



## Personality Profile & Incidence of Psychosis in Alcohol Dependent Individuals

### KEYWORDS

Sickle cell disease, Fetal hemoglobin, Vaso-occlusive crisis

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**ABSTRACT** *Background & Objectives:* - Personality factors play an important role in addiction & there are only a few studies on alcohol induced psychosis in the literature. This study examines the personality profiles & personality disorders in alcohol dependent patients, & the incidence of psychosis in them.

*Methods:* - 100 in-patients were selected by purposive sampling & were assessed with AUDIT. Those satisfying the inclusion were assessed with PAS, to examine the personality profiles & personality disorders. DSM IV T.R diagnostic criteria for substance induced psychotic disorder & BPRS were used for assessing psychosis. The relationship between severity of alcoholism & personality & the association of socio-demographic data & alcoholism were also studied.

*Results:* - 47% of the sample had personality disorders of which cluster B & cluster C were prominent & 26% had co-occurring personality disorders. 8% were diagnosed to have alcohol induced psychosis. Low levels of educational, occupational & economic status had a correlation with alcoholism. Severity of alcohol consumption was significantly correlated with borderline, avoidant & paranoid personality disorders.

*Interpretation & conclusion:* -

Personality disorders especially cluster B & cluster C are common in alcohol dependent individuals. Alcohol induced psychosis should be differentiated from other psychotic disorders. Personality factors should be looked into in the treatment for alcoholism for a better outcome.

**INTRODUCTION:** - Alcohol abuse is a pervasive problem that is taking toll on the world's population. Benjamin rush in 1784 described alcohol addiction as an uncontrollable & irresistible desire to consume alcohol. A focus on the individual was promoted by degenerationism, the theory that biological factors, toxic environmental influences or moral vices may trigger a cascade of social, moral & medical problems, which increase in each generation & finally lead to extinction of that family. 1954 report of WHO reflected the new focus on the individual & stated that the personal make up is the determining factor, but the pharmacological action of alcohol plays a significant role. Role of personality & personality pathology in the pathogenesis of addictive problems has been strongly and simultaneously influenced by a diversity of theoretical schools & public domains. According to pharmacological model of addiction, the central role of personality pathology is addictive potential of substance itself.

In symptomatic model, addiction was considered a symptom of another primary mental disorder that can be underlying personality disorder evidenced by maladjustment, neurotic character traits, emotional immaturity or infantilism. In biopsychosocial model, onset & course of addiction are thought to result from continuous reciprocal interaction between the individual's biological & psychological vulnerabilities. Understanding the co-morbidity is of paramount interest for treatment planning & development of more effective strategies for Rx of both alcohol abuse & personality disorders. Acute & sub acute psychotic states in alcoholics have probably attracted more attention than those associated with other addictions or physical illnesses. The relationship between alcoholism & psychotic symptoms is often difficult to classify. The features of alcoholic hallucinosis are rapid onset, anxiety, auditory hallucinations

& delusions of persecution with a clear sensorium. Alcoholic hallucinosis has been regarded as schizophrenic reaction precipitated by alcohol in those with certain personality traits. Differential diagnosis between alcoholic hallucinosis & schizophrenia is of great importance because the conditions require different pharmacological management & further therapeutic management. Further, prognosis depends on management of alcoholism.

### Aims and objectives: -

- 1) To examine the personality profiles & personality disorders of alcohol dependent patients.
- 2) To find out the incidence of psychosis in alcohol dependent individuals.

### Methodology: -

Sample & size: - the sample of 100 patients admitted to psychiatry ward of ASRAM General Hospital Eluru west Godavari dist A.P are taken up for the study.

**Type of study:** - Cross – sectional

### Inclusion criteria: -

- 1) Patients fulfilling the DSM-IV TR diag. criteria for alcohol dependence.
- 2) Age 18-55
- 3) Informed consent.

### Exclusion criteria: -

- I. With organic illness.
- II. Subjects who had an axis-I diagnosis other than those related to alcohol use; tobacco use & personality disorder prior to this disorder.
- III. Any medical illness or other substances causing psychosis.

IV. Co-existed drug abuse or dependence.

**Procedure: -**

A consecutive sample of patients admitted for alcohol problems in psychiatry ward during the study period was selected by purposive sampling. On admission patients were interviewed & assessed with alcohol use disorders identification test (AUDIT) & those satisfying the inclusion criteria were included in the study. Psychotic symptoms assessment in this study is according to DSM IV T.R criteria for alcohol induced psychosis & brief psychiatric rating scale (BPRS). After two weeks during which period, detoxification was completed, patients were evaluated with personality assessment schedule (PAS) to explore personality profile.

