

An Epidemiological Study to Determine the Prevalence of Depression and Disability among Alcohol Dependent PatientsVinod Verma¹, Pradeep Kumar², Chandan Kumar Sah³, Ajeet Kumar⁴¹Assistant Professor, Department of Psychiatry, Uma Nath Singh Autonomous State Medical College, Jaunpur, Uttar Pradesh, India²Assistant Professor, Department of Psychiatry, Maharshi Viswamitra Autonomous State Medical College Ghazipur, Uttar Pradesh, India³Senior Resident, Department of Psychiatry, Indira Gandhi Institute of Medical Science, Patna, Bihar, India⁴Assistant Professor, Department of Psychiatry, Baba Raghav Das Medical College, Gorakhpur, Uttar Pradesh, India

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Conflict of interest: Nil

Abstract**Aim:** The aim of the present study was to assess the prevalence of depression and disability among alcohol dependent patients.**Methods:** The present study was a cross sectional observational study. It was conducted in psychiatry department of Uma Nath Singh Autonomous State Medical College, Jaunpur, Uttar Pradesh, India from December 2022 to November 2023 and the complete project was done in accordance with the permission granted by Uma Nath Singh Autonomous State Medical College, Jaunpur, Uttar Pradesh, India ethical Committee. Sample size of 100 patients was taken by consecutive sampling.**Results:** All of the patients were Males (100%). Majority of the subjects were married (81%) and studied up to secondary education (41%), belonged to Hindu religion (78%), low socioeconomic status (65%). Most common occupation was semiskilled (53%) and unskilled (31%). In terms of severity, Moderate (32%) and very severe depression (20%) was more common. Disability was assessed using WHO DAS 2.0 Scale. Among the individual domains, life activities (30%), which include both household and work activities was most affected, followed by participation in the society (20%). In terms of severity, most of the patients had moderate (40%) to severe (38%) disability.**Conclusion:** AUDs, depression, and their co-occurrence impose a tremendous burden on individuals, families and communities. Three fourths of the patients with alcohol dependence syndrome are suffering from depression. Alcohol dependence is also associated with greater levels of disability, irrespective of the presence or absence of depression. Further research in disability assessment of alcohol users can help in formulating preventive early intervention strategies for specific disabilities. Alcohol control policies need to shift focus from economic issues to the social issues associated with alcohol use.**Keywords:** Alcohol dependence syndrome, Depression, DisabilityThis is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.**Introduction**

Alcohol dependence (AD) and depression commonly co-occur. [1,2] The prevalence of their co-occurrence in individuals with AD fluctuates markedly, according to how depressive symptoms are measured or defined. Epidemiologic data showed that the comorbidity rate in the general population varied between 15% and 28% [1,3-5], whereas in clinical samples, this rate was much higher, ranging from 43% to 48%. [6,7] Moreover, AD is significantly associated with depression. For example, Lai et al. conducted a meta-analysis of 22

community-based studies and found that the pooled odds ratio for AD and major depression was 3.09 (95% confidence interval [CI] 2.38–4.03). [8] In another hospital-based survey, alcohol abuse was strongly associated with depressive symptoms (OR 2.58, 95% CI 1.51–4.40). [9]

Comorbid depression in AD patients is associated with an increased risk of suicide attempts, relapse, treatment dropouts, and life dissatisfaction. [10-12] For instance, earlier studies reported that compared

with subjects with depression only, AD patients with depression had a suicide-specific standardized mortality ratio that was approximately two times higher, as well as more frequent episodes and more severe depression symptomatology. [13-15]

Psychiatric comorbidity is the presence, simultaneously or in sequence, of more than one disorder within an individual within a certain time period. [16] The prevalence of most mood, anxiety, substance, and thought disorders is higher in people with alcohol use disorder than in the general population [17-19] although the magnitude of the correlation varies across disorders. [20,21] Alcohol use disorder comorbidity could arise from several potential mechanisms, including a direct or indirect causal effect of the disorder on other psychiatric disorders, or vice versa, shared genetic and environmental causes of the disorder and other psychiatric disorders, or because alcohol use disorder and other psychiatric disorders share psychopathological characteristics and form part of a single diagnostic entity. Excessive use of alcohol causes 5.9% of all deaths globally. In addition, it is responsible for 5.1% of the disability adjusted life years. [22] It remains a major public health problem in South Asian region including India. [23]

The aim of the present study was to assess the prevalence of depression and disability among alcohol dependent patients.

Materials and Methods

The present study was a cross sectional observational study. It was conducted in psychiatry department of Uma Nath Singh Autonomous State Medical College, Jaunpur, Uttar Pradesh, India from December 2022 to November 2023 and the complete project was done in accordance with the permission granted by Uma Nath Singh Autonomous State

Medical College, Jaunpur, Uttar Pradesh, India ethical Committee. Sample size of 100 patients was taken by consecutive sampling.

Inclusion Criteria

Patients of age 18 years and above, who met the criteria for alcohol dependence syndrome according to ICD- 10, and having informant available. Only new cases were taken into the study.

Exclusion Criteria

Patients with Acute and severe physical illness, already diagnosed psychiatric illness, Uncooperative persons and those who do not give consent to take part in the study.

All the Patients meeting criteria for alcohol dependence syndrome according to ICD-10, attending psychiatry department who met the fixed inclusion and exclusion criteria were selected for the study.

