

ORIGINAL ARTICLE

**A STUDY OF SUBSYNDROMAL AND SYNDROMAL
PSYCHIATRIC MORBIDITY AMONG MALE PATIENTS
WITH ALCOHOL DEPENDENCE**

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Abstract

Objectives: The aims of this research were to study the frequency and pattern of subsyndromal and syndromal psychiatric morbidity in male patients with alcohol dependence, and the relationship of subsyndromal psychiatric morbidity with severity and duration of alcohol use in male patients with alcohol dependence. **Methods:** The sample were male patients suffering from alcohol dependence, admitted for treatment at Drug Abuse Treatment and Rehabilitation Centre (DATRC) ward of Institute of Human Behavior and Allied Sciences (IHBAS) Hospital for more than 3 weeks. A period of 12 months was taken and total sample size was fifty patients (n=50). Chief outcome measure was development of psychiatric morbidity, independent of signs and symptoms of alcohol withdrawal. **Results:** In this study, 38% of patients had onset of alcohol use at the age of between 10 to 20 years and 46% between 20 to 30 years. Majority (52%) of patients had relatively short duration of alcohol dependence i.e. less than 10 years. There was presence of significant amount of subsyndromal psychiatric morbidity even in 34 patients without diagnosable psychiatric disorder. Somatization was present in 3 patients, hostility in 3, paranoid ideation in 3, and positive symptom distress index (PSDI) was positive in 4 patients. Out of 50 patients, psychiatric disorder was present in 16 (32%) patients; depressive disorder was the most common psychiatric morbidity, being present in 6 (12%) patients. Among other disorders, anxiety disorders were present in 5(10%) patients, mania in 2(4%) patients, and schizophrenia in 2 (4%) patients, and Obsessive Compulsive Disorder (OCD) along with depressive disorder in 1(2%) patients. **Conclusions:** There was presence of psychiatric disorders in 32% of patients with alcohol dependence. Depressive disorder (37.5%) is the most common psychiatric disorder followed by anxiety disorders (31.25%), mania (12.5%), schizophrenia (12.5%) and OCD along with depressive disorder (6.25%). Among patients without any diagnosable psychiatric disorders, 9 (26%) had subsyndromal psychiatric morbidity. *ASEAN Journal of Psychiatry, Vol. 14 (2): July - December 2013: XX XX.*

Keywords: Alcohol Abuse, Mental Disorders, Males, Prevalence, Comorbidity

Introduction

Alcohol abuse is a pervasive problem that is taking an increasing toll on the world's population with the lifetime prevalence of alcohol dependence in various studies being 3.1-14% [1 – 6]. In various studies, the lifetime prevalence of comorbid psychiatric disorder in patients with alcohol dependence varies from 30-62% [3, 7 – 8]. Among these patients, various disorders present are anxiety disorder in 9.9-42.3% [7,9], Obsessive Compulsive Disorder (OCD) in 2.2% [9], social phobia in 13-20% [2,3] , generalized anxiety disorder (GAD) in 5.3%[7] , panic disorder in 2.7%[7] , depression in 7.3-36%[7-8], and mania in 17% [8] of patients. The treatment strategies for these patients are quite different from the ones used in the treatment of substance use disorder patients [10].

There has been a wide range in prevalence rates of alcohol dependence and associated morbidity found in different studies. Some of the problems in studying the epidemiology of alcohol related disorders have been: (i) It is only in recent times that a consensus has emerged for the definition of dependence disorders. The studies carried out until recently have employed variable definitions of dependence disorder; (ii) The reliability of the information does remain questionable because the major source of information in the epidemiological studies is the report provided by the concerned individuals who tend to be cautious while reporting about the use of illicit substances. Other sources of variation include lack of stability of the diagnosis, changing trends of alcohol use, sampling techniques, geographical variations, time lag, diagnosis not being supported by objective laboratory based tests, and lack of resources [10].

