COMORBIDITY OF DEPRESSION AND DISABILITY IN PATIENTS WITH ALCOHOL USE DISORDERS

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ABSTRACT

Background: Alcohol use disorder (AUD) and depressive disorders are among the most prevalent psychiatric disorders and co-occur more often than expected by chance. Studies have indicated that the co-occurrence of AUD and depressive disorders is associated with greater severity and worse prognosis for both disorders. Both pharmacologic and behavioral treatments have demonstrated efficacy for this population. However, treatment response is somewhat modest, particularly for drinking outcomes, highlighting the importance of further research on the etiology and treatment of co-occurring AUD and depressive disorders.

Materials and methods: This is a cross-sectional and observational study conducted in the Department of Psychiatry at Tertiary Care Teaching Center. 50 patients were included in the study and assessed for depression and disability. Patients of age 18 years and above, who met the criteria for alcohol dependence syndrome according to DSM 5TR, and having informant available. Only new cases were taken into the study.

Result: The prevalence of depression in alcohol dependence patients was found to be 80%. In terms of severity (10%), Moderate (30%) and very severe depression (22%) was more common. Among the individual domains, life activities (32%), which include both household and work activities was most affected, followed by participation in the society (30%). p-value between alcohol dependent patients with depression and their disability was found to be <0.0001 which was significant. In terms of severity, most of the patients had moderate (40%) to severe (35%), mild (23%), and extreme (2%), disability.

Conclusion: The study findings has potential implications for clinical practice by evaluating the implementation of specialized integrated treatment for comorbid anxiety and/or depression in an alcohol outpatient service.

Keywords: Alcohol Use Disorder, Depression, Cognitive behavioral therapy, Integrated care

INTRODUCTION

Psychiatric disorders, such as anxiety and mood disorders, commonly co-occur with alcohol use disorder (AUD). Depressive disorders are the most common psychiatric disorders among people with AUD. [1] The co-occurrence of these disorders is associated with greater severity and worse prognosis than either disorder alone, including a heightened risk for suicidal behavior. [2] AD poses a potent risk for the development of depression and vice versa. [3] Very few studies have been done on Indian population which has a prevalence of AUD of around 12.4% to estimate other psychiatric comorbidities. This study provides data regarding the prevalence of comorbid AUD and depressive disorders and compares their disability with those patients of AUD without depression.

Much of the published literature on the co-occurrence of AUD and depressive disorders uses the classifications from the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). [4] Where possible, this study specifies if the cited literature used the DSM-IV classifications for diagnosis (alcohol abuse or alcohol dependence) or the fifth edition (DSM-5) classification for diagnosis (AUD). [4] If a study reported results based on the combined DSM-IV diagnoses (i.e., included participants with alcohol abuse and participants with alcohol dependence), this study refers to the diagnosis as "DSM-IV AUD." Although DSM-IV and DSM-5 AUD share many symptoms, the diagnoses are defined differently. In the DSM-5, AUD requires at least two symptoms, whereas DSM-IV alcohol abuse required only one symptom. [5]

Also, from DSM-IV to DSM-5, modifications were made to the symptoms that were included as diagnostic criteria. For example, the criterion of legal problems related to alcohol was removed, and the criterion of alcohol craving was added. Thus, where possible, this study identifies which version of the DSM was used in a study. [6]

Depressive disorders are complex and heterogeneous syndromes. These disorders are characterized by disrupted mood (e.g., low, numb, or irritable), along with an array of cognitive (e.g., feelings of worthlessness and difficulty concentrating) and physical (e.g., fatigue and lack of energy) symptoms. [7] The DSM-5TR includes seven distinct disorders under the category of depressive disorders, including major depressive disorder, persistent depressive disorder (dysthymia), premenstrual dysphoric disorder, substance/medication-induced depressive disorder, disruptive mood dysregulation

disorder, other specified depressive disorder, and unspecified depressive disorder. [8] This study focuses on major depressive disorder, dysthymia, and substance-induced depressive disorder, which are the depressive disorders that have been studied most often in both the general population and among people with AUD.

