ISSN: 2581 – 3633
PubMed - National Library of Medicine - ID: 101745081

International Journal of Medical Science and Advanced Clinical Research (IJMACR)

Available Online at:www.ijmacr.com

Volume – 7, Issue – 4, August - 2024, Page No. : 93 – 103

Assessment of Personality Disorder In Inpatients Admitted With Alcohol Dependence Syndrome - A Cross Sectional, Observational Study

[1]Dr. Vishrutha, Final Year Psychiatry Resident, Department, of Psychiatry, Father Muller Medical College and Hospital, Kankanady, Mangalore.

[2]Dr. Supriya Hegde Aroor, Professor and HOD, Department of Psychiatry, Father Muller Medical College and Hospital, Kankanady, Mangalore.

Corresponding Author: Dr. Vishrutha, Final Year Psychiatry Resident, Department, of Psychiatry, Father Muller Medical College and Hospital, Kankanady, Mangalore.

How to citation this article: Dr. Vishrutha, Dr. Supriya Hegde Aroor, "Assessment of Personality Disorder In Inpatients Admitted With Alcohol Dependence Syndrome - A Cross Sectional, Observational Study", IJMACR- August - 2024, Volume – 7, Issue - 4, P. No. 93 – 103.

Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Background: Numerous studies have shown that the prevalence of personality disorder (PD) in alcohol dependence syndrome (ADS) varies from 22 to 78%. The pathophysiology, course, and prognosis of ADS can all be influenced by co-occurring PD. Studies conducted in India have not sufficiently examined this correlation.

Objectives: This study was conducted to estimate the prevalence of PD in patients admitted with ADS and to determine the association between PD, alcohol patterns, and the severity of ADS.

Methods: Inpatients of the psychiatry department diagnosed with ADS according to ICD-10 criteria participated in an observational, cross-sectional study at the tertiary care hospital. They were assessed for PD using the International Personality Disorder Examination. The severity of ADS was assessed using the Severity of Alcohol Dependence Syndrome Questionnaire.

Results: 31 individuals (38.30%) out of the 81 inpatients had at least one PD. The two most prevalent PDs, dissocial and borderline, were diagnosed in 14 and 7 patients, respectively. At p = 0.0031, the correlation between PD and ADS was statistically significant.

Conclusion: PD was present in more than one-third of ADS patients undergoing inpatient care. The severity of ADS was associated with age at onset, amount, duration, and duration of ADS.

Keywords: ADS, PD, Alcohol Use Pattern.

Introduction

Alcohol dependence syndrome is one of the most prevalent mental disorders in the general population. An

estimated 400 million people, or 7% of the world's population aged 15 years and older, have alcohol use disorders. Of this, 209 million people (3.7% of the adult world population) have alcohol dependence. The effects of alcohol dependence contribute substantially to the global burden of disease. 4.1% of global disability-adjusted life-years are attributed to alcohol, and the annualized death rates for alcohol dependence are 4.6-fold higher for women and 1.9-fold higher for men compared with the general population. Alcohol dependence is the third most serious public health problem, only surpassed by cardiovascular diseases and malignant tumors. A person with alcohol dependence syndrome prioritizes their alcohol consumption over other once-valuable behaviors. This condition encompasses a variety of physiological, behavioral, and cognitive problems. One of the main defining traits of the alcohol dependence syndrome is the intense, even overwhelming desire to consume alcohol. ICD-10 states that three or more of the following symptoms must be present concurrently at some point during the past year in order to diagnose alcohol dependence: craving, tolerance, withdrawal symptoms, loss of control, salience, and use despite negative consequences. A personality disorder is a persistent pattern of behavior that shows up as rigid reactions to a wide range of social and personal circumstances that deviate significantly or extremely from the way the typical person in a given culture thinks, feels, and especially interacts with others. These patterns of behavior are often consistent and cover a wide range of behavioral and psychological dimensions. They are commonly, but not always, linked to varying degrees of subjective distress as well as issues with performance and functioning in social situations. There is a substantial comorbidity between alcohol dependence syndrome and personality disorders. There is a bidirectional association between alcohol dependence syndrome and personality disorder [5]. Alcohol can both cause and worsen personality disorder symptoms, including increased impulsivity and risk-taking, erratic and poor decision-making, amplified mood swings, impaired emotional regulation, more self-destructive behavior, and increased relationship instability. Symptoms of personality disorders, such as impulsivity and risk-taking, may increase alcohol consumption. A common coping strategy for personality disorder symptoms is alcohol consumption. Alcoholism and personality disorders can be difficult to treat because each condition may exacerbate the symptoms of the other. If alcoholism and personality disorders are treated concurrently, good outcomes may arise from treating both disorders. Hence, it is utmost important to diagnose personality disorder in alcohol dependent patients in order to facilitate treatment and prevent frequent hospitalizations, frequent relapses, increased duration of hospitalization and an overall treatment outcome.

