

DEPRESSION IN FAMILY MEMBERS OF ALCOHOL DEPENDENCE PATIENTS: AN OBSERVATIONAL STUDY

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ABSTRACT

Objectives: The aim of the study was to find out prevalence and severity of depression in family members of alcohol-dependence patients.

Methods: This was a cross-sectional, observational study in which 50 family members of patients with alcohol dependence according to mental and behavioral disorders diagnostic criterion for research (ICD-10 DCR) included on the basis of a predefined inclusion and exclusion criteria. The severity of alcohol dependence was assessed by Alcohol Use Disorders Identification Test-C (AUDIT-C) score. The incidence of depression and its severity in family members was assessed by Hamilton Rating Scale for Depression (HAM-D) score. The correlation of AUDIT-C score in alcohol-dependent patients and HAM-D score in family members was done by using Pearson coefficient correlation statistical purposes $p < 0.05$ was considered as statistically significant.

Results: Out of the 50 patients with alcohol dependence, 48 (96.00%) were males and 2 (4%) were females. The mean age of the patients was found to be 41.12 ± 11.02 . The mean duration of alcoholism was 8.16 ± 5.39 years. 19 (38%) patients had AUDIT-C score of 8 whereas AUDIT-C score of 10 and 12 was found in 16 (32%) and 15 (30%) patients each. The most commonly affected relative was spouse (40%), followed by mother (26%), brother (20%), and father (14%). Majority of the family members (82%) had mild depression (score between 8 and 13). Nine (18%) patients did not have any depression. Moderate, severe, or very severe depression was not seen in any family member. There was a significant positive correlation between AUDIT-C score in alcohol-dependent patients and HAM-D score in family members (R score=0.6333 and $p < 0.005$).

Conclusion: There is a significant psychological impact, particularly depression, of alcohol dependence on family members. Severity of hazardous drinking correlated positively with the incidence of depression in family members.

Keywords: Alcohol dependence, Depression, Hamilton Rating Scale for Depression, AUDIT-C score.

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INTRODUCTION

Chronic alcoholism represents a significant public health issue manifesting as a pattern of alcohol use despite adverse social as well as health consequences [1]. It consists of a spectrum of problems that include the development of dependence, difficulty in controlling its use, and persistent alcohol intake despite harmful consequences. According to the National Survey on Drug Use and Health, nearly 3 million adults (11.2% in this age group) had alcohol use disorder (AUD) [2]. These individuals usually give higher priority to alcohol use than to other activities and obligations. With time, there is increased tolerance and sometimes a physical withdrawal state in these individuals. Chronic alcoholism not only affects the lives of those directly involved but also disturbs their families, affecting their physical and emotional as well as social well-being [3].

AUD is a medical condition which is characterized by loss of ability to stop alcohol consumption despite adverse health, occupational, and social consequences. AUD encompasses conditions such as alcohol dependence, alcohol abuse, alcohol addiction, or more common term alcoholism. The risk of alcohol dependence or AUD is known to increase if there is a history of starting to drink at an early age, presence of family history of AUD, and history of mental illness [4].

The medical consequences of chronic alcoholism are significant and far-reaching. Chronic alcohol consumption can lead to problems such as liver diseases (including fatty liver, cirrhosis, and hepatitis), cardiovascular problems, gastrointestinal issues, and neurological disorders. Chronic alcoholism is also associated with an increased risk of major depressive disorder, anxiety disorders, bipolar disorder, and

schizophrenia. The substance's neurotoxic effects can lead to cognitive impairments, affecting memory, attention, and decision-making processes. Furthermore, alcohol dependence significantly contributes to the risk of suicide and accidental death [5].

Family members of individuals with chronic alcoholism also suffer from significant emotional, social, and financial stressors. These families often experience increased conflict, domestic violence, and breakdown in family roles and responsibilities. Children in these environments are particularly vulnerable as they face higher risks of emotional abuse as well as neglect. All these factors can lead to developmental delays and emotional disorders. The chronic stress of living with someone who has an AUD can lead to a phenomenon known as "second-hand drinking" harm where family members experience psychological and physical symptoms resulting from the stress and trauma of dealing with the alcoholic family member [6].

