

# Prevalence of Personality Disorders in Alcohol Dependence: A Control Study



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## Abstract

**Background:** There is paucity of Indian studies on prevalence of co-morbid personality disorders (PDs) in alcohol dependent individuals.

**Aim:** To assess the frequency and type of personality disorders in subjects with alcohol dependence, and to compare them with normal population.

**Methods:** In this hospital based, cross-sectional study, using the International Personality Disorder Examination, 81 consecutively recruited alcohol-dependent patients admitted to a de-addiction unit were compared with 81 subjects from the general population chosen to match the patient samples for age, gender and socioeconomic level.

**Results:** Among the alcohol-dependent patients 29.63% showed personality disorders compared to 6.17% of the normal control sample. The difference was statistically significant. Obsessive-compulsive (9.88%) and Antisocial (7.41%) personality disorders were most prevalent, followed by Paranoid personality disorder (4.94%).

**Conclusion:** There is high prevalence of comorbid personality disorders in patients with alcohol dependence

**Keywords:** Alcohol dependence; Obsessive compulsive personality disorder; Antisocial personality disorder; Comorbidity

## Introduction

Alcohol dependence is one of the most prevalent mental disorders in the general population. Co-morbid alcohol dependence and personality disorders are a major health concern as they place significant burden on the health care system and are associated with a broad range of negative outcomes, including more severe depressive symptoms, longer duration of treatment, poorer treatment outcomes and poorer quality of life [1-2]. Some research reports indicate a high rate of personality disorders (PDs) in alcohol-dependent subjects [3-5]. Prevalence figures are even more varied when mental health settings are considered. This fluctuation depends on the type of sample (e.g. general population or psychiatric patients), method of diagnosis (e.g. self-report personality inventory or structured interview) and the type of research design (e.g. retrospective chart review, cross-sectional or

longitudinal). Accurate diagnosis of PDs is still viewed as a complex and challenging task.

These findings were supplemented by recent epidemiologic data from the National Epidemiologic Survey on Alcohol and Related Conditions which reported 39.5% of the alcohol-dependent subjects to have at least one of seven investigated PDs in comparison to 14.8% of controls [6]. It has been observed that assessment of inpatient alcohol dependent individuals has yielded higher rates of PD diagnoses ranging between 25 and 93% [7]. This variance in rates of PD comorbidity can be due to differences in specific sample characteristics, diagnostic modality used, differences in admission, and treatment modalities [8]. The types of PDs reported to be associated with alcohol dependence in the literature are very variable and no clear pattern has emerged.

The types of PDs most often reported include histrionic and dependent, [6,9] paranoid, [10] borderline, [5] antisocial, [5-6] narcissistic and avoidant, [5] passive-aggressive [11] and obsessive compulsive [4].

The diagnostic disparity and the lack of consistency in the literature with respect to the number and types of PDs associated with alcohol dependence are due to the different diagnostic tools for identification of PD, to the different severity of alcoholism considered (abuse or dependence) and to the different mental health settings (inpatients or outpatients) [12]. There is paucity of Indian literature in this field. The aim of this study was to describe the frequency and profile of personality disorders related to alcohol dependence, and to compare them with normal population using standard and valid diagnostic tools.

### Material and Methods

This hospital based, cross sectional study was carried out at two teaching tertiary care hospitals. The protocol was submitted to and approved by the institutional ethical committee. Written informed consent was obtained from each subject. During the period of study all patients meeting the DSM IV TR criteria [13] for alcohol dependence and admitted for de-addiction treatment were recruited by purposive sampling method as per the inclusion and exclusion criteria.

- a. Inclusion criteria for patients
  - i. Diagnosis of Alcohol dependence by DSM IV TR criteria.
  - ii. In the age group of 18 to 60 years.
  - iii. Willing to give informed consent.
- b. Exclusion criteria for patients
  - i. Patients with comorbid axis I diagnosis.
  - ii. Known cases of cardiorespiratory disease, hypertension and diabetes.

- iii. Clinical evidence cirrhosis, hepatocellular failure and portal hypertension.
- iv. Dehydration and obvious malnutrition.
- v. Previous history of psychiatric disorders and on psychotropic medications

An equal number of age, sex and regional background matched non-addicted subjects without any physical or psychiatric illnesses formed the control group. Each patient and control subject was examined independently by two psychiatrists to confirm the diagnosis and the absence of exclusion criteria, and was included in the study only after the concurrence of both. Patients were evaluated two weeks after admission when they were free from or having minimal withdrawal symptoms.