Literature Survey

A significant countrywide study conducted in the United States, the National Epidemiologic Survey on Alcohol and Related Conditions, indicated that more than one-fourth of patients with alcohol dependence—that is, 39.5% of the subjects—had at least one PD, compared to 14.8% of controls [6]. Additionally, it has been noted that between 25 and 93% of hospitalized patients who are alcohol dependent have personality disorders [7]. More than half of patients with alcohol dependence syndrome have at least one personality problem, according to a new study [8]. According to a study, more than half of patients with personality disorders such as borderline personality disorder and antisocial personality

disorder also have alcohol use disorder, indicating a bidirectional link between personality disorder and alcohol dependence syndrome [8]. One of the Indian studies that employed the International Personality Disorder Examination instrument discovered that 30% of individuals with alcohol dependence also had personality disorders [9]. Applying the Million Clinical Multiaxial Inventory-III assessment to alcohol-dependent individuals revealed significantly higher rates of narcissistic, paranoid, and depressive PDs [10]. This finding was reported in another Indian study. Alcohol dependence syndrome with comorbid personality disorder is a contributing or predisposing condition that affects the course, pathophysiology, and outcomes of treatment in these patients. The sample type (general population, psychiatric inpatients, etc.); the diagnosis method (structured interview, self-reported personality inventory, etc.); and the research design (retrospective chart review, cross-sectional study, longitudinal study, etc.) all influence the variations in prevalence in different studies. Precise identification of personality disorder is still considered a difficult and demanding process. The aim of this study was to estimate the frequency and profile of personality disorders in alcohol-dependent subjects receiving inpatient treatment. The objective of the study was to estimate the frequency and types of personality disorders in inpatients diagnosed with alcohol dependence syndrome, assess the association between personality disorders and the severity of alcohol dependence syndrome, and determine the clinical correlates of personality disorders in these patients. The hypothesis of the study is that there is an association between personality disorder, pattern of alcohol use, and the severity of alcohol dependence syndrome.

Methodology

The participants for this cross-sectional observational study were drawn from the inpatient ward of the department of psychiatry and de-addiction center of Father Muller Medical College and Hospital, Kankanady, Mangalore, using a convenient sampling over a period of 2 months from May to July 2024. Approval was obtained from the institutional ethics committee, and written consent was obtained from the study participants who fulfilled the inclusion criteria. During the period of study, patients meeting the International Classification of Disease -10 Diagnostic Criteria for Research for Alcohol Dependence Syndrome who were admitted for de-addiction treatment were recruited as per the inclusion and exclusion criteria.

Inclusion criteria

1. Diagnosis of alcohol dependence syndrome as per ICD-10 DCR criteria.
2. Both male and female patients in the age group of 18 to 65 years.
3. The participants who were willing to give informed consent.

Exclusion criteria

1. Patients with other comorbid axis I disorders except for nicotine use disorder.
2. Patients with severe cognitive impairment and sensory-motor dysfunction.
3. Patients in the withdrawal phase.
4. Patients who were not willing to give informed consent.

The sample size was calculated using the formula $n = z^2 p(1-p)_a/e2$. Assuming the prevalence of personality disorders in individuals with alcohol dependence syndrome to be 30% [9], p = 30, z = 1.96 at 95% CI, e =

10% (allowable error), a = constant, the sample size thus calculated was 81.

