

Psychiatric Comorbidity and Severity of Dependence in Alcohol Use Disorder: A Cross-Sectional Study

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Received: 25-03-2025 / Revised: 23-04-2025 / Accepted: 26-05-2025

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Conflict of interest: Nil

Abstract:

The majority of people consume alcohol, and alcoholism is a leading cause of premature death worldwide. The current study was a cross-sectional observational study conducted in the outpatient/inpatient setting of the Department of Psychiatry, SMS Medical College, Jaipur, on 100 patients with Alcohol Use Disorder after obtaining written informed consent. In the present study, 48% of respondents were found to have a psychiatric comorbidity (assessed using MINI), the most common being Major Depressive Disorder (13%). 54% of individuals had severe AUD, as measured by the SADQ (score >30). Results from the study showed that psychiatric disorders were associated with gender, history of psychiatric illness, and family history of psychiatric illness among AUD patients. In individuals with AUD, psychiatric comorbidity also contributes to higher degrees of dependency severity. The majority of individuals without psychological comorbidities were moderately or mildly dependent, with few falling into the severe range. Major Depressive Disorder, Antisocial Personality Disorder, and Generalized Anxiety Disorder were the associated psychiatric illnesses that were present in the majority of individuals in the severe dependency group. These findings suggest that alcohol dependency may worsen in the presence of coexisting mental health issues.

Keywords: AUD, Alcoholism, Dependence, Disorder, Psychiatric Comorbidity.

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Introduction

Alcohol dependence is statistically prevalent in societies where alcohol consumption is socially accepted. Many individuals experience an urge to consume alcohol, often triggered by a range of internal or external stimuli [1]. Long-term alcohol consumption has numerous adverse effects across various physiological systems, contributing to mental health problems, chronic pancreatitis, malnutrition, coronary heart disease, and hepatocellular carcinoma. Additionally, alcohol use increases the risk of oropharyngeal and esophageal cancer. Central and peripheral nervous systems are also weakened and impacted by ethanol [2].

Alcohol Use Disorder (AUD) is a major public health issue, characterized by impaired control over drinking [3]. The severity of alcohol dependence serves as a valuable indicator in determining the likelihood of relapse, and early interventions are commonly applied to individuals with emerging problematic drinking patterns [4]. Although alcohol withdrawal symptoms usually appear upon waking,

a thorough examination of the highly dependent individual could reveal the individual may experience sub-acute withdrawal throughout the day or even wakes up during the night with symptoms of withdrawal [1]. Alcohol is a depressant of the central nervous system that simultaneously changes multiple neural pathways, producing significant neurological and behavioral changes. Understanding its impact on neural signaling pathways brings up new therapy options for the rehabilitation of alcoholics by enabling the discovery of effectors that may block the central action of alcohol [5].

Patients and their families are greatly impacted by alcohol addiction and dependence. It has been demonstrated that people who overuse and dependent on alcohol have a much lower quality of life, especially in terms of mental health and social functioning [6]. Advancements in neurobiology have led to the development of novel drugs to treat alcoholism and the discovery of pharmacological targets, and many patients will benefit from phar-

macotherapy as part of their treatment regimen. When implemented with psychosocial interventions, pharmacotherapy can increase the efficacy of treatment [7]. The objective of the research is to assess the severity of alcohol dependence in patients with alcohol dependence syndrome and to evaluate the psychiatric comorbidities among these individuals.

The study also explores the association between socio-demographic characteristics and psychiatric comorbidities among individuals with ADS.

Material and Methods

Study Design: This was a cross-sectional observational study conducted on 100 patients diagnosed with Alcohol Use Disorder (AUD) according to DSM V TR Diagnostic Criteria for Research (DCR), from November 2023 to October 2024, in the outpatient/inpatient setting of the Department of Psychiatry, SMS Medical College, Jaipur. All participants gave written informed consent prior to enrolment, after receiving details about the purpose of the study in simple terms.