Among the psychiatric consequences faced by these family members depression is a common occurrence. The persistent stress that often accompanies living with someone with chronic alcoholism can precipitate or exacerbate depressive episodes. The emotional toll of witnessing family member's decline into alcoholism makes depression a common and serious issue among family members. This depression is not merely situational it can evolve into a chronic condition requiring professional intervention further complicating the family's emotional and financial burdens [7].

Despite the recognized impact of chronic alcoholism on families, there exists a knowledge gap regarding the specific psychiatric outcomes, particularly depression, in family members of individuals with chronic

alcohol dependence. This study aims to fill the existing knowledge gap by exploring the psychiatric consequences, specifically depression, in family members of patients with alcohol dependence.

METHODS

This was a cross-sectional, observational study in which 50 family members of patients with alcohol dependence according to mental and behavioral disorders diagnostic criterion for research (ICD-10 DCR) [8] included on the basis of a predefined inclusion and exclusion criteria. The study was conducted in the department of psychiatry of a tertiary care medical college. The sample size was calculated on the basis of pilot studies done on the subject of psychiatric comorbidities in family members of alcohol dependence. Assuming 90% power and 95% confidence interval, the sample size required was 46 patients. Based on central limit theorem, sample size was calculated to be sufficient if it was more than 46 thus, 50 family members were included in this study. An informed and written consent was obtained from all the participants before enrolling them in the study. Close family members such as father, mother, brother, son, daughter-in-law, or daughter were included in this study. Demographic details such as age, gender, occupation, and socioeconomic status were noted in all the cases.

First, the patient was interviewed for the severity of alcohol dependence. The severity of alcohol dependence was assessed by AUDs Identification Test-C (AUDIT-C) score [9]. Each family member was interviewed and asked questions regarding relationship status, level of religious involvement, family size (including the number of siblings and children), parental educational, and vocational achievements. In addition, participants were asked about a family history of mental health conditions, parental loss, details on alcohol use by family members, personal psychiatric history, relationship challenges, familial issues, and stressors. Any symptoms of associated depression or psychotic illnesses were enquired into. Hamilton Rating Scale for Depression (HAM-D) in the studied cases [10].

The incidence of depression and its severity in family members was assessed. The correlation between AUDIT-C score of the patient and HAM-D score of the family members was also analyzed.

“Statistical analysis will be done using SPSS version 21.0 software. Quantitative data was presented as mean and standard deviation. Qualitative data was presented with incidence and percentage tables. For quantitative data, unpaired t-test was applied and for qualitative data, Chi-square test was used. p<0.05 was taken as statistically significant.”

Inclusion criteria

The following criteria were included in the study:

1. Close family members (first-degree and second-degree relatives) of patients with alcohol dependence according to mental and behavioral disorders diagnostic criterion for research (ICD-10 DCR)
2. Age above 18 years
3. Living in same home as that of patient with alcohol dependence
4. Ready to give informed and written consent to be part of study.

Exclusion criteria

The following criteria were excluded from the study:

1. Distant relatives
2. Age <18 year
3. Refusal to give consent to be part of study
4. History of comorbid psychiatric illnesses
5. Family members not living with the individual with alcohol dependence.

RESULTS

The analysis of the patients on the basis of gender distribution showed that an overwhelming majority of the patients were males. Out of the 50 patients with alcohol dependence, 48 (96.00%) were males and 2 (4%)

were females. The mean age of the patients was found to be 41.12±11.02. The mean duration of alcoholism was 8.16±5.39 years (Table 1).

The gender distribution of the family members of patients with alcoholism showed that out of 50 family members majority (66%) were females and 17 (34%) patients were males. The mean age of family members of the alcohol dependence patients was found to be 38.8±9.2 years (Table 2).

The analysis of the patients on the basis of relation with the alcoholic showed that the most commonly affected relative was spouse (40%), followed by mother (26%), brother (20%) and father (14%) (Fig. 1).

The analysis of the patients with alcohol dependence for the presence of comorbidity showed that the most common abnormality which was found with on clinical examination or investigation was hepatomegaly (30%), followed by substance abuse (Opioid, cannabis etc.) (24%), diabetes mellitus (16%), Hepatitis C infection (14%), hypertension (14%), neuropathy (2%), Ascites (2%), depression (2%), and epilepsy (2%) (Fig. 2).