Tools used

Semistructured socio demographic proforma: The questionnaire includes age, sex, marital status, education, occupation, socioeconomic status, family type, religion, address, past history, and family history.

Severity of alcohol dependence questionnaire (SADQ-C): The SADQ-C is a self-administered, 20-item assessment tool created by Edwards & Gross (1976) and Edwards (1978) to gauge the degree of alcohol dependency. Physical withdrawal, affective withdrawal, withdrawal relief drinking, alcohol consumption, and quickness of reinstatement are the five subscales, each including four items. On a 4-point Likert scale, each item is assigned a score between 0 and 3, with a possible score range of 0 to 60. A score of less than 16 indicates minimal or no alcohol dependence, a score of 16–30 indicates moderate alcohol dependence, and a score of 30 or above indicates severe alcohol dependence.

International Personality Disorder Examination: The US Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) and the World Health Organization collaborated to develop the IPDE as part of their cooperative effort for the diagnosis and classification of mental diseases. This is a diagnostic interview that is semistructured. The 67 elements in the ICD-10 IPDE handbook. Six headings comprise the IPDE: job, self, affects, reality testing, interpersonal connections, and impulse control. The behavior or trait must be present for at least five years and meet the criteria before the age of twenty-five in order to establish valid diagnoses. The items are scored as follows: 0 for absenteeism or being within a normal range, 1 for attenuated presence, and 2 for pathology or meeting criteria standards. Both test-retest and inter-rater reliability of the IPDE (median = 0.87 and median kappa = 0.73), respectively, are generally good.

Statistical Analysis

It was carried out using Statistical Package for Social Sciences software version 20. Sociodemographic and clinical variables were summarized using frequency and percentage for categorical variables and mean and standard deviation for continuous variables. The ANOVA test was used to determine the association between the pattern of alcohol use and the severity of alcohol dependence (SADQ-C score). The T test was used to determine the association between personality disorder and the severity of alcohol dependence syndrome (SADQ-C score). The level of significance for statistical analysis was set at 5%.

Results

Eighty-one patients with alcohol dependence syndrome were recruited in the study. The mean age of the participants was 41.98 +/- 11.95 years. Most participants were male (n = 78), belonged to the age group of 41–50 years (n = 23), were married (n = 46), belonged to the Hindu religion (n = 58), were educated up to 2nd Pre-University (n = 21), semi-skilled by occupation (n = 32), belonged to a lower socioeconomic status class (n = 51), and belonged to a nuclear family (n = 61). Sociodemographic details of the participants are shown in Table 1.

Table 1: Sociodemographic Details Of The Patient

Variable	n (%)
Gender	
Male	78 (96.3%)
Female	3 (3.7%)
Age	
< 30 years	15 (18.50%)
31-40 years	21 (26%)
41-50 years	23 (28.40%)
> 50 years	22 (27.10%)
Mean +/- SD	41.98 +/- 11.95
Marital status	
Single / unmarried	27 (33.30%)
Married	46 (56.80%)
Divorced/separated	06 (7.40%)
Widower/widow	02 (2.50%)
Relegion	
Hindu	58 (71.60%)
Christian	15 (18.50%)
Muslim	8 (9.90%)
Education	
Illiterate	4 (5%)
Lower or higher primary	11 (13.60%)
High school	19 (23.40%)
College	21 (26%)
Graduate	19 (23.4%)
Post graduate	07 (8.60%)
Occupation	
Unskilled	24 (29/70%)
Semi-skilled	32(39.50%)
Skilled	18 (22.20%)
Professional	7 (8.60%)
Family type	
Nuclear	61 (75.30%)
Joint	16 (19.80%)
Extended	4 (4.90%)
Socioeconomic status	
Lower	51(63%)
Middle	29 (36%)
Upper	01 (1%)

Out of 81 participants with alcohol dependence syndrome, 42 participants (51.9%) also had nicotine use disorder. In our study, 31 participants (38.30%) had at least one PD. Two participants were diagnosed with dual personality disorder. Dissocial (n = 14) and emotionally unstable personality disorder, borderline type (n = 7) were the most common PDs in the study population, followed by anxious PD (n = 5) (Table 2).

