioral symptoms in COAs are very few. We could establish a prevalence rate of 14% for internalizing symptoms in COAs. Previous studies show that COAs have higher scores on both internalizing and externalizing symptoms when compared with non-COAs.¹⁶ Even though evidence shows that parent's alcoholism has weaker relation with child's internalizing symptoms when compared to the externalizing symptoms,¹⁷ COAs have more internalizing symptoms than non-COAs.¹⁸ Our result is in resonance with this point. Parent alcoholism has a unique effect on child's internalizing symptoms, above and beyond those of

both parent depression and antisocial personality disorder.¹⁹

A higher proportion of boys than girls were found to have internalizing symptoms — 18.64% (n=11) of the 59 boys and 7.32% (n=3) of the 41 girls. Also, children of younger age group showed more internalizing symptoms even though not statistically significant. Previous studies demonstrated more internalizing behaviors in female children of younger age group.¹⁶

Internalizing symptoms were significantly more prevalent in children from middle socioeconomic status families. Srinath et al. in their study got a similar result of higher prevalence of psychiatric disorders in children from middle socioeconomic class families.²⁰ This could be because the parents from lower socioeconomic status are more tolerant to child's problematic behaviors and poor living conditions and multiple stressors together maybe contributing to the child's problem going unnoticed.

It was also observed that the first child of the parents had significantly high internalizing symptoms (p value=0.021) (Table 1). Reasons behind the above observation are not clear. It may be an incidental observation and various hypotheses may be considered on it, but we will need to replicate the said observation in a larger sample before attributing it much importance. Those children whose parents are not living together and children with comorbid medical conditions tend to have more internalizing symptoms, though the difference did not reach the level of statistical significance. These findings were expected, as incomplete family and illnesses are sure causes of psychosocial stresses to children which could have caused them sadness and anxiety.

When the father's alcoholism was taken into account, we found that children showed less internalizing symptoms when father had high dependence scores as per AUDIT, though the difference did not reach statistical significance

Table 1: Various socio-demographic factors associated with internalizing symptoms

Characteristics	Type	Internalizing symptoms		P value
		Present n(%)	Absent n(%)	
Age group	6-10	7(14.6%)	41(85.4%)	0.872
	11-14	7(13.5%)	45(86.5%)	
Gender	Male	11(18.6%)	48(81.4%)	0.108
	Female	3(7.3%)	38(92.7%)	
Socioeconomic status	Lower	4(6.5%)	58(93.5%)	*0.005
	Middle	10(26.3%)	28(73.7%)	
Birth order	First	11(22%)	39(78%)	*0.021
	others	3(6%)	47(94%)	

P<0.05 is significant.

Table 2: Association of father's alcohol problem with internalizing symptom in children

Characteristics	Type	Internalizing symptoms		P value
		Present	Absent	
Dependence (AUDIT)	Yes	9(12.7%)	62(87.3%)	0.54
	No	5(17.2%)	24(82.8%)	
SADQ	Mild	5(12.5%)	35(87.5%)	0.15
	Moderate	4(14.3%)	24(85.7%)	
	Severe	5(15.6%)	27(84.4%)	
Family history of AUD	Yes	9(12.7%)	62(87.3%)	0.54
	No	5(17.2%)	24(82.8%)	

*AUDIT Yes= dependence (score ≥ 20); No=not having dependence (score <20)

Table 3: Other factors associated with internalizing symptoms

Characteristics	Type	Internalizing symptoms		P value
		Present n(%)	Absent n(%)	
Parents living together	Yes	12(14%)	74(86%)	0.97
	No	2(14.3%)	12(85.3%)	
Perinatal complications	Yes	1(12.5%)	7(87.5%)	0.69
	No	13(14.3%)	79(85.87%)	
Medical Comorbidities	Yes	2(16.7%)	10(83.3%)	0.67
	No	12(13.6%)	76(86.4%)	
Developmental Delay	Yes	1(50%)	1(50%)	0.26
	No	13(13.26%)	85(86.74%)	

(Table 2). Family history of AUD in paternal side did not have a positive association with child's internalizing symptoms, which is in line with the result of study by Schuckit et al.²¹

CONCLUSION

We found that internalizing symptoms are common in COAs. Early identification and timely intervention of internalizing symptoms can help in preventing their future progression. Strategic policies are to be initiated to deal with internalizing symptoms in children, at least in high risk group like COAs.

LIMITATIONS

- Comparatively small sample size
- Absence of a control group
- The main scale used in the study (CBCL) lacks standardized norms for Indian children.

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