



Personality profile and level of anxiety in patients with alcohol dependence syndrome: a comparative study

Abstract

Alcohol and drug dependence disorder is characterised by a chronic course with frequent relapses. Various psychosocial factors have been identified which predict relapse in alcohol dependence. Many studies have shown that personality and anxiety play major roles in determining the outcome of patients with alcohol dependence. **Method:** In the present study, a sample of 30 patients with the diagnosis of mental and behavioural disorders due to use of alcohol, currently using the substance (active dependence) was taken. Along with these, 20 normal controls matched on age and education were also included. The sample was collected by using the purposive sampling method. Temperament and Character Inventory (TCI) and State-Trait Anxiety Inventory (STAI) were used as tools to assess personality profile and levels of anxiety respectively. The analysis included independent sample t-test and chi-square test. **Results:** Results shows that patients with alcohol dependence had significantly more score on novelty seeking ($p < 0.05$) and self-transcendence ($p < 0.05$), and less score on self-directedness ($p < 0.001$) and cooperativeness ($p < 0.01$), and had significantly ($p < 0.001$) more anxiety (both state and trait) compared to normal group. **Conclusion:** Further, it can be concluded that patients with alcohol dependence had more novelty seeking and anxiety which precipitate relapse among them.

Keywords: Mental Disorders. Temperament. Character. Novelty-Seeking.

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INTRODUCTION

Alcohol consumption occurs along a continuum as there is variability in drinking patterns among individuals. Till date, very little is known about the cause of excessive drinking and alcohol dependence. Nowadays, alcohol abuse and dependence are thought to result from a variety of interacting factors, which can be individual as well as environmental, such as physiological, cognitive, interpersonal, and personality.

Relapse prevention is a major challenge in the treatment of alcoholism. Various studies revealed that alcohol dependence has been associated with relapse and it is estimated that about 50% of patients with alcohol dependence relapse after three months of abstinence.[1] Similarly some studies revealed that there are 90% chances that patients with alcohol dependence relapse once during the four-year period following treatment.[2] It has been proved in literature that various psychosocial factors affect the outcome and course of relapse in patients with alcohol dependence. Such factors may include individual characteristics of the patient, the drug, and environmental reinforcers. Personality and anxiety symptoms are among the prominent factors that play important roles in patients with alcohol dependence.

Symptoms such as anxiety, depression and personality traits such as antisocial behaviour, conduct problems, violent and criminal acts, or personality disorders are often

frequently associated with alcohol dependence and sometimes precede it.[3] Various studies revealed that anxiety disorder and alcohol use disorder could commence with each other, and in this regard anxiety disorder could play contributing as well as maintaining factor in alcohol dependence.[4] Similarly, Driessen *et al.*,[5] revealed that after three weeks of successful detoxification, trait anxiety continues which further increased the risk of relapse in patients with alcohol dependence.

In a study, Janowsky *et al.*[6] have suggested that specific personality variables have predictive value. Personality traits, such as low conscientiousness and high neuroticism, are significantly related to return to uncontrolled drinking following treatment.[7] Novelty seeking, measured by the Tridimensional Personality Questionnaire (TPQ), seems to identify a subgroup of alcohol dependent men who are at risk for dropping out of treatment; further, higher scores in novelty seeking in alcohol dependent patients are found in general.[8,9] Hence, there is a need for study to explore the personality and anxiety profiles in patients with alcohol dependence, so that clinicians can look into these two important variables while managing a patient with alcohol dependence. So, keeping this in view, the main aim of the present study was to study the personality profile and level of anxiety in patients with alcohol dependence syndrome.

In the present research, the following objectives and hypotheses were purposed:

Objectives

To study personality profile between patients with alcohol dependence and normal controls.

To study anxiety between patients with alcohol dependence and normal controls.

Hypotheses

There would be no significant difference on personality profile between patients with alcohol dependence and normal controls.

There would be no significant difference on anxiety between patients with alcohol dependence and normal controls.

METHOD

Design

The main aim of the present study was to study the personality profile and level of anxiety between patients with alcohol dependence and normal controls. For this purpose, a cross-sectional design was used.

Sample

In the present study, a sample of 30 patients with the diagnosis of mental and behavioural disorders due to use of alcohol, currently using the substance (active dependence), and 20 normal controls matched on age and education were included. The sample was collected by using purposive sampling method. Data was collected from the Central Institute of Psychiatry, Ranchi, India during October 2012 to April 2013.