Table 2: Prevalence of Personality Disorder In Ads

Variable	n (%)
Personality disorder	31 (38.30%)
One personality disorder	29 (93.54%)
Two personality disorders	2 (6.45%)
Anxious PD	05 (6.20%)
Dissocial PD	14 (17.30%)
Emotionally Unstable PD: Borderline	07 (8.60%)
Emotionally Unstable PD-Impulsive	02 (2.50%)
Dependent	02 (2.50%)
Obsessive-compulsive PD	1 (1%)
Histrionic	1 (1%)
Paranoid	1 (1%)

In our study, the majority of the participants (n = 42) had an age of onset of alcohol consumption below 20 years of age, with the mean age of onset being 22.87 +/- 7.59 years. The majority of the participants (n = 24) had a total duration of alcohol consumption between 11 and 20 years, with a mean duration of 19.27 +/- 11.19 years. The majority of the participants (n = 55) had average alcohol consumption of </= 2 quarters per day (12 units) and n = 46 had a total duration of alcohol dependence syndrome of less than 10 years, with a mean duration of 11.75 +/- 8.87 years. Also, a history of complicated withdrawal was seen in 23 participants, with Delirium tremons in N = 15 (65%) and withdrawal seizures in N = 8 (35%) (table 3).

Table 3: Alcohol related variables in the study participants

Variable	n (%)
Age at onset	
< 20 years	42 (51.80%)
21 to 30 years	26 (32.10%)
> 31 years	13 (16.10%)
Mean +/- SD	22.87 +/- 7.59
Quantity of alcohol consumption	
< 2 quarters /day	55 (67.90)
2-5 quarters /day	23 (28.40%)
> 5 quarters / day	03 (3.70%)
Mean +/- SD	2.34 +/- 1.25
Duration of alcohol consumption	
< 10 years	22 (27.20%)
11 to 20 years	24 (29.60%)
21 to 30 years	21 (25.90%)
> 31 years	14 (17.30%)
Mean +/- SD	19.27 +/- 11.19
Duration of alcohol dependence	
< 10 years	46 (56.80%)
11 to 20 years	22 (27.20%)
21 to 30 years	11 (13.60%)
> 31 years	02 (2.40%)
History of complicated withdrawal	
Delirium tremons	15 (18.51%)
Withdrawal seizures	08 (9.87%)
Total	23 (28.39%)

In our study, 33.35% (n = 27) participants had mild alcohol dependence syndrome, 44.40% (n = 36) had moderate alcohol dependence syndrome, and 22.25% (n = 18) had severe alcohol dependence syndrome with a mean SADQ-C score of 23.32 +/- 9.8 (Table 4). Therefore, the majority of the participants had moderate alcohol dependence syndrome.

Table 4: Severity of alcohol dependence

SADQ-C Score	n (%)
< 16 (mild alcohol dependence syndrome)	27 (33.35 %)
16- 30 (moderate alcohol dependence syndrome)	36 (44.40%)
> 31 (severe alcohol dependence syndrome)	18 (22.25%)
Mean +/- SD	23.32 +/- 9.81

The ANOVA test was applied to determine the association between the pattern of alcohol use and the severity of alcohol dependence (SADQ-C score). The association between severity of alcohol dependence and parameters like age of the patient, age at onset of alcohol consumption, quantity of alcohol consumption per day, total duration of alcohol consumption in years, and the total duration of alcohol dependence in years were found to be statistically significant (p value = 0.004, p = 0.001, p = < 0.001, p = 0.001, p = 0.001, respectively) (Table 5).

Table 5: Association between SADQ score and other parameters.