Inclusion Criteria:

- The patients with AUD as per DSM V TR criteria.
- Patient belongs to the age 18 to 60 yrs.
- Individuals who are willing to take part in the study and can provide informed permission
- Patients of any gender, including male, female, or other
- Patients who are capable of understanding Hindi or English

Exclusion Criteria:

- Those who are suffering from mental illnesses due to identifiable organic causes.
- A patient who suffers multiple mental and physical disorders at the same time.
- Individuals using drugs that can cause cognitive and other psychological problems, aside from nicotine and caffeine.

Study Technique: Information on the socio-demographic characteristics of the patients with alcohol dependence was obtained using a standardized proforma.

The level of alcohol dependence of study population's was evaluated using the SADQ (Severity of Alcohol Dependence Questionnaire).

The SADQ is a 20-item self-administered test evaluating physical withdrawal, affective withdrawal, withdrawal relief drinking, and rapidity of reinstatement.

MINI English Version 7.0.2 for DSM-5 a brief, systematic diagnostic examination used to assess

Psychiatric diseases. To minimize the impact of withdrawal symptoms, the diagnosis is verified using DSM-5 two weeks later.

Statistical Analysis: The information was gathered, condensed, and organized in a master data sheet in Microsoft Excel. SPSS version 25 was used to analyze the data using the Chi-Square tests based on objectives of the study (p -value < 0.05 is regarded as significant).

Ethical Concerns: The study received prior approval from the Institutional Ethics Committee and Research Review Board of SMS Medical College, Jaipur. All the information of the patients collected during study was kept confidential.

Results

For the present study, a total of 100 individuals with Alcohol Use Disorder (AUD) as per DSM V TR criteria were selected, aged between 18-60 years. Of these, 39% were between the ages of 26-35 years, with a mean age of 35.98 ± 8.63 years. Most of the patients were males (96%) compared to females (4%), and 92% identified as Hindu, while 8% identified as Muslim. The participants were nearly evenly divided between those who were employed (48%) and those who were unemployed (52%). Participants belonged to varying socioeconomic classes, with 52% from the lower class, 33% from the middle class, and 15% from the upper class.

In terms of family structure, 17% lived in joint families, 30% in extended nuclear families, and 53% in nuclear families. Regarding educational status, the largest proportion had completed only primary education (37%), followed by secondary education (22%), graduation (17%), no formal education (14%), and post-graduation (10%). The majority of the participants were married (71%), while 20% were single, 5% widowed, and 4% divorced. With respect to residence, 42% were from urban areas, 38% from rural areas, and 20% from semi-urban regions. A history of psychiatric illness was reported by 21% of participants, whereas 79% had no such history.

Additionally, 81% did not report any family history of psychiatric illness. Table 1 presents the relationship between socio-demographic variables and psychiatric comorbidity in alcohol use disorder. Statistical analysis revealed a significant association between psychiatric comorbidity and gender, history of psychiatric illness, and family history of psychiatric illness, while no significant associations were observed with other socio-demographic factors.

Table 1: Relation between socio-demographic data with psychiatric comorbidity in alcohol use disorder

Variable	Category	Absent psy- chiatric comorbidity	Present psychiatric comorbidity	Total	Present psychi- atric comorbid- ity (%)	Chi- Square Value	p- value
Age	18-25	6	5	11	45.45	3.97	0.41
	26-35	20	19	39	48.72		
	36-45	14	19	33	57.58		
	>45	12	5	17	29.41		
Gender	Female	1	3	4	75.00	74.46	0.000*
	Male	51	45	96	46.88		
Religion	Hindu	46	46	92	50.00	7.96	0.979
	Muslim	6	2	8	25.00		
Occupation	Employed	27	21	48	43.75	12.55	0.818
	Unemployed	25	27	52	51.92		
Socioeconomic Status	Lower	26	26	52	50.00	20.86	0.979
	Middle	15	18	33	54.55		
	Upper	11	4	15	26.67		
Type of Fam- ily	Extended Nuclear	13	17	30	56.67	32.29	0.6458
	Joint	8	9	17	52.94		
	Nuclear	31	22	53	41.51		
Education Status	Graduate	8	9	17	52.94	73.73	0.421
	Illiterate	6	8	14	57.14		
	Postgraduate	5	5	10	50.00		
	Primary	20	17	37	45.95		
	Secondary	13	9	22	40.91		
Marital Status	Divorced	2	2	4	50.00	37.59	0.956
	Married	38	33	71	46.48		
	Single	8	12	20	60.00		
	Widow	4	1	5	20.00		
Domicile	Rural	17	21	38	55.26	38.82	0.344
	Semi-Urban	12	8	20	40.00		
	Urban	23	19	42	45.24		
History of Psychiatric Illness	No	47	32	79	40.51	59.66	0.000*
	Yes	5	16	21	76.19		
Family Histo- ry of Psychi- atric Illness	No	45	36	81	44.44	36.86	0.005*
	Yes	7	12	19	63.16		