Inclusion criteria (for patients)

Those who fulfilled the diagnostic criteria for research (DCR) of the tenth revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) for alcohol dependence.[10]

Two weeks after the initiation of successful detoxification programme.

Male patients.

Patients aged between 18-50 years.

Those who gave the informed consent.

Formal education for at least eight years.

Exclusion criteria (for patients)

Patients with serious physical problem and complicated withdrawal (seizure, delirium), physical illness, and organic brain disorder.

History of harmful use or dependence on any other substance (except nicotine and caffeine).

Any history of other major psychiatric illness or mental retardation.

Inclusion criteria (for control group)

Matched with alcohol group in terms of age and education.

Those who scored three or less on the General Health Questionnaire-12 (GHQ-12).

Participants aged between 18-50 years.

Formal education for at least eight years.

Exclusion criteria (for control group)

History of harmful use of alcohol or any other substance (except nicotine and caffeine).

Score more than three on GHQ-12.

Any history of psychiatric illness or mental retardation.

Persons with chronic physical illness and organic brain disorder.

Tools used

1. Socio-demographic and clinical datasheet

It includes various socio-demographic variables, like age in years, educational qualification, occupation, marital status, religion, income, residence and clinical variables, like types of substance, age of onset, pattern of intake, duration of dependence, family history of substance dependence, and treatment history.

2. General Health Questionnaire-12 (GHQ-12)

The 12-item questionnaire was used to see the general health and screen out any psychiatric morbidity in healthy controls.[11] It was designed as a self-administered screening test sensitive to the presence of psychiatric disorders in individuals coming to primary care settings and non-psychiatric clinical settings. The GHQ does not detect symptoms that occur with specific psychiatric diagnoses, but at the same time provides a measure of overall psychological health and wellness. In order to assess this, the GHQ focuses on two major classes of phenomena: i) inability to continue to carry out normal healthy functions and ii) symptoms of a distressing nature. The validity of the scale has been studied in nine countries and the Cronbach's alpha in all of them is over 0.80.

3. State-Trait Anxiety Inventory (STAI)

STAI is a 40-item self-report assessment that differentiates between state anxiety, a temporary condition experienced in specific situations, and trait anxiety, the general chronic anxiety experienced by some individuals.[12] It has two 20 items scale; each item graded one to four. Internal consistency coefficients for the scale have ranged from 0.86 to 0.95; test-retest reliability coefficients have ranged from 0.65 to 0.75 over a two months interval.

4. Temperament and Character Inventory (TCI)

TCI contains 240 items is a battery of tests designed to assess differences between people in seven basic dimensions of temperament and character.[13] Temperament essentially includes automatic emotional responses that are heritable and stable throughout life; the four measured temperament dimensions are novelty seeking, harm avoidance, reward dependence, and persistence. Whereas, character includes

self-concept and individual differences in goals and values, which affects voluntary choices, intentions, and the meaning of experiences in life. Differences found in character of individuals are moderately influenced by sociocultural learning and mature in progressive steps throughout life. The three measured character dimensions are self-directedness, cooperativeness, and self-transcendence. Cronbach's alpha values for TCI scales ranged from 0.60 to 0.85 for the temperament scales and from 0.82 to 0.87 for the character scales. The test-retest reliability (correlation, r) ranged from 0.52 to 0.72 and 0.52 to 0.71 for the temperament scales and the character scales respectively.

Procedure

Patients with diagnosis of alcohol dependence syndrome as per ICD-10 (DCR) and fulfilling the inclusion criteria were taken for the study. At first, informed consent was taken from each patient and normal control that was investigated for present study. Necessary socio-demographic and clinical information was collected by using structured socio-demographic sheet. After that, all the patients and normal controls were assessed on TCI and STAI. Subsequently, after screening on GHQ-12, normal controls were assessed on TCI and STAI.

Statistical analysis

The obtained data was subjected to statistical analyses pertinent to research objectives of the study by using statistical package for social sciences (SPSS) 16.0 for Windows.[14] The analysis included independent sample t-test.

RESULTS

Table 1 shows the comparison of personality profile between alcohol group and normal group, using TCI. When different domain scores of TCI were compared between alcohol group and normal group, it was found that alcohol group had significantly more score on novelty seeking ($p<0.05$) and self-transcendence ($p<0.05$) and less score on self-directedness ($p<0.001$) and cooperativeness ($p<0.01$) compared to normal group. The scores of harm avoidance, reward dependence, and persistence were similar between alcohol group and normal group.