**Instruments: -**

**1. Personality assessment schedule (PAS):**

It is a semi-structured clinical interview with a considerable degree of overlap between ICD-10 & DSM-IV classification systems. Using PAS, the classification of personality disorders can be arrived at independent of clinical decision. It is designed to formalize the assessment of personality disorder & may be used with any subject irrespective of psychiatric status.

A hierarchical system is employed in which the personality category that has highest score for social impairment becomes the named personality disorder. The 24 personality variables of PAS include pessimism, worthlessness, optimism, lability, anxiousness, suspiciousness, introspection, shyness, aloofness, sensitivity, vulnerability, irritability, impulsiveness, aggression, callousness, irresponsibility, childishness, resourcelessness, dependence, submissiveness, conscientiousness, rigidity, eccentricity & hypochondriasis. Each of the variables is assessed & rated by interview with subject & interview with informant; in case of non-availability of informant, the subjects ratings alone can be used. The ratings are made on a nine-point scale for all variables, specifically designed to record the abnormal personality traits & normal variation occurs between scores 0 & 3. Greater the severity of the trait, greater will be the rating. Scoring as follows –

**0 Trait absent**

- 1 Subject recognizes the presence of trait but it is shown chiefly in terms of feelings rather than behaviour.
- 2 Personality trait definitely present & affects behaviour, but only to limited extent.
- 3 Personality trait markedly affects the feelings & behaviour.
- 4 Personality trait is marked to both the subject & to most people who have frequent contact with the subject.
- 5 Personality trait is marked to both the subject & most people who come in contact with the subject.
- 6 Personality trait has major influence on behaviour & tends to affect all aspects of life.
- 7 Personality trait is so marked that it is noticed by almost all who come in contact with the subject, even those who only see the subject once.
- 8 Personality trait dominates behaviour completely.

**2. Alcohol use disorders identification test :- (AUDIT)**

This was developed in phase-1 of WHO collaborative project on identification & management of alcohol-related problems in primary health care tested in six-centres across the world for use by health workers in developed as well

as developing countries. AUDIT is primarily developed for adults, but can also be used in college students & adolescents. It is a ten-item brief structured interview.

One standard drink is defined as half pint of ordinary beer, a single measure of spirits, glass of wine, a small glass of sherry or 10 gms of alcohol.

Score of	8-14-men	} Strong likelihood of hazardous or harmful consumption.
	7-12-women	
Score of	≥15-men	} Evidence of significant alcohol dependence.
	≥13-women	

**3. Brief psychiatric rating scale: -**

BPRS was developed in the late 1960's by JE overall & DR Gorham as a short scale for measuring severity of psychiatric symptomatology. Its 18 items are rated on a seven-point item-specific likert scale from 0 to 6, with the total score ranging from 0 to 108. It includes observations made by the rater which measure tension, emotional withdrawal, mannerisms & posturing, motor retardation, uncooperativeness, excitement & disorientation & subject verbal report which measure conceptual disorganization, unusual thought content, anxiety, guilt feelings, grandiosity, depressive mood, hostility, somatic concern, hallucinatory behaviour, suspiciousness & blunted affect.

**Statistics used: -**

- 1) Karl Pearson coefficient of correlation.
- 2) Fisher F test
- 3) Student t test

**RESULTS:-**

**Table 1:-**

S.No	Age Distribution	Age Frequency Percentage
1	21-30	6.0
2	31-40	47.0
3	41-50	39.0
4	>50	8.0

- No subjects less than 20 yrs or more than 55 yrs were present in the sample.

**Table 2: -**

S.No	Distribution of Occupational Status	Occupation Frequency Percentage
1	Unemployed	3.0
2	Unskilled	43.0
3	Semi skilled	35.0
4	Skilled	13.0
5	Professional	6.0

**Table 3: -**

S.No	Duration of Dependence (in years)	Frequency Percentage
1	1-5	74.0
2	6-10	17.0
3	11-15	7.0
4	15-20	2.0

Table 4: -

S.No	Symptom Characteristics of Study Subjects	Symptom Frequency Percentage
1	Hallucination	7.0
2	Delusion	2.0
3	Cognitive symptoms	0.0
4	Negative symptoms	0.0
5	Thought disorder	0.0
6	Behavioural symptoms	0.0

Table 5: - Personality disorders in alcohol dependent subjects using PAS:-

S.No	Personality disorder	Frequency Percentage
1	Paranoid	5.0
2	Schizoid	2.0
3	Schizotypal	0.0
4	Histrionic	7.0
5	Antisocial	3.0
6	Borderline	12.0
7	Avoidant	9.0
8	Dependent	6.0
9	Obsessive – compulsive	2.0
10	Narcissistic	0.0
11	Passive – aggressive	1.0

Table 6: - personality traits of alcohol dependent individuals based on PAS.