*Significant p value (≤ 0.05)

According to the MINI 7.02 diagnostic interview, 48% of respondents were found to have a psychiatric comorbidity. The most common was Major Depressive Disorder (13%), with other comorbid conditions including Antisocial Personality Disorder (5%), Generalized Anxiety Disorder (4%), Mixed Anxiety Depression (3%), Dysthymia (3%), Panic Disorder (3%), Borderline Personality Disorder

(3%), Substance-Induced Mood Disorder (3%), Hypomania (2%), Adjustment Disorder (2%), Obsessive-Compulsive Disorder (1%), Substance-Induced Psychotic Disorder (2%), Social Anxiety Disorder (1%), Somatoform Disorder (1%), Mania (1%), and Schizophrenia (1%) (Figure 1). The remaining 52% did not have any psychiatric comorbidity.

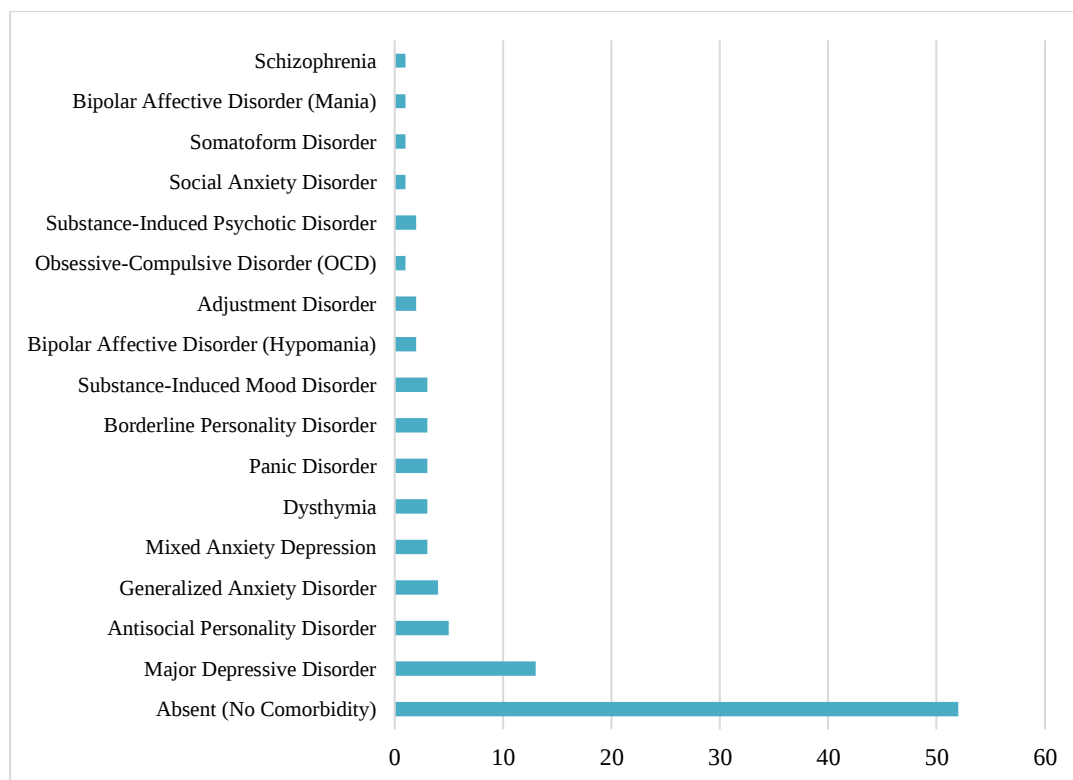


Figure 1: Prevalence of different types of psychiatric comorbidities

Table 2 presents the prevalence of severity in patients and relation between psychiatry comorbidity and severity of dependence in alcohol use patient. Figure 2 is graphical presentation of psychiatric comorbidity in relation with severity of dependence.