In each patient, AUDIT-C Score, suggestive of severity of hazardous drinking was determined with the help of questionnaire. Nineteen (38%) patients had AUDIT-C score of 8 whereas AUDIT-C score of 10

Table 1: Gender, mean age, and mean duration of alcoholism in patients

Gender, mean age, and mean duration of alcoholism	No of cases	Percentage
Gender distribution		
Males	48	96
Females	2	4
Mean Age of Patients	41.12±11.02 years	
Mean Duration of Alcohol intake	8.16±5.39 years	

Table 2: Gender and mean age of family members of alcoholism in patients

Gender and mean of family members	No of cases	Percentage
Gender distribution		
Males	17	34
Females	33	66
Mean age of family members	38.8±9.2 years	

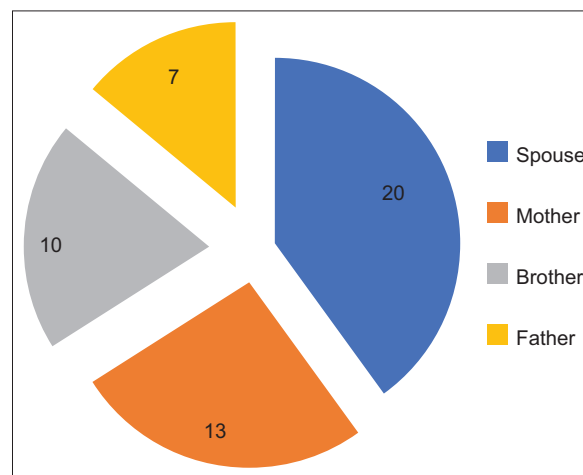


Fig. 1: Family members affected by alcohol dependence

and 12 was found in 16 (32%) and 15 (30%) patients each. The mean AUDIT score in studied cases was found to be 9.84±1.65 (Table 3).

The analysis of problems caused by alcoholism showed that family disputes were the most common issue, affecting half of the cases (50%). Financial problems were also a significant consequence which was seen in 20% of the instances. The combination of financial problems with violence, and the combination of family dispute and financial problems, each account for 8% of the cases. Psychosocial problems were noted in another 8% of the cases. More severe problems involving family dispute, financial problems, and violence, as well as psychosocial problems coupled with violence were less accounting for 4% and 2% of the cases, respectively (Table 4).

Family members of alcohol-dependent individuals were assessed for the presence of depression by HAM-D scale. Majority of the family members (82%) had mild depression (score between 8 and 13). Nine (18%) patients did not have any depression. Moderate, severe, or very severe depression was not seen in any family member (Table 5).

Table 3: AUDIT-C score in patients with alcohol dependence

AUDIT-C score	Number of cases	Percentage
8	19	38
10	16	32
12	15	30

Mean AUDIT score=9.84±1.65

Table 4: Family problems caused by alcohol dependence

Family problems caused by alcohol dependence	Number of cases	Percentage
Family dispute	25	50.0
Financial problems	10	20.0
Financial problems and violence	4	8.0
Family dispute and financial problems	4	8.0
Psychosocial problems	4	8.0
Family dispute, financial problems, and violence	2	4.0
Psychosocial problems and violence	1	2.0

Table 5: Severity of depression in family members of alcohol dependence

Depression in family members	Number of cases	Percentage
Normal (0-7)	9	18
Mild depression (8-13)	41	82
Moderate depression (14-18)	0	0
Severe DEPRESSION (19-22)	0	0
Very severe depression (23 or above)	0	0

