

Original Research Article

A comparative analysis of on behavioral patterns and family functioning among children of alcoholics and non-alcoholics in a tertiary care center, Mysuru

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ABSTRACT

Background: Alcohol dependence in individuals harm the health of that individual and also that of their family members. Children of alcoholics are at high risk for many behavioral problems as they grow up in less functional families. This study aimed to assess and compare the behavioral patterns and family functioning among children of alcoholics (COA) and children of non-alcoholics (CONA) in a tertiary care center, Mysuru.

Methods: Using analytical cross-sectional design, 200 children (100 COA and 100 CONA) from a tertiary care center, were evaluated for their behavioral patterns and family functioning. Child behavior checklist (CBCL), family APGAR (adaptation, partnership, growth, affect, and resolve) scale and general health questionnaire 12 (GHQ12) were used. Independent t-test was used to compare the two groups and correlation was seen between GHQ12 and CBCL, APGAR scores respectively.

Results: The total CBCL mean score was higher for stating statistically significant relation between parental alcoholism and behavioral patterns. Among COA, 45% had CBCL scores more than clinical cutoff score and 4% of COA were associated with dysfunctional family whereas 17% of CONA had CBCL scores more than clinical cutoff score and none were associated with dysfunctional families showing statistically significant difference.

Conclusions: Children from families with alcohol dependent parents are at higher risk of having problematic behaviors, interestingly, there were very few families of COAs with dysfunctionality.

Keywords: Alcoholism, Behavioral patterns, Children of alcoholics, Family functioning

INTRODUCTION

A significant portion of the global disease burden is attributed to alcohol consumption, which is associated with various intentional and unintentional injuries, including violent crimes and road traffic accidents. Globally, alcohol abuse results in approximately 3 million deaths every year, accounting for nearly 5.3% of all deaths. Furthermore, alcohol abuse contributes to 5.1% of the global disease burden as measured by disability-adjusted life years (DALYs). Notably, alcohol-related morbidity and mortality often occur at relatively young

ages. Alcohol abuse during time of pregnancy might lead to fetal alcohol syndrome (FAS) and other complications, including preterm births.^{1,2}

When alcohol consumption is suddenly discontinued or significantly reduced, withdrawal syndrome may develop, characterized by both psychological and physical symptoms. The fear of withdrawal symptoms can perpetuate excessive alcohol consumption in some individuals.³ Children of alcoholics (COA), defined as those who grow up with one or both parents dependent on alcohol, are particularly vulnerable. They often

experience deprived parental love and care, which are crucial for healthy child development.⁴ Alcoholic parents are frequently characterized by inconsistent and ineffective parenting styles, deviating from ideal parenting norms. Their unpredictable and unreliable behavior fosters insecurity and instability in children.⁵⁻⁷ Children show symptoms depending on the gender of the parent who consumes alcohol. It was found that conduct disorder (CD) among children correlates with paternal alcoholism and emotional disorders are correlated with maternal alcoholism. Children with both parents who consume alcohol show both disorders with the same frequency.⁸ Internalizing and externalizing symptoms are major categories of psychopathological symptoms classified by researchers that are seen in childhood. Disorders like anxiety and depression are examples of internalizing psychopathology symptoms. COAs report high levels of anxiety and sadness, according to a number of studies. The term externalizing disorders primarily covers attention deficit hyperactivity disorder (ADHD), conduct disorder (CD) and oppositional defiant disorder (ODD) acting out or expressing through behavior, which are characterized by rule-violation, resistance, hostility, inattention, and impulsiveness.⁹ Parental alcoholism is a proven risk factor in the development of child's externalizing problems.

Alcohol abuse not only harms the individual but also adversely impacts those around them, including family, friends, and colleagues.¹ Families that have individuals with alcohol dependence are often linked with family discordance, physical or emotional violence, decreased cohesion in family, family isolation and strain in marital relationship. People who abuse alcohol face the risk of ruining family finances, provoking fights, disregarding their young ones, and endangering the health of everyone they love. Family members could ultimately even show signs of dependency on another person, unwittingly continuing their addiction despite its adverse impact on them. Children from these households often have heightened fear, hopelessness, and low confidence.^{10,11}

There is a great need to evaluate the children of alcoholics for the presence of behavioral problems and address them at the earliest to prevent them from developing more significant mental health disorders. As there is limited literature available on behavioral patterns and family functioning among the children of alcoholics in and around Mysuru, the proposed study was undertaken. Aim of the study was to assess and compare the behavioral patterns and family functioning among COA and CONA in a tertiary care center.