There is vast literature available about prevalence of psychiatric morbidity in patients with alcohol dependence. However, prevalence of subsyndromal psychiatric symptoms have largely been ignored.

Age

Participants aged between 18 and 24 years at the time of the interview were more likely to use alcohol, to become dependent, and to persist in dependence compared to the older population [11].

Sex

Among bipolar and depressed alcoholics, more women than men remained abstinent at 2 years after treatment, with this difference mainly in the depressed sample [12].

Effect of psychiatric morbidity on alcohol dependence (and vice versa)

Multiple studies [13-15] have demonstrated that transient mental disorder symptoms like anxiety and depression can be present during the withdrawal period, which resolves within 4 weeks. Thus antidepressant medication should not be considered prior to 4 weeks of abstinence [14].

In various studies, presence of psychiatric disorder was associated with increased alcohol consumption [16-18], shorter relapse time [18-19], earlier onset of dependence [20] or increase in symptoms of alcohol abuse or dependence [21]. Though alcohol related psychosis with predominant hallucinations has been described in many alcohol related conditions, including acute intoxication and withdrawal state, alcohol related psychosis lacks in depth research and rigorous definition of the syndrome [22]. According to Mason WA et al. [23], frequency of alcohol use, quantity of consumption, frequency of heavy episodic drinking, and frequency of problem use were predictive of young-adult major depressive disorder.

Objectives of this research are to study the frequency and pattern of psychiatric morbidity (syndromal and subsyndromal) in male patients with alcohol dependence, and the relationship of subsyndromal psychiatric morbidity with severity and duration of alcohol use in male patients with alcohol dependence.

Methods

Study population and sample selection

The present study was conducted at Institute of Human Behavior and Allied Sciences (IHBAS), New Delhi, a psychiatric tertiary referral centre in Northern India. The study was carried out over a period of 12 months, and the convenient study sample consisted of the first 50 adult patients satisfying study criteria admitted in Drug Abuse Treatment and Rehabilitation Centre (DATRC) ward. Inclusion criteria included: (i) age between 18-60 years; (ii) male patients; (iii) patients diagnosed as alcohol dependent based on ICD-10 (DCR) criteria; (iv) duration of admission in DATRC ward of IHBAS of more than 3 weeks; (v) the patient was willing to give written informed consent for examination, and application of assessment tools. In case the patient was not capable of providing a valid consent, then family member provided the consent. The exclusion criteria included (i) patients with dependence in other substances (excluding nicotine); (ii) patient with co-morbid severe physical illness (like hepatic encephalopathy, severe debilitating illness) that might hamper the assessment process, and exclusion was done based on history and clinical examination, and the details of such patients were recorded; (iii) patients with severe cognitive deficits that might hamper the assessment process. Patients with MMSE score of less than 23 were also excluded from the study.

Assessment

Instruments used in the study

1. Basic socio-demographic background: This included questions to obtain information regarding socio-demographic characteristics of those with alcohol dependence. Socio-demographic characteristics such as age, sex, marital status, education, occupation, employment status, religion, residence, and family history of psychiatric illness and substance/alcohol use were recorded.

2. The Mini Mental State Examination (MMSE): The MMSE is a 30-point questionnaire ~~test~~ designed by Folstein et al [24] that was used to rule out cognitive deficits in the study subjects.

3. Addiction Severity Index (ASI): The ASI is a relatively brief semi-structured interview designed to provide important information about aspects of a patient's life which may contribute to his/ her substance abuse syndrome.

The assessment of severity and pattern of alcohol dependence in the study subjects was done using the ASI [25].

4. Symptom Checklist-90-Revised (SCL-90-R): SCL-90-R is a multidimensional tool that assesses nine symptoms of psychopathology and provides three global distress indices. It was used to ascertain the subsyndromal psychiatric morbidity in study subjects [26].

5. Schedule for Clinical Assessment in Neuropsychiatry (SCAN): The assessment of the psychiatric morbidity in the study subjects was performed using a SCAN based clinical interview. [27].