Sn.	Particulars (Mean ± SD)	SADQ score Mild (n=27)	Moderate (n=36)	Severe (n=18)	p value
01	Age of the subject	36.93 ± 9.01	46.53 ± 11.72	40.50 ± 12.51	**0.004 ***
02	Age at onset	24.15 ± 5.50	24.81 ± 8.53	17.11 ± 5.04	**0.001 ***
03	Alcohol consumption quantity	1.74 ± 0.46	2.19 ± 0.56	3.53 ± 2.04	**<0.001 ***
04	Alcohol consumption duration	12.85 ± 8.62	21.78 ± 10.64	23.89 ± 11.42	**0.001 ***
05	Alcohol dependence years	6.85 ± 6.52	14.06 ± 9.00	14.50 ± 8.61	**0.001 ***

(ANOVA test: NS- not significant, * is significant, at p value <0.05)

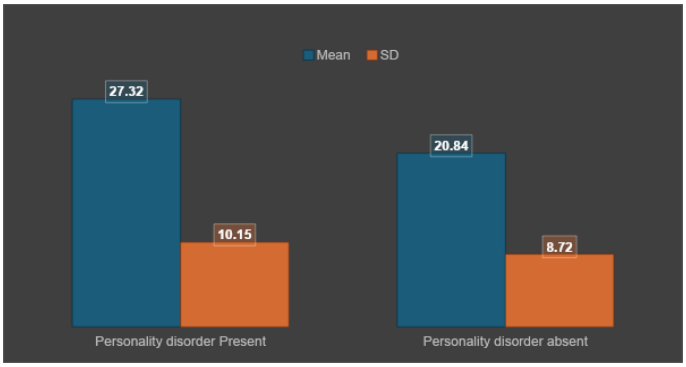
The T test was applied to determine the association between the severity of alcohol dependence syndrome and personality disorder. It was found to be statistically significant when the personality disorder was present (p = 0.0031) (Table 6).

Table 6: Association between personality disorder and SADQ score

Sn.	Personality disorder	SADQ score (Mean ± SD)	p value
01	Present (n=31)	27.32 ± 10.15	0.0031 *
02	Absent (n=50)	20.84 ± 8.72	> 0.05

(t test: NS- not significant, * is significant, at p value <0.05)

Figure 1: Association between personality disorder and SADQ score



Discussion

With a mean age of 41.98 +/-11.95 years, the majority of participants in our study were male (96%), married, employed, and from lower socioeconomic backgrounds. They also belonged to nuclear families. This is consistent with the findings of Ratan Gedam et al.'s study, which included a higher proportion of male participants (99%), a mean age of 36.73 +/- 9.56 years, and a majority that was married, employed, and came from lower socioeconomic class Hindu nuclear families [11]. While more participants in the study above studied until higher secondary, the majority of participants in our study had studied up to pre-university college or above. Comparable results concerning sociodemographic information were reported by Aswal et al. and Gauba et al. [12, 13].

According to our research, 38.30% of inpatients admitted with alcohol dependence syndrome had a personality disorder, accounting for over one-third of the study population. Additionally, it was discovered that a pattern of alcohol consumption and alcohol dependence syndrome are related ($p = 0.00031$). ADS patients had a 29.63% prevalence of personality disorder and normal controls had a 6.17% prevalence, according to Chaudhury et al., who also used IPDE to diagnose personality disorder in ADS patients [9]. Comparing our study to Chaudhury et al.'s, we found a higher prevalence rate. The most prevalent PD in the aforementioned study was obsessive-compulsive disorder (9.88%), followed by antisocial personality disorder (7.41%). Our research did reveal cluster B personality disorders, with dissocial personality disorder being the most prevalent (17.30%) and borderline personality disorder (8.60%) coming in second. Personal interviews were used to gather data from 43,093 American adults (18 years of age or older) who took part in the largest study to date, the 2001–2002 National Epidemiologic Survey on Alcohol and Related Conditions [6]. The prevalence rate was also lower than in our study, and of the participants with a diagnosis of alcohol use disorder, 28.6% also satisfied the diagnostic criteria for one or more PDs. However, in the above study, alcohol use disorders were most strongly related to antisocial PD, which is in line with our study, followed by histrionic and dependent. Balachandran et al. found a prevalence of 48% of ADS patients having one or more PDs, with antisocial and avoidant PDs being the most common. The prevalence rate is much higher than in our study, when a semistructured instrument to diagnose personality disorders was employed [14]. According to Heramani et al., 21% of the ADS patients had antisocial personality disorder as a comorbid psychiatric disorder when a study was conducted to determine comorbid psychiatric disorders in alcohol use disorder patients [15].