METHODS

Study design

Current study used an analytical cross-sectional design to compare the scores of two groups: children of alcoholic parents and children of non-alcoholic parents.

Data collection

Data was collected by the primary investigator using structured questionnaires and scales. The questionnaires were hosted on Google forms, but responses were recorded during face-to-face interviews conducted by the investigator to ensure accuracy and consistency. All questionnaires were originally in English but were translated into the local language to accommodate participants unfamiliar with English.

Study population and sampling

The study used purposive sampling to recruit participants from the department of psychiatry of a tertiary care center. The recruitment period spanned from October 2023 to February 2024.

A total of 200 children were included in the study: 100 COA: children with alcoholic parents registered in the department of psychiatry. 100 CONA: children of hospital staff or relatives of patients without alcohol dependence.

Inclusion process

Participants were screened to ensure they met the inclusion and exclusion criteria. Parents of the children were administered the questionnaires, as the study involved children aged 4 to 16 years.

Inclusion criteria

Children aged 4 to 16 years of both genders. Group 1 (COA): children with alcoholic parents (inpatients or outpatients) registered in the department of psychiatry at a tertiary care center within the past year and meeting the ICD-10 criteria for alcohol dependence or clinically diagnosed with alcohol dependence syndrome. Group 2 (CONA): children of hospital staff or relatives of patients whose neither of parent have alcohol dependence.

Exclusion criteria

Children with mental retardation and psychotic illness. Children with alcoholic parent with other psychiatric comorbidities.

Measuring tools/scales

Socio-demographic proforma: socio-demographic details like age, gender, education, parents' education, occupation, and religion, number of siblings, total family income, and number of years of alcohol consumption were collected.

Child behavior check list: behavioral patterns were measured by using the 113 item CBCL questionnaire. This checklist is one element of the Achenbach system of empirically based assessment (ASEBA). The ASEBA is

designed to identify emotional and behavioral issues in children and adolescents. It has a 3-point scoring ranging from 0 to 2 for each question i.e. 0= not true, 1= sometime/somewhat true, 2= very/often true and is administered to parents with three subscales internalizing, externalizing and other behaviors. The Cronbach's alpha for the full CBCL is 0.904. According to standard CBCL questionnaire, children with CBCL scores more than the given scores are considered to be having deviant behaviors (Table 1).

Table 1: Clinical cutoff scores of CBCL age and gender wise.

Age in years	Male	Female
4-5	42	42
6-11	37	40
12-16	37	38

Family APGAR: it was developed by Smilkstein et al in 1982 and is used to assess the family functioning. It is a questionnaire with two parts, in which, the first part has 5 questions with scoring ranging from 0 to 2 for each i.e. 0= Hardly ever, 1= some of the time, 2=almost always. The Cronbach's alpha for the full APGAR is 0.974.

General health questionnaire 12: in 1972, David P. Goldberg, a British professor, created the GHQ-12 which

assesses psychological functioning and mental health of an individual in a little amount of time. It is frequently used to identify mental problems in the community and non-psychiatric therapeutic settings. Bimodal scoring has been used for scale and the Cronbach's alpha value is 0.983.

Statistical analysis

Descriptive statistics such as mean and standard deviation along with other statistics were used for data description. The individuals were divided into two groups based on parental alcoholism. Their scores on scales of CBCL and APGAR were compared using independent t-test. Data on GHQ 12 was analyzed using Pearson's correlation test with CBCL and APGAR scores. All the statistics were analyzed using SPSS software (IBM) version 25.

RESULTS

Socio demographic profile of both groups is shown in Table 2. Age of the children in the sample ranged from 4 to 16. Out of the 200 children, there were more males (104 i.e. 52%) than females. Most of them belonged to nuclear lower middle-class families. Among alcoholics, around 60% have been drinking for more than 10 years.

Table 2: Socio-demographic profile.