### Tools

Sociodemographic and clinical characteristics including age, marital status, education, occupation, family income, age at onset and duration of alcohol consumption were recorded on a specially designed proforma. Detailed history about the alcohol habit was obtained from the patient and from family members. The International Personality Disorder Examination (IPDE) [14] was utilized for assessment and diagnosis of personality disorders. The IPDE is a semi-structured diagnostic interview which was created for diagnoses of PDs. The IPDE covers all criteria for accurate diagnoses of personality disorders of DSM-IV. In order to establish reliable diagnoses, the behaviour or trait must be present for at least 5 years and the criterion must be met before the age of 25 years. A self-administered IPDE screening questionnaire is available before the interview to assist in identifying PDs that might be of focus in the interview. Inter-rater reliability of the IPDE (median kappa = 0.73), as well as test-retest reliability (median = 0.87) is generally good [15]. Statistical analysis were carried out using the students 't' test, chi-square test with Yates correction and Fishers exact test as appropriate.

### Results

**Table 1:** Demographic characteristics of alcohol dependence patients (n=81) and control subjects (n=81).

Variable		ADS Patients	Controls	T / $\chi^2$ / Fishers	df	p
Mean ( $\pm$ S.D.) Age in years		38.6 ( $\pm$ 7.38)	38.3( $\pm$ 7.16)	0.194	160	0.846 NS
Age distribution (in years)	21-30	11	11	0	160	1.00 NS
	31-40	36	36			
	41-50	29	29			
	51-60	5	5			
Marital Status	Married	73	76	5.56	160	0.062 NS
	Unmarried	3	5			
	Separated	5	0			
Education	Illiterate	9	7	1.18	160	0.758 NS
	1-5 class	21	19			
	6-12class	47	48			
	Graduates	4	7			

Occupation	Farmer	26	28	2.586	160	0.629 NS
	Unskilled	33	31			
	Skilled	9	11			
	Service	7	9			
	Unemployed	6	2			
Family income (in Rupees)	< 5000	34	31	1.38	160	0.501 NS
	5001-10000	39	37			
	>10000	8	13			

**Table 2:** Characteristics of alcohol use in patients with alcohol dependence.

Variable		Alcohol dependence patients	
		Number	Percent
Age at onset of alcohol consumption (in years)	<20	33	40.74
	21-30	45	55.55
	31-40	3	3.71
Duration of alcohol consumption (in years)	1-5years	2	2.47
	6-10	12	14.81
	11-15	26	32.09
	16-20	22	27.16
	>20	19	23.46

A total of 81 patients with alcohol dependence syndrome and equal number of normal subjects were included in the study with their informed consent. All subjects were male. Mean age of the patients and control subjects was 29.6 years and 30.5 years respectively. Range of age was 26-58 years for both groups. There were no significant differences between the two groups on any of the socio-demographic variables like sex, education, marital status, and socioeconomic status (Table 1). Distribution of age at initiation of alcohol consumption and duration of alcohol consumption is given in Table 2. Personality disorders were identified in 29.63% of alcohol dependent patients compared to 6.17% in normal control subjects. The types of personality disorders found in alcohol dependent patients and normal controls are shown in Table 3.

**Table 3:** Personality disorders in Alcohol dependence syndrome patients.

Personality disorders	Alcohol dependent Patients(n=81)	Normal Controls (n=81)	Fishers exact test P	P
	N (%)	N (%)		
Obsessive-compulsive	8 (9.88)	1(1.23)	0.0339	S
Antisocial	6 (7.41)	0	0.0284	S
Paranoid	4 (4.94)	1(1.23)	0.3672	NS
Borderline	2 (2.47)	1(1.23)	1.000	NS
Schizoid	1 (1.23)	0	1.000	NS
Narcissistic	1 (1.23)	0	1.000	NS
Dependent	1 (1.23)	1(1.23)	1.000	NS
Avoidant	1 (1.23)	0	1.000	NS
Histrionic	0	1(1.23)	1.000	NS
Total	24 (29.63)	5(6.17)	<0.0001	S

## Discussion

A major strength of our study was the inclusion of a matched control group from which patients with comorbid Axis I disorders were excluded. In addition the diagnoses of PDs were made using the IPDE which is a valid and reliable tool for diagnosis of PDs. An important limitation of the present study is that this study included only alcohol-dependent patients in inpatient treatment. While the study included patients with prolonged and severe alcohol dependence but the patients were with good social support, as the patients had been brought by their family members to the hospital for treatment. Strength of the study was that it included large number of patients belonging to rural agrarian population, from lower socio-economic class who are usually not represented in the help-seeking populations.