A study conducted in Canada using SCID-II by Zikos et al. found that 59% of alcohol use disorder patients had at least one PD and cluster B PDs were the most common subtype [16]. Similarly, in a study conducted in Germany, Preuss et al. reported a 60% PD prevalence in ADS inpatients. They found obsessive-compulsive and borderline PDs to be most common in their study population [17]. An earlier multicentric study from the United States reported a 58% prevalence of PDs in participants with ADS, with antisocial, borderline, and paranoid PDs being the most commonly identified disorders [18]. A Spanish study reported a PD prevalence of 44.3% in treatment-seeking ADS patients, with obsessive-compulsive personality disorder being the most common [19].

Our study found that the majority of the participants had moderate alcohol dependence (44.40%), which is in line with Balachandran et al., where 50% had moderate alcohol dependence. However, the next severity found in our study was mild dependence syndrome in 33.35% of the patients, compared to severe alcohol dependence syndrome (28%) in the above study [14]. Ratan Gedam et al. had 52% severe alcohol dependence syndrome, followed by 38% moderate alcohol dependence syndrome patients [11].

Our study showed that the age of the patient , age at onset of alcohol consumption, average consumption of alcohol per day, duration of alcohol consumption and duration of alcohol dependence in years were statistically significant with the severity of alcohol dependence syndrome. Chaudhury et al. had a majority of participants with age at onset between 21 and 30 years, which is different from our study, where it was found below 20 years, and duration of alcohol consumption in the above study was between 11 and 15 years in the majority of the participants, which is in line with our study. Balachandran et al. reported that the age at first drink and average alcohol consumption per day were associated with the presence of PD, which is similar to our study . However, the severity of ADS was not associated with the presence of PD in Balachandran et al., which is against our study. Similarly, age at first drink was associated with the presence of PD in Preuss et al. Zikos et al. reported that the cluster B personality disorder was associated with younger age at onset.

The variability in the prevalence rates of PDs in the general population in the various geographical locations may be partly responsible for the variation in the prevalence rates of PDs in the current study compared to others. On the other hand, the sample size, the degree of substance use, the timing of the assessment, and the design of the study tools could affect the reported prevalence.

The findings of the present study have to be interpreted with the following limitations in mind: The study was done on inpatients. Hence, the findings cannot be generalized to all the patients with ADS and also to all people in the community. The study had a small sample size. Study also had fewer females . Hence, the findings cannot be implicated in female ADS patients.

The strength of the present study is that the validated tools were used . The personality disorder was assessed using the IPDE full version. The assessment was done after the withdrawal period.

Conclusion

At least one PD was present in around one-third of alcohol dependence syndrome patients receiving inpatient therapy. The two most prevalent PDs were dissocial and borderline PD. The severity of alcohol dependence syndrome was correlated with the younger age at which comorbid PD patients initially drank and the longer duration they spent consuming and becoming dependent on alcohol. ADS with comorbid PD patients may be manipulative in order to provide a sufficient history and may downplay their alcohol consumption. This could lead to extended hospital stays and relapses frequently, which would be detrimental to the patients' prognosis. following therapy. In the end, this leads to a low standard of living, compromised socioоccupational functioning, and strained interpersonal ties.

To determine the prevalence of PDs in patients with ADS in diverse settings, future research involving a representative sample from the community, outpatients, and inpatients will be necessary. More research is necessary to fully understand how PD affects the pattern

and clinical correlates of relapse as well as how it affects treatment outcomes.