Table 2: Relation between psychiatric comorbidity and severity of dependence in alcohol use patient:

SADQ Severity	Percentage	Psychiatric Comorbidity Absent	Psychiatric Comorbidity Present
Mild	9%	8	1
Moderate	37%	27	10
Severe	54%	17	37

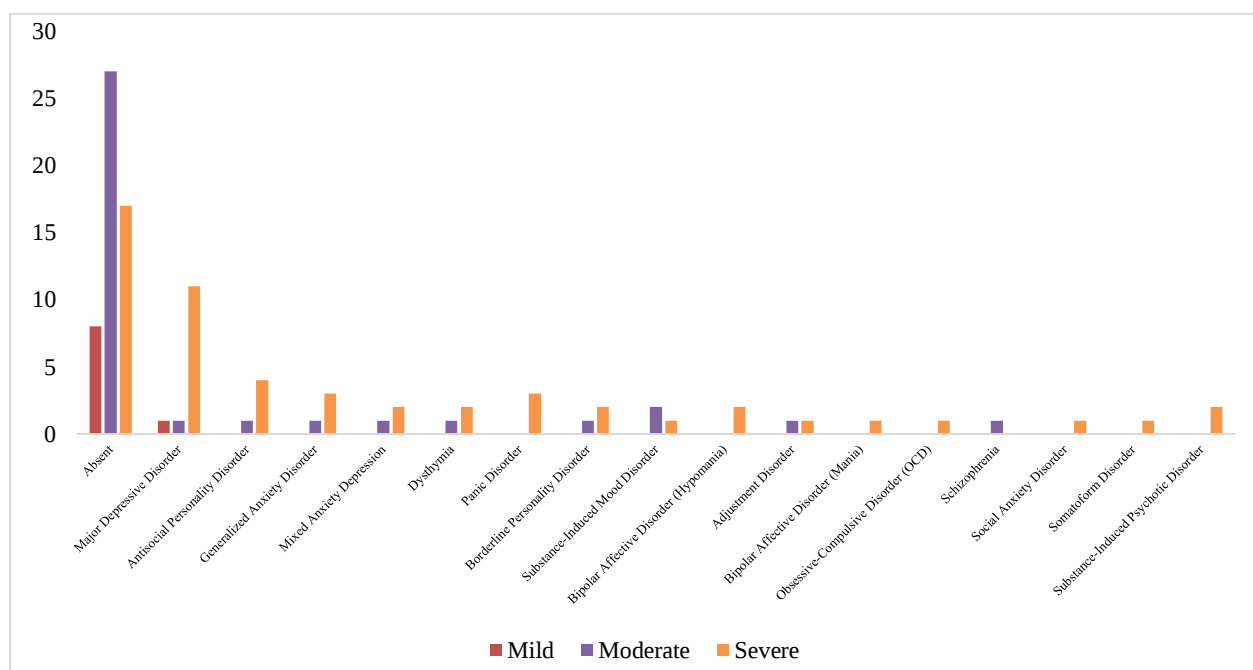


Figure 2: Comparison of psychiatric comorbidity in relation with severity of dependence