Wherever required for better clarification, additional information from clinical records and staff observations were incorporated in the assessment process.

Assessment procedure

Initially protocol of the study which was based on Declaration of Helsinki (sixth revision) was presented before the ethical committee at IHBAS and subsequently got approval from University of Delhi. The assessment was done after 3 weeks as many authors [15, 28-29] have mentioned presence of depressive symptoms at the time of presentation which resolve within a few weeks. Patients with other significant co-morbid physical and substance use disorders other than nicotine were excluded as it could have led to significant modification of prevalence of psychiatric disorders. Patients within the age group of 18-60 years were included to further homogenize the sample.

After written consent in this regard being obtained from study subjects, the assessment tools were applied in the order starting from the proforma to assess the socio-demographic characteristics, ASI, SCL-90-R, and lastly SCAN based clinical interview. Confidentiality and privacy were maintained during the assessment.

Statistical analysis and data collection

Data was analyzed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics were used to report data on socio-demographic variables, alcohol dependence on ASI subscales, and frequency and pattern of psychiatric morbidity.

SPSS was used to perform Pearson's test of correlation to determine the relationship between subsyndromal psychiatric morbidity and severity of alcohol use as measured on ASI subscales.

Results

Description of the sample

The socio-demographic profile of study subjects

Table 1. Socio-demographic profile of the study subjects

Number of patients (n)		Mean + SD age of patients in years = 33.12 + 7.82	
		Number of patients	Percentage of patients
Age	20-30 years	15	30
	30-40 years	23	46
	40-50 years	9	18
	50-60 years	3	6
Occupation	Unemployed	23	46
	Unskilled	6	12
	Semiskilled	8	16
	Skilled	11	22
	Student	2	4
Marital status	Married	36	72
	Unmarried	8	16
	Separated/ Divorced	3	6
	Widowed	3	6
Age of onset of	10-20 years	19	38

is provided in Table 1. The mean age of the patients was 33.12 years (SD =7.82). Majority of the study subjects were married, unemployed, Hindu males, who had at least received primary education. Most of the study subjects belonged to a lower socioeconomic status, nuclear families residing in an urban setting. The findings are consistent with earlier study [30] findings of significant association between some baseline socio-demographic variables (young age, low education, non-white ethnicity, occupational status) but not others (sex, number of children, residential area), and the subsequent onset of alcohol or drug dependence based on Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) criteria.

Results on the characteristics of alcohol use disorders

Table 2 shows the alcohol use characteristics of the study sample. 84% of the patients had onset of alcohol use before age of 30 years and 52% had relatively short duration of alcohol dependence i.e. less than 10 years.

alcohol use	20-30 years	23	46
	30-40 years	7	14
	40-50 years	1	2
Duration of alcohol use	0-5 years	8	16
	6-10 years	18	36
	11-15 years	13	26
	16-20 years	9	18
	>20 years	2	4
Duration of alcohol dependence	0-5 years	16	32
	6-10 years	21	42
	11-15 years	10	20
	16-20 years	3	6

(*SD = Standard deviation)

Table 2. Severity of alcohol dependence on ASI subscales (Number of patients, n=50)

No.	ASI subscale	Mean score (Range 0-1)	^SD (Range 0-1)
1	Medical status	0.229	0.306
2	Employment/ support status	0.522	0.322
3	Alcohol use	0.542	0.102
4	Drug use*	0	0
5	Legal status	0	0
6	Family/ social relationships	0.478	0.359
7	Psychological status	0.160	0.231

**It may be noted that patients with co-morbid substance use was an exclusion criteria;*

^SD = Standard deviation.

As described in Table 3, even in 34 patients who did not have any syndromal psychiatric disorder, there were multiple traits suggestive of subsyndromal psychiatric morbidity. Hostility

was the most common trait followed by somatization and depression. None of them scored positive for phobic anxiety trait.