The most important finding of the present study was that 29.63% of the alcoholics met IPDE diagnostic criteria for a PD compared to 6.17% of the normative controls. The difference was statistically significant. This finding is congruent with findings of previous studies which observed that PDs were significantly more common in alcohol dependent persons. In the largest study to date the 2001-2002 National Epidemiologic Survey on Alcohol and Related Conditions, 43,093 participants aged 18 years or older from United States were evaluated with face-to-face interview. Among subjects diagnosed to have alcohol use disorder, 28.6 percent also fulfilled the diagnostic criteria for at least one PD. There was significant positive association between alcohol use disorder and PDs. Overall, alcohol use disorders were most strongly related to antisocial PD followed by histrionic and dependent PDs [16].

On the other hand in another study 158 consecutive alcohol-dependent patients attending a psychiatric outpatient clinic were compared with 120 consecutively recruited psychiatric patients with non-addictive disorders, and 103 control subjects from the general population.

The control subjects were matched with the patient samples for age, gender and socioeconomic level. In the alcohol dependent patients 44.3%, general clinical sample 21.7% and 6.8% of the control subjects showed at the least one personality disorder. Obsessive-compulsive PD (12%) was the commonest PD, followed by antisocial, paranoid and dependent PDs (7% each) [4]. Preuss et al. [3] in 1,079 in patients with DSM-IV Alcohol Dependence from three inpatient addiction treatment centers detected PDs in 60%. A review of clinical and epidemiological studies revealed that the prevalence of personality disorders in alcohol dependence varies from a low of 22-40% to a high of 58-78%. [17] Though earlier studies often reported higher rates of PD diagnoses from inpatient samples of alcohol-dependent subjects, the rate of PDs in the present study was on the lower side of figures reported in the literature for inpatients with alcohol dependence.

Though a large part of the literature has primarily focused on comorbid antisocial and borderline PDs, in different studies almost the whole spectrum of PDs have been reported in patients with alcohol dependence, such as the obsessive compulsive, dependent, avoidant, paranoid and others. With respect to the types of PDs, De Jong et al. [8] found histrionic (34%), dependent (29%), avoidant (19%) and borderline PD (17%) to be the most common axis II diagnoses in patients with alcohol dependence. A different but overlapping profile of PDs in hospitalized alcohol dependent patients was reported by Preuss et al with Obsessive-compulsive PD (31.4%) as commonest followed by borderline (26.1%), narcissistic (18.6%) and paranoid PD (17.8%) [3]. Echeburua et al. [4] reported the most common PDs in alcohol dependence syndrome to be obsessive-compulsive (12%), followed by antisocial, paranoid and dependent PDs (7% each).

The observed differences in rates of various PDs across studies could be explained by differences in specific sample characteristics (e.g. inpatient vs. outpatient vs. epidemiologic), differences in diagnostic methods and setting of treatment facilities. However, the literature indicates that some PDs, including antisocial, borderline, obsessive-compulsive and paranoid PDs, are diagnosed most frequently in alcohol-dependent individuals across studies. It has been observed that patients with alcohol-dependence and comorbid PD are high users of the health care system, [18] receive less alcoholism-specific treatment, [19] and have a more severe course of alcohol dependence than non-comorbid alcohol-dependent individuals [20]. Several previous studies also reported an adverse effect of comorbid PDs on treatment compliance and outcome [21-22].

### Conclusion

There is high prevalence of comorbid personality disorders in patients with alcohol dependence. Proper assessment and evaluation of PDs in individuals with alcohol dependence would be useful in planning further research to decide the appropriate treatment of alcohol dependent patients with different comorbid PDs.

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