Discussion

When a family member has an alcohol addiction, everyone in the family has ongoing stress and various kinds of difficulties [8]. Socio-demographic data for the patients including (Age, Gender, Religion, Occupation, Socioeconomic Status, Type of Family, Education Status, Marital Status, Domicile, History of Psychiatric Illness, and Family History of Psychiatric Illness) were recorded. Statistical analysis revealed a significant association between psychiatric comorbidity and gender, history of psychiatric illness, and family history of psychiatric illness. Female patients showed more psychiatric comorbidity as compare to males. These results are inconsistent with the results of earlier research conducted by Petrović et al. (2025) [9] find no gender differences, but the quality of life was lower for participants with alcohol dependency than for healthy controls. Høiland et al. (2025) [10] stated that women with alcohol use disorders who are seeking treatment have unique requirements that should be evaluated and addressed throughout therapy. In individuals with alcohol use disorder, age and education were linked to hypertension, whereas gender, education, and body mass index (BMI) were linked to hyperlipidemia [11]. García-Marchena et al. (2025) [12] there were differences by sex among those beginning alcohol use disorder treatment for the first time and when developing individualized treatment plans for men and women, these distinctions need to be considered. It is essential to examine at the increase in alcohol use, the more serious consequences of chronic alcohol use in women, and the reduction of the gender gap [13].

Alcohol is one of the most often used psychoactive substances in the world. There is compelling evidence that Alcohol use disorders have a complicated polygenic architecture and are genetically impacted. Similarly, there is strong evidence that environmental factors, such unfavorable early exposures and maladaptive developmental pathways, have consequences [3]. It was found that the prevalence of mental comorbidities rises in line with the severity of alcohol dependency. The severity and prognosis of bipolar illness and alcohol use disorder are strongly influenced by one another, and the course of both conditions is more complicated [14]. Kattukulathil et al. (2015) [15] stated that addiction to alcohol is associated with a high prevalence of mental comorbidities. In present study, 48% of respondents were found to have a psychiatric comorbidity.

The most common was Major Depressive Disorder (13%), with other comorbid conditions including Antisocial Personality Disorder (5%), Generalized Anxiety Disorder (4%), Mixed Anxiety Depression (3%), Dysthymia (3%), Panic Disorder (3%), Borderline Personality Disorder (3%), Substance-

Induced Mood Disorder (3%), Hypomania (2%), Adjustment Disorder (2%), Obsessive-Compulsive Disorder (1%), Substance-Induced Psychotic Disorder (2%), Social Anxiety Disorder (1%), Somatoform Disorder (1%), Mania (1%), and Schizophrenia (1%). Mannes et al. (2021) [16] stated several functional, psychiatric, and alcohol-related validators are linked to higher probabilities of severe ADS than mild or moderate ADS and the results of present study also shows more cases of psychiatric comorbidity in severe alcohol dependence. Ummels et al. (2022) [17] stated that anxiety disorders (AD) are more likely to develop in people with alcohol use disorders, and vice versa. And the correlation between alcohol use disorders and AD prediction is unaffected by clinical, smoking, or socio-demographic characteristics. According to Puddephatt et al. (2022) [18] individuals who suffer from common mental diseases, such as anxiety, phobia, or depression, are twice as likely to report having an alcohol use disorder compared to those who do not. A number of comorbidities have been found to be at risk for developing and getting worse when major depressive disorder is present [19]. There are several causal routes that link alcohol use disorder to other mental health conditions. A number of theories are put forth to explain these relationships: common genetic and environmental origins, reciprocal direct causal linkages, and shared psychopathological traits of larger diagnostic entities [20].

Because the association between alcohol and mental health is more complicated, therapy for co-occurring mental health and alcohol disorders should be offered simultaneously access to both services [18]. In the present cross-sectional study on psychiatric comorbidity and severity of alcohol dependence, patients were reassessed two weeks after detoxification to accurately evaluate psychiatric disorders and reduce diagnostic confounding. This approach highlights the clinical importance of integrated management strategies that simultaneously identify and treat co-occurring psychiatric conditions and alcohol dependence, thereby contributing to improved patient outcomes.

Conclusion

It was concluded from the study that psychiatric disorders are associated with gender, history of psychiatric illness, and family history of psychiatric illness among AUD patients. Psychiatric comorbidity also show an association with higher levels of dependence severity in patients with AUD. These results suggest that comorbid psychiatric conditions may make alcohol dependence more severe. It is recommended that future studies employ longitudinal designs to examine the directionality and causal connections between the severity of alcohol dependency and mental problems. In particular, prospective research might assess if

mental health conditions can be detected and managed early to reduce the likelihood or intensity of AUD in the future.

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