Table 3. Subsyndromal psychiatric morbidity on SCL-90-R (Number of patients, n= 34)

	Mean score	SD*
Somatization	0.314	0.306
Obsessive- compulsive	0.035	0.092
Interpersonal sensitivity	0.143	0.181
Depression	0.253	0.213
Anxiety	0.181	0.187
Hostility	0.326	0.414
Phobic anxiety	0.000	0.000
Paranoid ideation	0.143	0.302
Psychoticism	0.037	0.081

(*SD = Standard deviation)

Results on presence of subsyndromal psychiatric morbidity

Table 4 shows that somatization was present in 3 patients, hostility in 3, paranoid ideation in 3, and positive symptom distress index (PSDI) was

positive in 4 patients. None of the patients scored positive for obsessive compulsive, interpersonal sensitivity, depression, anxiety,

phobic anxiety and psychoticism. The finding shows presence of subsyndromal morbidity even in a section of alcohol dependence patients without diagnosable psychiatric morbidity.

Table 4. Subsyndromal psychiatric morbidity according to standardized SCL-90-R score (Number of patients, n= 34)

	Present	Absent
Somatization *	3	31
Obsessive- compulsive *	0	34
Interpersonal sensitivity *	0	34
Depression *	0	34
Anxiety *	0	34
Hostility *	3	34
Phobic anxiety *	0	34
Paranoid ideation *	3	31
Psychoticism *	0	34

** SCL-90-R scale has been divided into 9 dimensions based on various aspects of psychopathology*

Results on the relationship between alcohol use characteristics and subsyndromal psychiatric morbidity

Table 5 shows relation between ASI subscales and various dimensions of SCL-90-R using Pearson's correlation. The relation between employment status and phobic anxiety was

significant ($p < 0.05$). According to current study, relation between psychological status with interpersonal sensitivity ($p < 0.01$) and psychological status with paranoid ideation was also significant. As had been shown in Table 2, patients with alcohol dependence have poor family and social relationships.

Table 5. Relation of ASI sub-scores with SCL-90-R subscales (n=34)

	Medical status	Employment status	Alcohol use	Family relation status	Psychological status
Somatization	-0.48	0.056	0.135	0.019	0.045
Obsessive-compulsive	0.201	-0.870	0.179	0.071	0.145
Interpersonal sensitivity	-0.09	-0.940	0.195	0.027	0.527(**)
Depression	0.52	0.110	0.079	0.163	0.050
Anxiety	-0.143	0.057	0.098	-0.108	0.089
Hostility	-0.176	-0.010	0.069	0.043	0.097
Phobic anxiety	0.380(*)	-0.163	0.075	0.078	-0.069
Paranoid ideation	0.071	0.002	0.116	0.095	0.395(*)
Psychoticism	-0.172	0.005	0.029	0.087	-0.160

**Correlation is significant at the 0.05 level (2-tailed).*

*** Correlation is significant at the 0.01 level (2-tailed).*

Table 6 shows that out of 50 patients, psychiatric disorders were present in 16(32%) patients, with depressive disorder being the most common psychiatric morbidity present in 6 (12%) patients. Among other disorders, anxiety disorders was present in 5(10%) patients, mania in 2(4%) patients, schizophrenia in 2(4%)

patients, and OCD along with depressive disorder in 1(2%) patients. However, in this study, no attempt to differentiate alcohol induced psychotic disorder with schizophrenia had been made, which according to another study [29] is clinically distinguished from schizophrenia.

Table 6. Psychiatric morbidity among patients of alcohol dependence according to ICD-10 (DCR) (n=50)

Psychiatric disorders	Number of subjects	Percentage of subjects
<i>Absence of psychiatric disorders</i>	34	68
<i>Presence of psychiatric disorders</i>	16	32
Depressive disorder	6	37.50
Mania	2	12.50
OCD with Depressive disorder	1	06.25
Anxiety disorders	5	31.25
Schizophrenia	2	12.50

Discussion

The decision to include only male patients in the study was based on facts that more men than women use alcohol, and the ratio of men to women for an alcohol-related diagnosis is about 2:1 or 3:1 [2, 32]. Thus, with the limitation of the sample size, it was considered more appropriate to include only males to get a homogenous sample with adequate size for statistical analysis.