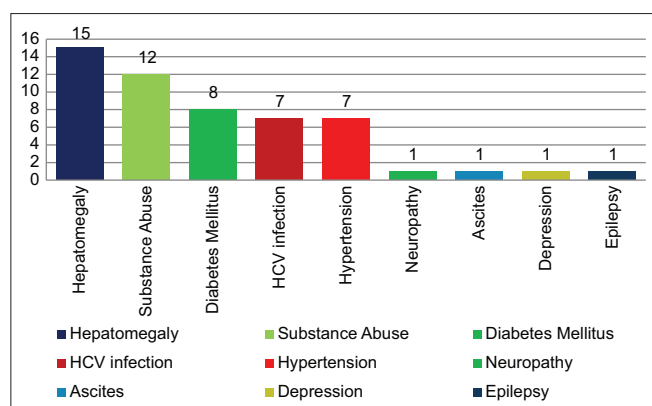


Fig. 2: Comorbidities in studied patients with alcohol dependence

The correlation of AUDIT-C score in alcohol-dependent patients and HAM-D score in family members was done using Pearson coefficient correlation. There was a significant positive correlation between AUDIT-C score in alcohol-dependent patients and HAM-D score in family members (R score=0.6333 and p<0.005) implying that severity of hazardous drinking correlated positively with incidence of depression in family members and the correlation was found to be statistically significant (p<0.005).

DISCUSSION

The family members of patients with alcohol dependence are known to suffer from significant emotional impact and chronic stress. These family members are susceptible to psychological distress, particularly depression, due to challenges such as social isolation, financial hardship, and emotional turmoil from the erratic behavior of the alcohol-dependent family member. This exposure to chronic stress is identified as a key factor for the onset or worsening of depressive symptoms [11].

In our study dependence, 48 (96.00%) patients with alcohol dependence were males and 2 (4%) were females. The mean age of the patients was found to be 41.12±11.02. The mean duration of alcoholism was 8.16±5.39 years. Raveendranathan *et al.* conducted a study to examine the gender-specific correlates of alcohol use [12]. In this study, lifetime alcohol use was reported by 39% males and 12.6% females. In the multivariable logistic regression analysis using a full model, male students using alcohol compared to male non-users were older, non-Muslim, had poor academic performance, and used other substances. Female users, compared to female non-users, were non-Muslim, had urban residence, used tobacco, and had higher psychological distress, higher suicidal thoughts, and higher lifetime exposure to sexual abuse. On the basis of these findings, the authors concluded that gender-specific differences extend across sociodemographic and psychological domains. Similar male preponderance was also reported by the authors such as Selvaraj *et al.* [13] and Dasgupta *et al.* [14].

The analysis of effects on family members of patients with alcoholism found that females (66%) were affected predominantly. The most affected relatives were spouses (40%), followed by mothers, brothers, and fathers. Common comorbidities in patients included hepatomegaly (30%), substance abuse (24%), and diabetes mellitus (16%), among others. The AUDIT-C score, indicating hazardous drinking levels, showed that 38% of patients had a score of 8, while 32% and 30% had scores of 10 and 12, respectively, with an average score of 9.84. Singh *et al.* conducted a study to find out psychiatric morbidity in wives/ life partners and children of alcohol-dependent patients [15]. For this purpose, the authors studied 50 consecutive index patients diagnosed to be alcohol dependent. The study found that 18.75% of the cases were also having additional substance dependence. Similar correlation between alcohol dependence and other substance abuse was also reported by the authors such as Ross [16] and Enoch and Goldman [17].

The study revealed that family disputes (50%) and financial problems (20%) were the most prevalent issues caused by alcoholism, with additional complications arising from violence and psychosocial problems. Depression assessments on family members using the HAM-D showed 82% had mild depression, while 18% exhibited no signs of depression. No moderate, severe, or very severe depression cases were identified among the family members. A significant positive correlation (R=0.6333, p<0.005) was found between the AUDIT-C score of alcohol-dependent patients and the HAM-D score of family members. Fukunishi *et al.* conducted a study to find out presence of alexithymia and depression in family members of alcoholics [18]. The study found that the prevalence of alexithymia was 47.9% (23 cases) whereas that of depression was 6.3% (3 cases), there was no significant correlation between alexithymia and depression. Expressiveness and conflict were significantly lower in families with alcoholics than in healthy families without alcoholics. Although the incidence of depression in

family members was less in this study, there was however alexithymia in approximately half of the studied family members. Similar findings were also reported by the authors such as Kasperowicz-Dabrowiecka *et al.* [19] and Wall *et al.* [20].

CONCLUSION

There is a significant psychological impact of alcohol dependence on family members. Therefore, it is important to have strategy to have targeted support strategies for family members addressing their mental health needs to mitigate the effects of alcohol dependence on the family unit.

CONFLICTS OF INTEREST

None.

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