Study variables	CONA (n=100) N	COA (n=100) N	Total (n=200) N
Age (in years)			
4-5	8	8	16
6-11	59	34	93
12-16	33	58	91
Gender			
Male	50	54	104
Female	50	46	96
Religion			
Hindu	96	96	192
Muslim	4	0	4
Christian	0	3	3
Other	0	1	1
Year of studying			
Pre primary	11	7	18
Lower primary	52	30	82
Upper primary	13	24	37
Secondary	19	24	43
Pre university	5	15	20
Type of family			
Nuclear family	76	75	151
Nuclear extended family	6	5	11
Three generation family	18	20	38
No of children			
1	15	15	30
2	73	76	149
3	12	5	17

Continued.

Study variables	CONA (n=100) N	COA (n=100) N	Total (n=200) N
4	0	4	4
Socio-economic Status			
Upper	0	0	0
Upper middle	22	10	32
Lower middle	48	46	94
Upper lower	22	38	60
Lower	8	6	14
No of years alcohol consumption			
0.1 to 4.11	0	13	13
5 to 9.11	0	36	36
10 to 14.11	0	28	28
15 to 19.11	0	15	15
20 to 24.11	0	14	14
25 and above	0	4	4

Table 3: Comparison of CBCL scores and APGAR between two groups.

Study variable	Children of alcoholics		Children of non alcoholics		t value	P value
CBCL	Mean	SD	Mean	SD		
Internalizing	6.98	0.384	4.91	0.388	3.87	<0.01*
Externalizing	12.09	0.784	7.15	0.544	5.180	<0.01*
Other problems	15.99	0.856	10.25	0.776	4.969	<0.01*
Total	35.060	18.25	22.31	15.56	5.315	<0.01*
APGAR	9.64	1.069	5.89	2.098	15.927	<0.01*

Note: Independent t test gives t value, *- represents significant value p<0.05. CBCL- Child behavior check list; APGAR- adaptation, partnership, growth, affect, resilience scale.

Table 4: Comparison of CBCL scores between two groups based on clinical cutoff scores.

Age in years	Children of alcoholics (n=100)				Children of non-alcoholics(n=100)			
	Male (%)		Female (%)		Male (%)		Female (%)	
	Less than CCS	More than CCS	Less than CCS	More than CCS	Less than CCS	More than CCS	Less than CCS	More than CCS
4-5	6	1	1	0	3	0	5	0
6-11	5	11	10	8	26	5	25	3
12-16	14	17	19	8	9	7	15	2

CCS- Clinical cutoff scores; refer Table 1 for standard scores.

Table 5: Comparison of CBCL scores between two groups based on mean cutoff scores.

CBCL domains	Mean cut off	Children of alcoholics (n=100)	Children of non- alcoholics (n=100)
Internalizing	<5.92	34	62
	>5.92	66	38
Externalizing	<9.62	47	67
	>9.62	53	33
Others	<13.12	43	63
	>13.12	57	37

Table 6: Correlation between GHQ12 and CBCL, family APGAR scores.

		Total CBCL	Family APGAR
GHQ12	r	0.025#	-0.267#
	P value	0.808	0.007*
	N	100	100

Note: *- represents significant value p<0.01; # - represents correlation value. GHQ12- General Health questionnaire 12

As shown in Table 3, children of alcoholics displayed significantly higher levels of internalizing, externalizing, and other behavioral problems, as well as a higher total score on the CBCL, compared with children of non-alcoholics. Children of non-alcoholics report better family functioning as measured by the APGAR score. All the comparisons are statistically significant with *p* values of <0.01

Table 4 describes the data obtained from the CBCL questionnaire. As it can be understood from the table, among COA, 45% of children had scores higher than clinical cutoff scores while only 17% of children of non-alcoholics had scored more than clinical cutoff scores.

The mean cutoff CBCL score of children on each subscale is shown in Table 5. Considering the scores of our study population and calculating mean scores in each subscale, we have categorized the children accordingly.

Table 6 shows that there was a very weak positive correlation ($r=0.025$) between GHQ-12 and total CBCL score, which was not statistically significant (*p* value =0.808). This indicates that GHQ-12 scores do not significantly relate to the total CBCL scores. There was a weak negative correlation ($r=-0.267$) between GHQ-12 and family APGAR scores, which was statistically significant (*p* value =0.007). This suggested that higher GHQ-12 scores, indicating worse general health, are associated with lower family APGAR scores, reflecting poorer family functioning.