S.No	Personality Traits	Frequency Percentage
1	Sociopathic	14
2	Passive – dependent	8
3	Anankastic	5
4	Schizoid	7
5	Explosive	24
6	Sensitive	18
7	Histrionic	14
8	Asthenic	17
9	Anxious	14
10	Paranoid	12
11	Hypochondriacal	2
12	Dysthymic	3
13	Avoidant	17

Table 7:- Personality disorder characteristics (absence & co-occurrence)

S.No	Number of co- morbid PD'S	Frequency
1	No PD	53
2	Single PD	21
3	Co-occurrence of two PD'D	17
4	Co-occurrence of three PD'S	9

Table 8:- descriptive statistics of personality disorders

Personality disorder	N	Maximum	Minimum	Mean	Standard Deviation
Paranoid	100	3.50	0.00	1.1695	0.81109
Schizoid	100	2.75	0.00	0.5875	0.54862
Schizotypal	100	2.50	0.00	0.6350	0.58216
Histrionic	100	3.50	0.00	0.9750	0.92694
Antisocial	100	3.25	0.00	0.9970	0.89482
Borderline	100	4.00	0.00	1.1780	1.10003
Avoidant	100	3.25	0.00	1.2025	0.87306
Dependent	100	3.50	0.00	1.0890	0.82013
Obsessive – compulsive	100	3.25	0.00	0.8555	0.65512
Narcissistic	100	2.50	0.00	0.8825	0.61284
Passive-aggressive	100	3.00	0.00	0.8325	0.64261

Table 9: -Co-relation between severity of alcohol consumption & personality disorders:-

	Paranoid	Schizoid	schizotypal	Histrionic	Antisocial	Borderline
r	0.356	0.074	0.190	0.031	0.079	0.397
P	0.002	0.466	0.058	0.763	0.432	0.001 rhs
N	100	100	100	100	100	100

  

	Avoidant	Dependent	Obsessive-compulsive	Narcissistic	Passive –aggressive
r	0.230	0.044	0.069	0.68	0.026
P	0.022	0.663	0.494	0.500	0.800
N	100	100	100	100	100

The table shows the relationship between personality scores & severity of alcohol consumption. Borderline personality disorder (P=0.001), paranoid personality disorder (p=0.002) & avoidant personality disorder (p=0.022) had a significant correlation with severity of alcohol consumption.

Table 10: - Correlation between age & severity of alcohol consumption

Age	N	Mean	Standard deviation	F	P
<20	6	20.2500	3.9476		
31-40	47	22.1556	5.1299		
41-50	39	22.0769	5.0648		
>50	8	20.5000	4.5227	0.51	0.676 ns

Table 11:- Correlation between occupational & severity of alcohol consumption

Occupational	N	Mean	Standard deviation	F	P
Unemployed	3	28.0000	6.8557		
Unskilled	43	22.7895	4.4610		
Semi-skilled	35	21.6071	3.4677		
Skilled	13	22.0769	3.4511		
Professional	6	16.5000	4.4333	9.57	0.001 Vhs

- Occupational has a very high significant correlation with alcohol consumption

**DISCUSSION: -****Socio – Demographic Variables:-**

80 patients belonged to the age group between 30-50 yrs; large number in this group may be due to emergence of alcohol related problems & the need to seek help in that age group. The pressure from family members, peers & superiors might force this group to attend the clinical setting more often than others; & also in this group 35% were unskilled workers. It may be possible that alcohol consumption may lead to a lower income, occupation & educational status.

**Prevalence of Personality Disorders:-**

47% of our sample had a DSM-IV diag. of personality disorder based on PAS. Rounsaville & Nace et al reported a 57% prevalence rate of personality disorder. Grilo CM et al in the study on 117 consecutive inpatients found that 47% of the sample had personality disorders. These results are comparable to the results of our study. Nunberg HG et al found 64% personality disorder in outpatient alcoholic patients. De Jong et al had reported a prevalence of 78%. Verheul reported that by using semi structured interviews, estimates of the overall axis II prevalence range from 30% to 75% in alcoholics (median 45%). Differences are partly accounted for by sample characteristics such as age & sex, treatment setting & whether substance related disorders are excluded from diagnosis. Another important source of variation results from the specific diagnostic criteria employed.