Abbreviations

ADS: Alcohol Dependence Syndrome

PD: Personality Disorder

ICD-10: International classification of disease-10

SADQ-C: Severity of Alcohol Dependence Questionnaire

IPDE-International Personality Disorder Examination

References

1. Rehm J, Imtiaz S. A narrative review of alcohol consumption as a risk factor for global burden of disease. Substance abuse treatment, prevention, and policy. 2016 Dec;11:1-2.
2. John U, Rumpf HJ, Bischof G, Hapke U, Hanke M, Meyer C. Excess mortality of alcohol-dependent individuals after 14 years and mortality predictors based on treatment participation and severity of alcohol dependence. Alcoholism: Clinical and Experimental Research. 2013 Jan;37(1):156-63.
3. González R. Alcohol harm: beyond the body to the body politic. MEDICC review. 2010 Dec 29;12(4):30-3.
4. Anderson P, Møller L, Galea G. Alcohol in the European Union: consumption, harm and policy approaches. World Health Organization. Regional Office for Europe; 2012.
5. Helle AC, Watts AL, Trull TJ, Sher KJ. Alcohol use disorder and antisocial and borderline personality disorders. Alcohol Research: Current Reviews. 2019;40(1).
6. Grant BF, Hasin DS, Stinson FS, Dawson DA, Chou SP, Ruan WJ, Pickering RP. Prevalence, correlates, and disability of personality disorders in the United States: results from the national epidemiologic survey on alcohol and related conditions. Journal of Clinical Psychiatry. 2004 Jul 1;65(7):948-58.
7. Preuss UW, Koller G, Barnow S, Eikmeier M, Soyka M. Suicidal behavior in alcohol-dependent subjects: the role of personality disorders. Alcoholism: Clinical and Experimental Research. 2006 May;30(5):866-77.
8. Newton-Howes G, Foulds J. Personality disorder and alcohol use disorder: An overview. Psychopathology. 2018 May 29;51(2):130-6.
9. Chaudhury S, Saini R, Kumar S, Dewan C, Goyal E, Kadiani A. Prevalence of personality disorders in alcohol dependence: A control study. Glob J Addict Rehabil Med. 2017;3:106
10. Prakash O, Sharma N, Singh AR, Sengar KS, Chaudhury S, Ranjan JK. Personality disorder, emotional intelligence, and locus of control of patients with alcohol dependence. Industrial psychiatry journal. 2015 Jan 1;24(1):40-7.
11. Gedam SR, Patil PS. Personality profile and severity of alcohol use in patients with alcohol dependence syndrome: a cross-sectional study from central rural India. Int Arch Addict Res Med. 2018;4:029.
12. Siddharth Aswal,KK Verma,Anand Mathur,Harphul Singh,Lokesh Jain,et al. (2012) Study of Psychiatric Morbidity and Psychosexual Dysfunctions in patients of Alcohol Dependence. Delhi Psych J 15:379-384.
13. Gauba D,Thomas P,Balhara YP, Deshpande SN (2016) Psychiatric comorbidity and physical correlates in alcohol-dependent patients. Indian J psychol Med 38: 414-418.
14. Balachandran A, Ramamurthy P, Thilakan P. Prevalence and correlates of personality disorders in males with alcohol dependence syndrome

undergoing inpatient treatment in a tertiary care hospital in South India. Indian Journal of Psychiatry. 2023 Mar 1;65(3):356-60.

15. Singh NH, Sharma SG, Pasweth AM. Psychiatric co-morbidity among alcohol dependants. Indian Journal of Psychiatry. 2005 Oct 1;47(4):222-4.
16. Zikos E, Gill KJ, Charney DA. Personality disorders among alcoholic outpatients: prevalence and course in treatment. The Canadian Journal of Psychiatry. 2010 Feb;55(2):65-73.
17. Preuss UW, Johann M, Fehr C, Koller G, Wodarz N, Hesselbrock V, Wong WM, Soyka M. Personality disorders in alcohol-dependent individuals: relationship with alcohol dependence severity. European addiction research. 2009 Jul 20;15(4):188-95.
18. Morgenstern J, Langenbucher J, Labouvie E, Miller KJ. The comorbidity of alcoholism and personality disorders in a clinical population: prevalence rates and relation to alcohol typology variables. Journal of abnormal psychology. 1997 Feb;106(1):74.
19. Echeburúa E, De Medina RB, Aizpiri J. Comorbidity of alcohol dependence and personality disorders: A comparative study. Alcohol & Alcoholism. 2007 Nov 1;42(6):618-22.