DISCUSSION

Alcoholism is very common in India. COAs are significantly more likely to develop a variety of behavioral disorders and their families are usually less functional. Research done in India has also shown that children of alcoholic parents exhibit both internalizing and externalizing behaviors. The current study examined the behavioral patterns and family functioning in COAs and compared with CO NAs.

According to our study, among children of alcoholics, about half of male children and a third of female children had scores more than clinical scores on CBCL. Similar to another study by Diaz et al, our study found a significant relationship between COA and low socio-economic status. In our study, we have considered all children belonging to a family between the ages of 4 to 16 years, while a study by Sugaparanetharan et al considered only the eldest child from a family in the study which might influence behavioral assessments.¹²

In this study, the mean scores of externalizing, internalizing and other problems of the children of alcoholics are higher among males than in females. Forty-five of the COAs had scores higher than cutoff scores on CBCL which includes 29% males and 16% females.

Aligning with our study results, another study by Wall, et al. sons of alcoholics have higher CBCL scores than daughters.¹³ And another study by Roger et al, saw that boys who had clinical cutoff scores for temperamental and behavioral problems using CBCL were associated with parents having antisocial behavior and long-term association of alcohol consumption showing higher mean scores of externalizing than internalizing problems.¹⁴ But in contrast to our study, findings by Christensen et al show that the CBCL score of daughters of alcoholics is significantly high compared with sons.⁸

A study by Ravindran et al, discovered a significant difference among the two groups COAs and the CONAs on the CBCL externalizing and internalizing subscales i.e. aggressive behavior, anxious/depressed, rule breaking behavior, withdrawn, somatic complaints scores.¹⁵ In alignment with this another study showed that a larger number of children of alcoholics had internalizing than externalizing characters which is also proven by the findings of Christensen et al and Omkarappa et al.^{4,8} In contrast to our findings, a study done by Sugaparanetharan et al, has found the total CBCL score of COA are not significantly higher than CONA, but On the externalizing symptoms subscale, patients outscored controls substantially.¹²

APGAR scale was used to assess family functioning in children of alcoholics and non-alcoholics. Majority of COAs came from moderately functional families and very few from dysfunctional family, while none of the CONAs were from dysfunctional families. There was also a significant difference in family functioning in COAs and CONAs and none of the CONAs belong to dysfunctional families. A study by Andrade et al, found that the median family Apgar score was lowered in the presence of children and women with mental health issues.¹⁶ Similar to our findings, a study conducted in Spain on children by Diaz et al found that scores on Family environment scale (FES), family cohesion was less in COAs compared to CONAs.⁷ In contrast to our study findings, a study by Raman et al used FES (family environment scale) to find the association between family functioning and parental alcoholism and found that no significant difference found between children of alcoholics and non-alcoholics with regards to family cohesion, and other relationship dimensions.¹⁷

A study by Murphy it was used to assess lack of social support and its association with psychosocial problems and found that families and children with low social support, children from low-support families had a four-fold increased risk of impairment on pediatric symptom checklist (PSC) and a two-fold increased risk of a doctor's report identifying psychosocial difficulties in their children.¹⁸

In our study, the psychological well-being of non-alcoholic parents of children of alcoholics was assessed using the GHQ12 scale. We found that these parents

exhibited higher levels of psychological distress compared with findings from other research. However, the psychological distress and mental health problems as shown by GHQ12 score in Non-alcoholic parent had weak positive correlation with behavioral patterns of the children of alcoholics.

The present study has few limitations. To begin with, every child from the alcoholics' families in the age range of 4 and 16 were taken into consideration in our study. As our Study is a tertiary care hospital-based study, the results cannot be generalized to the entire community. The reliability of parents' answers regarding their children's complete behavioral patterns might be a limitation in certain circumstances.

CONCLUSION

This study concluded that children raised by alcoholic parents are more likely to get involved in problematic activities. It is interesting to observe that families with COAs do not demonstrate significant dysfunction, nor does the non-alcoholic parent of the COAs exhibit psychiatric morbidity. Most of the deviant behavior in children is majorly due to alcoholic dependency of the parent than any mild psychiatric morbidity in the spouse of the alcoholic parent. Current study helps to lay a path for advanced studies involving earlier evidence-based interventions in children of alcoholics and implement family focused substance prevention programs in community and at all health care levels.

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