**Personality Disorders in Alcohol Dependent Individuals**

In the study by Nunberg et al 44% had paranoid, 20% anti social, 20% avoidant, & 16% borderline. Grant BF et al reported 7.8% obsessive compulsive disorder, 4.41% paranoid, 3.63% antisocial personality disorder, schizoid 3.31% avoidant 2.36%, histrionic 1.84% in general population. Studies looking at all the personality disorders are scanty. In our sample, 12% had borderline, 9% avoidant, 7% histrionic, 6% dependent, 5% paranoid, 3% antisocial, 2% obsessive compulsive, 2% schizoid & 1% passive aggressive.

Out of the sample who had personality disorders, 47% had cluster B personality disorders, 38% had cluster C personality disorders & 15% had cluster A. most of the studies in literature report a high prevalence of cluster B personality disorders; which hold true in our study also. The high prevalence of borderline personality disorder may be because of its high prevalence in clinical & non-clinical settings, most commonly diagnosed in both Inpatient & Outpatient setting. Another reason may be that alcohol use can contribute to affective instability, impulsivity & interpersonal problems which are features of borderline personality disorder. In our study 3% of the sample & 6% of those with personality disorders had antisocial personality disorder. This finding of low prevalence in our sample is in variance with most of the studies which reported high prevalence like Rounsaville et al 27%, Hessel brock et al 41%, Zimmerman et al 14% & Midha et al 22.7% De Jong et al, reported a low prevalence of 5% in their study. The prevalence of antisocial personality disorder may be accounted for by short histories of dependence in our sample, & with less opportunity to develop a pattern of antisocial behaviour. 2% of our sample had obsessive compulsive personality disorder which is comparable to the study by Zimmerman et al and Eisen and Rasmussen.

**Co-Morbidity of Axis II Disorders:-**

Co- morbidity among personality disorders has been reported by De Jong et al in their study. In the present study

single personality disorder was present in 21% of the sample & 26% had multiple personality disorders. 53% of the patients in our sample had no personality disorder. This finding would suggest that in alcoholism personality disorders overlap.

**Personality traits in alcohol dependent individuals:-**

In our sample highest prevalence is seen among cluster B & cluster C personality disorders. Several studies support the fact that substance abusers have increased impulsivity compared with non-substance abusing controls. In this study 24% had explosive personality trait. Impulsivity may be a significant factor in both initiation & maintenance of alcohol use. Alcoholics have strong obsessions & they drink compulsively; & they might have multiple obsessive-compulsive traits in non-alcohol related areas as well. In our study 5% had anankastic traits. In Susuki et al study, 30% of their sample reported obsessive compulsive personality traits. Personality traits among alcohol dependent individuals have been studied using different scales. Basiaux et al reported that alcohol dependent patients in general scored higher on Novelty- seeking. Higher Novelty – seeking is linked with higher impulsiveness, exploratory excitability, extravagance & disorderliness & in categorical evaluation with cluster B personalities.

**Incidence of alcohol induced psychosis:-**

In our study, 8% of the sample had a diagnosis of alcohol induced psychosis. All the patients had the psychotic manifestation either after acute alcohol intoxication or withdrawal. One subject had both auditory hallucination & delusion. The prompt treatment with benzodiazepines during the detoxification phase might have suppressed its emergence in alcohol withdrawal patients as seen by the higher incidence in alcohol intoxication than in withdrawal. Two subjects reported delusions which were persecutory in nature. Patients had poor insight regarding their psychosis which is one of the diagnostic criteria for alcohol induced psychosis. Auditory hallucinations were predominantly a single voice talking to patients. Patients with alcohol induced psychosis had a heavier alcohol use which is in agreement with earlier studies. The interplay of personality, alcohol & an inherited predisposition may play a role in persons developing alcohol induced psychosis.

**CONCLUSION:-**

Most of the subjects were between the ages of 30 to 50 yrs; while more were manual labourers. Personality disorders were found in a significant no. of patients (47%) which points to importance in considering personality factors in the assessment & management of alcohol dependent individuals. Predominant among personality disorders were borderline (26%), avoidant (19%), histrionic (15%), dependent (13%), paranoid (11%) & antisocial (6%). The predominant personality traits in the sample were explosive, sensitive, asthenic, avoidant, histrionic, sociopathic, anxious, paranoid & aggressive traits. Alcohol induced psychosis occurs in alcohol related problems & is important in differentiating from psychoses in other illnesses & has implications in the treatment strategies.

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