After explaining about the study, informed consent was taken from the participants and sociodemographic details were taken using a semi-structured proforma developed in the department of psychiatry. Patients were screened for depression through clinical interview using ICD-10 criteria and severity was assessed using HAM-D rating scale (Score on HAM-D: 0-7 = normal, 8-16= mild depression, 17-23 = moderate depression, 24 and above = severe depression). Disability was assessed using WHODAS 2.0 rating scale. WHODAS 2.0 scale was chosen because it has been used in previous studies to measure disability in alcohol dependence syndrome.19 Statistical analysis was done using SPSS version 21. Mann-Whitney U test was used and the level of significance was set at p value <0.05.

Results

Table 1: Baseline characteristics

Parameters	Frequency	Percentage
Age(years)		
20-30	15	15
31-40	51	51
41-50	23	23
51-60	11	11
Religion		
Hindu	78	78
Christian	1	1
Muslim	21	21
Education		
Illiterate	29	29
Primary	27	27
Secondary	41	41
Graduate	3	3
SES		
Lower	65	65
Middle	33	33

Upper	2	2
Marital Status		
Unmarried	5	5
Married	81	81
Separated	4	4
Divorced	4	4
Widower	6	6
Family type		
Nuclear	85	85
Joint	15	15
Employment status		
Unemployed	9	9
Unskilled	31	31
Semiskilled	53	53
Skilled	7	7

All of the patients were Males (100%). Majority of the subjects were married (81%) and studied up to secondary education (41%), belonged to Hindu religion (78%), low socioeconomic status (65%). Most common occupation was semiskilled (53%) and unskilled (31%).

Table 2: Severity of depression

Severity of depression	N	%
Normal	16	16
Mild	18	18
Moderate	32	32
Severe	14	14
Very severe	20	20

In terms of severity, Moderate (32%) and very severe depression (20%) was more common.

Table 3: Assessment of disability

Assessment of disability	N	%
Understanding and communication	18	18
Getting around	12	12
Self-care	11	11
Getting along with people	9	9
Life activities	30	30
Participation in society	20	20

Disability was assessed using WHO DAS 2.0 Scale. Among the individual domains, life activities (30%), which include both household and work activities was most affected, followed by participation in the society (20%).

Table 4: Severity of disability

Severity of disability	N	%
Mild	10	10
Moderate	40	40
Severe	38	38
Extreme	12	12

In terms of severity, most of the patients had moderate (40%) to severe (38%) disability.

Discussion

Alcohol misuse and depression frequently co-occur. [24] The prevalence of depression in people seeking treatment for Alcohol Use Disorder (AUD) ranges

from 25.7% [25] to 70%. [26] Among patients with an AUD, comorbid depression is associated with an earlier onset of alcohol dependence, higher rates of lifetime drug dependence [27] and worse outcomes among those entering treatment for alcohol and drug problems. [28] Co-morbid depression is also associated with higher relapse following Alcohol

Use Disorder treatment among adolescents [29] and adults. [30] AUD with co-morbid depression is also associated with greater severity of suicidality in adult psychiatric patients [31] and higher likelihood of suicide attempts [32,33] and completed suicides. [34]

All of the patients were Males (100%). Majority of the subjects were married (81%) and studied up to secondary education (41%), belonged to Hindu religion (78%), low socioeconomic status (65%). Previous studies [35-38] have revealed female gender, younger age, divorced or single status, unemployment, age at first drink, and severity of drinking problems to be independent predictors of comorbid depressive symptoms among patients with AD. In our study, gender, age, educational attainment, employment status, monthly family income, and age at first drink were not significantly associated with comorbid depression in logistic regression analysis. The potential reasons might be due to the relatively small sample size or recall bias, which need to be further studied. Consistent with other research, we found that unstable marital status and AUDIT total score were risk factors for the comorbidity of AD and depressive symptoms. For instance, according to the survey from Caetano et al., the severity of alcohol use disorder was positively correlated with the likelihood of major depression, and the AUDIT total score indicates the severity of drinking problems. [35]

Most common occupation was semiskilled (53%) and unskilled (31%). In terms of severity, Moderate (32%) and very severe depression (20%) was more common. Disability was assessed using WHO DAS 2.0 Scale. Among the individual domains, life activities (30%), which include both household and work activities was most affected, followed by participation in the society (20%). In terms of severity, most of the patients had moderate (40%) to severe (38%) disability. In the World Mental Health Survey, the adjusted odds ratio of psychotic experiences given previous history of alcohol use disorder was 1.6 (95% CI 1.2–2.0), whereas the odds ratio of alcohol use disorder given previous history of psychotic experiences was 1.5 (1.2–2.0). These results support the hypothesis of a bidirectional relationship between alcohol use disorder and psychotic experiences, even after adjusting for antecedent mental disorders. [39]

In this study, we compared the prevalence of disability in alcohol dependent patients with depression and without depression. Significant association was found between alcohol dependence and disability, both with and without depression. These findings suggest that alcohol dependence is related to disability irrespective of the presence or absence of depression. Our study had certain limitations. Sample size is small and therefore

results cannot be extrapolated to general population. Majority of the population were Hindus.

Conclusion

AUDs, depression, and their co-occurrence impose a tremendous burden on individuals, families and communities. Three fourths of the patients with alcohol dependence syndrome are suffering from depression. Alcohol dependence is also associated with greater levels of disability, irrespective of the presence or absence of depression. Further research in disability assessment of alcohol users can help in formulating preventive early intervention strategies for specific disabilities. Alcohol control policies need to shift focus from economic issues to the social issues associated with alcohol use.

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