The concept of subsyndromal morbidity is mostly limited to subsyndromal depression. Researchers lack consensus regarding the characteristics of subsyndromal morbidity which is sometimes called “subthreshold” or “subcase” morbidity. However, persons with subsyndromal morbidity are recognized to be at a risk of functional impairment and disability [33]. In a study, Centre for Epidemiological Studies Depression Scale (CES-D) scores ranging from 8 to 15 were selected to indicate subsyndromal depression [33]. No earlier study on presence of subsyndromal psychiatric morbidity in patients with alcohol dependence could be found for comparison.

In the current study, 84% of study subjects had onset of alcohol use prior to 30 years of age, which was consistent with the finding of an earlier study that participants aged between 18 and 24 years at the time of the interview were more likely to use alcohol, to become dependent, and to persist in dependence compared to the older population [17]. Figures for alcohol use determinants varied from age of onset of problems in co-morbid patients being 25-26 years to another study finding of 35% subjects having started using alcohol at the age of 16-20 years; 44% had developed dependence between the ages of 15 and 25 years, and majority (54%) of subjects were dependent on alcohol for 5 years or less [33]. Our study supports the fact that alcohol use starts at formative years of early adult life along with development of alcohol dependence when quite young. 74% of our patients were only dependent for 0-10 years but still had co-morbidity rate of 32%, which confirms the preventive paradox [34] that even a short duration of abuse/dependence leads to severe psychiatric and other morbidity.

The economic burden of having an individual with alcohol dependence alters the structure and functioning of the family, thereby, forcing

persons to take up responsibilities inappropriate to their roles e.g., young children, widowed mother, sister's husband etc. This in turn sets up a chain of longer term loss to society, not to speak of the direct consequences of failure and frustration in such a role change [20]. This deterioration of family and social relationships of the patients is also reflected in the current study finding of mean score of 0.478(SD=0.359) on ASI subscale related with family and social relationships, which is consistent with earlier study findings that drinking by a person has substantial effects on health and wellbeing of others [35].

Though alcohol related psychosis with predominant hallucinations has been described in many alcohol related conditions [36], the issue of subsyndromal psychosis in alcohol dependence has not been adequately studied and no study on this issue could be obtained. According to Tien et al, somatization symptoms showed independent cross-sectional associations to prevalent extreme alcohol use [37] which corroborates with study finding of 3 patients having somatization symptoms. No major study on relation of hostility with alcohol dependence could be found. So, though there has been presence of subsyndromal psychiatric morbidity in many patients not having any diagnosable psychiatric disorder according to ICD-10(DCR), findings could not be compared in view of lack of earlier studies on this issue.

Limitations of the study include generalizability. This was a hospital based study and the results cannot be applied to the general population. There was no comparison group in the study. Several studies have also pointed towards relationship between personality change and the onset and course [38] or persistence [17] of alcohol dependence but effect of personality disorders on either psychiatric morbidity or alcohol dependence was beyond scope of this study.

Conclusion

In this hospital sample of 50 patients in a specialty mental health hospital, the following

conclusions were drawn. There was presence of psychiatric disorders in 32 %(n=16) of patients with alcohol dependence. Among 16 patients with psychiatric disorders, depressive disorder (37.5%) was the most common psychiatric disorder, followed by anxiety disorders (31.25%), mania (12.5%), schizophrenia (12.5%) and OCD along with depressive disorder (6.25%). Among 34 patients without any diagnosable psychiatric disorders, 9 (26%) had subsyndromal psychiatric morbidity, 3 patients had somatization, 3 had paranoid ideation, and 3 scored positive for hostility. Half of patients either had psychiatric disorder or subsyndromal psychiatric morbidity.

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