

## A Study to Assess the Prevalence of Depression and Anxiety among Alcohol Use Disorder

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### Abstract

**Aim:** Alcohol is the leading substance among the abused substances which is legitimate to use and causes significant burden than any other substances. Globally, alcohol consumption has escalated in recent decades, with all or most of that increase in developing countries. The present study was aimed to estimate the prevalence of depression and anxiety among individuals with alcohol use disorder in a tertiary care hospital.

**Methodology:** A cross sectional based study. 40 Subjects were recruited in the study after the approval from the institutional ethics committee. After obtaining the informed consent sociodemographic profile was collected using a Semi structured Proforma. Screening for alcohol consumption was done using CAGE questionnaire and Alcohol Use Disorder Identification Test (AUDIT). Patients were then screened for the presence of Depression and Anxiety, 10 days after the last consumption of alcohol. The severity of Depression and Anxiety were rated based on the Hamilton Depression Rating Scale (HAM D) and Hamilton Anxiety Rating Scale respectively. The results were analysed using appropriate statistical methods.

**Results & Discussion:** Evaluation of the study population revealed that 80% had depression. The mean HAM D score was  $13.7 \pm 6.35$  in the study population. The mean HAM-D score for participants with psychosocial stressors was 17.4 which was significantly higher ( $P$ -value = 0.004) compared to participants without psychosocial stressors whose mean score was 11.52. Entire study population had symptoms of anxiety however the severity varied. 70% of them showed symptoms of mild anxiety while 17.5% showed symptoms of mild to moderate anxiety. The mean HAM A score was  $13.43 \pm 9.03$  in the study population.

**Conclusion:** This study demonstrates the risk of depression and anxiety disorder to be significantly high in the adult population with Alcohol use disorder. When alcoholism and psychiatric disorder co-exist patients are more likely to have difficulty in maintaining abstinence and to avail mental health services. Meticulous evaluation of psychiatric complaints in alcoholic patients is important to reduce illness severity in these individuals and to improve their quality of life.

**Key Words:** Alcohol Abuse, Alcohol use, Depression, Anxiety, substance use

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### I. Introduction

Alcohol is the leading substance among the abused substances which is legitimate to use and causes significant burden, more than any other substance. It is a potent drug that causes both acute and chronic changes in almost all neurochemical systems. Globally, alcohol consumption has escalated in recent decades, with all or most of that increase in developing countries.

It has a health and social sequel *via* intoxication (drunkenness), dependence (habitual, compulsive and long-term drinking), and biochemical effects. Problematic alcohol consumption is defined as a pattern that causes harm to mental, physical health and serious alterations in the subject's life and in the lives of those in his or her social environment and represents a major political concern.<sup>(1)</sup>

Vohra *et al.*<sup>(2)</sup> did a study which showed a result of 76% of the individuals having a diagnosable axis I disorder and 40% having an axis II disorder. Among these, the most common axis I and II disorders were Depressive disorders (52.1%) and cluster B personality disorders (58.3%). Hence the study suggests that alcohol abuse is capable of producing severe psychological symptoms like depression, anxiety and psychoses.

The necessity to differentiate the patients of alcohol dependence with and without psychiatric morbidity is of utmost importance and the present study was aimed at estimating the prevalence of depression and anxiety among persons with alcohol use disorder in a tertiary care hospital .

## II. Methods

### Setting and sample

The present cross-sectional questionnaire based study was conducted in the outpatient department of psychiatry, in a tertiary care hospital in south India . The inclusion criteria were patients fulfilling the ICD 10 criteria for alcohol dependence of 18 to 60 years of age , 10 days after the last consumption of alcohol and willingness to participate in the study. The exclusion criteria were those with chronic medical illness and those not willing to provide informed consent.

### Procedure

40 Subjects were recruited in the study after the approval from the institutional ethics committee. After obtaining the informed consent sociodemographic profile was collected using a Semi structured Proforma . Screening for alcohol consumption was done using CAGE questionnaire and Alcohol Use Disorder Identification Test (AUDIT). Patients were then screened for the presence of Depression and Anxiety , 10 days after the last consumption of alcohol .The severity of Depression and anxiety were rated based on the 17-item Hamilton Depression Rating Scale (HAM D) and Hamilton Anxiety Rating Scale respectively and results were analysed.