Table 2 shows the comparison of scores obtained on STAI between alcohol group and normal group. Both state and trait anxiety were significantly ($p<0.001$) more in alcohol group compared to normal group.

DISCUSSION

The main aim of the present study was to study the personality profile and level of anxiety in patients with alcohol dependence syndrome. In regard to personality profile, results indicated that when different domain scores of TCI were compared between alcohol group and normal group, it was found that alcohol group had significantly more score on novelty seeking and self-transcendence, and significantly less score on self-directedness and cooperativeness compared to normal group.

The results are consistent with the previous research that alcohol dependent patients in general scored higher on novelty seeking and lower on self-directedness. The rationale is that lower self-directedness may be present in patients with alcohol dependence before the onset and acts as a predisposing factor for alcohol dependence.[13] On the other hand, higher novelty seeking is associated with higher impulsiveness, exploratory excitability, extravagance along with disorderliness. Temperament scores are more stable with time and may present before the onset of alcoholism.[13] So self-directedness and novelty seeking seem to be predisposing factors for alcohol dependence. Basiaux *et al.*,[9] in their study also found that patients with alcohol dependence were characterised by higher novelty seeking and lower self-directedness than non-psychiatric control subjects. Andó *et al.*[15] also found that alcohol dependent patients showed higher level of novelty seeking than depressed and control subjects.

Our results showed that state trait anxiety is significantly more in alcohol group compared to normal group. There could be several assumptions which found a strong relationship between anxiety and alcoholism. First, the tension reduction hypothesis theorises that a predisposition toward alcoholism may relate to the use of alcohol to alleviate innate anxiety symptoms or to help cope with day to day life problems.[16-18] Second, anxiety symptoms are likely to occur during withdrawal and recovered early in alcoholics.[19,20] Third, anecdotal and clinical reports

Table 1: Comparison of personality profile between alcohol group and normal group, using Temperament & Character Inventory (TCI) (independent sample t-test)

SI. No.	TCI	Mean±SD		t-value	df	p
		Alcohol dependence N=30	Normal control N=20			
1	Novelty seeking	19.20±3.60	16.45±3.57	2.65	48	0.01*
2	Harm avoidance	13.66±6.22	13.15±5.74	0.296	48	0.76
3	Reward dependence	14.53±2.50	14.25±2.26	0.407	48	0.68
4	Persistence	4.83±1.08	5.00±1.29	0.492	48	0.62
5	Self-directedness	24.53±6.11	30.40±4.22	3.733	48	0.000***
6	Cooperativeness	27.43±5.39	31.90±4.27	3.106	48	0.003**
7	Self-transcendence	17.63±4.36	15.15±2.23	2.342	48	0.02*

SD=standard deviation, df=degree of freedom. *Significance at 0.05 level (2-tailed), **Significance at 0.01 level (2-tailed), *** Significance at 0.001 level (2-tailed)

Table 2: Comparison of anxiety between alcohol group and normal group, using State Trait Anxiety Inventory (STAI) (independent sample t-test)

Sl. No.	Anxiety	Mean±SD		t-value	df	p
		Alcohol dependence N=30	Normal control N=20			
1	State anxiety	39.66±11.86	26.05±5.58	4.78	48	0.000*
2	Trait anxiety	39.63±9.79	25.45±4.81	5.99	48	0.000*

SD=standard deviation, df=degree of freedom, *Significance at 0.001 level (2-tailed)

suggest that some patients with anxiety disorders who drink may develop alcohol related life problems.[18] Finally, it has been suggested that both alcoholism and anxiety disorders may be seen in the same families and may be genetically related.[21] Our results are consistent with the literature that high levels of anxiety symptoms are found among alcoholics. Almost 80% of patients reported symptoms of anxiety and/or palpitations with shortness of breath in the context of alcohol withdrawal. However, this discomfort tended to be self-limited and to disappear spontaneously with continued abstinence.[22] In previous studies, they interviewed patients just after the admission. But in our research, we assessed them on anxiety inventory after detoxification. So, our study has methodological advantage as compared to previous ones.

Strength and limitation

In the present study, all the patients were assessed after detoxification and compared with normal controls who were screened on GHQ. The tools used in the present study were standardised on patients with alcohol dependence; so, the results can be generalised. However, the sample used in the present study was small and there is a need of longitudinal study. Another limitation of the present study was that patients who were abstinent from alcohol should be compared with patients with alcohol dependence, who were currently using the substance, on these variables. Hence, in future these variables should be taken into account while formulating a management plan for patients with alcohol dependence.

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