MATERIALS AND METHODS

The present study is a cross-sectional observational study. It was conducted in the Department of Psychiatry at Tertiary Care Teaching Center.

Inclusion criteria

Patients of age of18 to 60 years, who met the criteria for Alcohol Use Disorder according to DSM 5TR, and having informant available. Only new cases were taken into the study after their acute symptoms of withdrawal had subsided.

Exclusion Criteria

Patients with Acute and severe physical illness, already diagnosed with other psychiatric disorders, Uncooperative persons and those who do not give consent to take part in the study. All the Patients meeting criteria for alcohol use disorder according to DSM 5TR, attending psychiatry department who met the fixed inclusion and exclusion criteria were selected for the study. Sample size of 50 patients were taken by consecutive sampling.

Sample size is calculated based on the Cochran formula:
 Where: e is the desired level of precision (i.e. the margin of error, 5%) p is the (estimated) proportion of the population which has the attribute in question, q is $1 - p$.

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 DSM 5TR 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).. WHODAS version 2.0 (36 item version) was used to assess the disability among the study subjects (WHO, 2014). Simple scoring technique was used to summate the scores in the core questions section, as well as in the six domains, since it sufficiently described the degree of functional limitation in each domain.

Statistical analysis

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. Correlation analysis was carried out using Pearson's correlation coefficient for the scores on WHODAS 2.0. Linear regression analysis was carried out to find independent predictors of disability from among the demographic and illness variables. The level of statistical significance was kept at $P < 0.05$ for all the tests.

RESULTS

The sociodemographic profile of the patients shows in table 1. All of the patients were Males (100%). Majority of the subjects were married (80%) and studied up to secondary education (40%), belonged to Hindu religion (84%), low socioeconomic status (70%) and belonged to rural background (84%). Most common occupation was semiskilled (50%) and unskilled (30%).

Table 1: Demographic profile of the patients

Parameters	Number of patients 50	Percentage
Age(years)		
Below 30	10	20
30-40	25	50
40-50	11	22
Above 50	4	8
Religion		
Hindu	42	84
Christian	3	6
Muslim	5	10
Education		
Illiterate	13	26
Primary	13	26
Secondary	20	40
Graduate	4	8
SES		
Lower	35	70
Middle	12	24
Upper	3	6
Marital Status		
Unmarried	2	4
Married	40	80
Separated	2	4
Divorced	2	4
Widower	4	8
Family type		

Nuclear	42	84
Joint	8	16
Employment status		
Unemployed	5	10
Unskilled	15	30
Semiskilled	25	42
Skilled	5	3
Residence		
Rural	28	56
Urban	22	44

Table 2: Prevalence of Depression in patients with AUD

Presence of Depression	Number	Percentage(%)
No depression	10	20
Mild Depression	9	18
Moderate Depression	15	30
Severe Depression	16	32

The prevalence of depression in alcohol dependence patients was found to be 80%. In terms of severity (18%) mild, Moderate (30%) and very severe depression (22%) was more common table 2.

Table 3: Comparison of WHODAS scores across various domains

Variable	WHODAS score	t test (P value)
Marital status		0.741 (0.214)
Unmarried	9.1 (0.8)	
Married	31.3 (4.6)	
Separated	8.3 (0.7)	
Divorced	9.4 (0.3)	
Widower	10.4 (2.3)	
Education		1.031 (0.194)
Illiterate	16.3 (1.9)	
Primary	16.4 (1.2)	
Secondary	26.3 (2.8)	
Graduate	7.1 (1.3)	
Occupation		
Unemployed	8.1 (0.9)	2.353 (0.001)*
Unskilled	21.3 (2.7)	