### Statistical Analysis

Statistical analysis was done using IBM SPSS Version 22. Prevalence of depression and anxiety was considered as outcome variable.

Demographic parameters, Audit were considered as explanatory variables. Descriptive analysis was carried out by mean and standard deviation for quantitative variables, frequency and proportion for categorical variables. The association between categorical explanatory variables and quantitative outcome was assessed . ANOVA was used to assess statistical significance. P value < 0.05 was considered statistically significant.

## III. Results

Study included 40 subjects and their demographic variables are described in table 1. As per the AUDIT scale for alcohol consumption 95% were addicted to alcohol while 5% were at a high risk group for addiction .

**TABLE 1 – SOCIODEMOGRAPHIC PROFILE OF THE STUDY POPULATION**

VARIABLE		N %
AGE	18-29	12.5%
	30-39	52.5%
	40-49	30%
	>=50	5%
MARITAL STATUS	Married	85%
	Unmarried	10%
	Separated	5%
SOCIOECONOMIC STATUS	Upper lower	40%
	Lower middle	47.5%

	Upper middle	12.5%
Religion	Hinduism	80%
	Muslim	7.5%
	Christianity	12.5%

**Prevalence of depression and anxiety :**

Evaluation of the study population revealed that 80 % had depression . According to the Hamilton Rating scale for depression , 35% had mild depression and 25 % had moderate depression. Severe depression was found among 7.5 % while 12.5 % had very severe depression .The mean HAM D score was  $13.7 \pm 6.35$  in the study population .

The mean HAM-D score for participants with psychosocial stressors was 17.4 which was significantly higher (P-value= 0.004) compared to participants without psychosocial stressors whose mean score was 11.52.

The mean HAM-D score for participants with medical comorbidities, for those in age-group of 18-29 years, those belonging to Hinduism , unmarried and from upper-middle socio-economic status were higher compared to other groups. Although, these results were not statistically significant.

It is surprising to report that the entire study population had symptoms of anxiety however the severity varied based on the Hamilton Anxiety Rating scale .70% of them showed symptoms of mild anxiety while 17.5% showed symptoms of mild to moderate anxiety .Very severe anxiety was found in 7.5% while 5% had moderate to severe anxiety .The mean HAM A score was  $10.12 \pm 6.56$  in the study population

The mean HAM-A score for participants in age-group 30-39 years, for those belonging to Hinduism, separated from spouses, belonging to upper lower socio-economic status was higher compared to other groups, but these results were not statistically significant.

The mean HAM-A score was higher for participants with psychosocial stressors and medical comorbidities when compared to participants without these. Although, they were not statistically significant

**IV. Discussion**

Wide range of studies have been done abroad on depression and anxiety among alcohol use disorders yet only few studies have been conducted in India . The current study shows there is an increased evidence of depressive and anxiety features after the withdrawal phase of alcohol use . This suggest that a marked proportion of individuals with alcohol use disorder suffer from a psychiatric comorbidity.

Studies of Kumar *et al.*<sup>(3)</sup> cross-sectionally assessed patients with alcohol dependence and found around 65% patients to have comorbid psychiatric illness out of which 50% patients presented with a mood disorder, 45.8% had an anxiety disorder and 25% patients had a psychotic disorder

In the present study the peak age-group affected by depression was of 18-29 years, unmarried and from upper-middle socio-economic status compared to other groups . Anxiety was predominantly higher in age-group of 30-39 years, individuals separated from spouses and belonging to upper lower socio-economic status compared to other groups .

The study also found that individuals abusing alcohol with a psychosocial stressor (social/environmental ,Financial /Occupational ) had a higher predisposition rate to have a mood disorder.

The limitations of this study were the small sample size, a cross-sectional design and not having a control group .

**V. Conclusion**

This study demonstrates the risk of depression and anxiety disorder to be significantly high in the adult population with Alcohol use disorder. When alcoholism and psychiatric disorder co-exist patients are more likely to have difficulty in maintaining abstinence and to avail mental health services. Meticulous evaluation of psychiatric complaints in alcoholic patients is important to reduce illness severity in these individuals and to improve their quality of life .

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