Semiskilled	35.8 (4.5)	
Skilled	7.3 (0.8)	
Family type Nuclear	41.3 (4.3)	0.032 (0.841)
Joint	7.3 (0.9)	
Residence Rural	31.2 (3.6)	0.584 (0.342)
Urban	44.3 (4.4)	
Tobacco use Yes	31.9 (3.3)	1.0142 (0.314)
No	29.3 (4.9)	

*$P<0.05$ WHODAS – WHO Disability Assessment Schedule 2.0

The relationship of WHODAS total scores with other demographic and clinical variables

Showed that being not employed currently was related to greater disability

Table 4: Linear regression equation for predictors of Disability

Variable	Unstandardized β	Standardized β	Significance	Confidence interval of β
Not employed	19.421	0.421	<0.001	6.244-21.42
Duration of alcohol use	0.325	0.254	0.031	0.042-1.352

Model R^2=0.248

Linear regression analysis was carried out to find independent predictors of disability. It was seen that being unemployed and greater duration of alcohol use were the independent predictors of greater disability. The model explained 24.8% of the variance

Table 5:- Comparison of the World Health Organization Disability Assessment Schedule scores between the groups with depression and without depression.

	MEAN (SD)		P value
	AUD WITH DEPRESSION **N =40**	**AUD WITHOUT DEPRESSION** **N=10**	
WHODAS SCORE	79.75 (12.86)	18.39 (5.69)	< 0.001

When the disability scores of patients with comorbid depression was compared those without depression a significant difference was seen in their scores.

DISCUSSION

The main aim of the current study is to assess the prevalence of depression in patients with AUD and to also to compare the disability of AUD patients with comorbid depression with those without depression in an outpatient hospital setting.

In addition, the secondary aims of the study were to determine factors that contribute to disability in alcohol use disorders. Targeting specific mechanisms that may underlie comorbidity during treatment is likely to be a productive strategy.

The prevalence of depression in general population is 5-17% [9, 10]. Whereas in patients with alcohol dependence it was 25%-70% [11]. In this study, we found that prevalence of depression in alcohol dependent patients to be 82%whichisa little higher to the previous studies, who found a prevalence of 25-70% [11,12]. In terms of severity (18%) mild, Moderate (30%) and very severe depression (22%) was more common.

The proportion of disability was found to be more in those patients with comorbid depression ṭhan those without depression. Those with longer duration of alcohol use and those who were unemployed were had higher WHODAS 2.0 score. Similar results were obtained in the study conducted by Balhara YP et al., and they found most impairment in the domains of participation in the society, household, and work-related activities [13-16]. Patkar, *et al*.in their study found that the ADS group had significantly more number of unemployed people, whereas the control group had more people with stable monthly jobs.

The study findings also suggest that the group of patients with comorbid depression were having more disability which will have potential implications for clinical practice by evaluating the implementation of specialized integrated treatment for comorbid anxiety and/or depression in an alcohol outpatient service. The results may, therefore, be helpful to improve

treatment outcomes for people with alcohol dependence by addressing depression while treating AUD. A clearer understanding of these issues is a prerequisite to devising and implementing appropriate clinical interventions.

LIMITATIONS

Our study was conducted in a hospital-based setting. It was hence inevitable that we missed out on a lot of alcohol dependence cases which were at that time not facing any or having mild physical complaints. Perhaps, for the same reason, we found that maximum of our patients belonged to the moderate and severe category of alcohol dependence. Therefore, a community-based study would have been better.

CONCLUSION

The study findings have potential implications for clinical practice by evaluating the implementation of specialized integrated treatment for comorbid anxiety and/or depression in an alcohol outpatient service. Alcohol abuse leads to negative impact on social, occupational and economic aspects of an individual, leading to impairment of various role functions, ultimately contributing to poor QoL. The assessment of alcohol dependence with psychiatric co-morbidity must consider different aspects of QoL, which has been impaired and management strategies must aim to address this in certain way, only then a holistic approach to management of alcohol dependence could be put into practice.

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