

Socio-Demographic and Clinical Profile of Patients Subjected for Alcohol Detoxification

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Abstract

Background: Lifetime risk for alcohol use disorders is more than 15% for men (and is even higher among those who seek treatment for medical or psychiatric disorders) and between 8-10% for women. Alcohol is one of the leading causes of death and disability globally. About two billion people worldwide consume alcoholic beverages and one-third (nearly 76.3 million) is likely to have one or more diagnosable alcohol use disorders. **Subjects and Methods:** Hundred consecutive admissions of alcohol dependence syndrome who were admitted at the department of psychiatry were included into study after written Informed consent was taken. **Results:** Socioeconomic class is calculated according to Kuppuswamy modified classification, which includes education, occupation and family income. 76% of the sample belonged to upper lower class. **Conclusion:** The individuals in our sample consumed a mean of 446.5ml/ day (180gm/day) of alcohol with a mean duration of alcohol use of 16.05 years and age of first drink of 19.7yrs.

Keywords: Socio-demographic factors, Clinical profile, Alcohol detoxification.

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Introduction

Alcoholism is a multi-factorial disorder in which genetic, biologic and socio-cultural factors interact.^[1] About 40–60% of the risk of alcohol-use disorders is explained by genes and the rest through gene–environment associations. The environment includes the availability of alcohol, attitudes towards drinking and drunkenness, peer pressures, levels of stress and related coping strategies, models of drinking, and laws and regulatory frameworks.^[2]

Alcohol-use disorders are common in all developed countries, and are more prevalent in men than women, with lower, but still substantial rates in developing countries. Although rates of these disorders are lower in Mediterranean countries (e.g., Greece, Italy, and Israel), and higher in northern and eastern Europe (e.g., Russia and Scandinavia), they are responsible for a large proportion of the health-care burden in almost all populations.^[3,4] As many as 80% of men and 60% of women in developed countries drink at some time during their lives. 30–50% of people who drank in the past year experience at least one adverse alcohol-related problem during their lifetime, such as missing work or school, driving after drinking, or interpersonal problems.^[5]

Lifetime risk for alcohol use disorders is more than 15% for men (and is even higher among those who seek treatment for medical or psychiatric disorders) and between 8-10% for women.

Alcohol is one of the leading causes of death and disability

globally. About two billion people worldwide consume alcoholic beverages and one-third (nearly 76.3 million) is likely to have one or more diagnosable alcohol use disorders. Alcohol is attributed to nearly 3.2% of all deaths and results in a loss of 4% of total DALYs (58 million). Alcohol consumption has numerous health and social consequences and is an important contributor to death and disability. Worldwide, alcohol causes 1.8 million deaths each year.^[6]

These are common and potentially lethal disorders that mimic and exacerbate a wide range of additional medical and psychiatric conditions, and thereby shorten the life spans of affected people by more than a decade.

74% of the general public indicated that alcoholism affects their daily lives, with 41% reporting having to encourage a loved one to seek help for an alcohol problem. The vast majority (80%) indicated a stigma toward alcoholics. Denial or refusal to admit severity and fear of social embarrassment were the top 2 reasons for not seeking help. The majority of the general population believes that alcoholism is caused partly by moral weakness.^[7]

Globally alcohol consumption has increased in recent decades, with all or most of that increase being in developing countries. It is acknowledged that countries which had low alcohol consumption levels are now witnessing an increasing consumption pattern. WHO estimates for the South East Asian countries indicate that one-fourth to one-third of male population drink alcohol with increasing trends among women.

Alcohol is one of the recognized risk factors for ill-health. The new understanding of the problems related to alcohol use is its greater socio-economic impact than hitherto realized. This is alarming especially with an upward trend in the prevalence of alcohol use over the last two decades. There is growing evidence that apart from the total quantum, the pattern of consumption (frequency of use, drinking to intoxication, binge drinking, chronic use) plays an important role in many of the public health problems (Injuries, violence, etc.) consequent to alcohol use. The new paradigms of alcohol use viz., decreasing age at initiation, greater permissibility of social drinking, popularity among women, etc., is increasingly, associated with the processes of globalization, urbanization and migration.^[8]

In India, the estimated numbers of alcohol users in 2005 were 62.5 million, with 17.4% of them (10.6 million) being dependent users and 20–30% of hospital admissions are due to alcohol-related problems.

In a meta-analysis of 13 psychiatric epidemiological studies it was found that the prevalence rate of alcohol/drug use was 6.9 per 1000 population.

A National household survey was conducted in India for estimating the extent of substance dependence for alcohol and opiates. The data was collected between March 2000 and November 2001. The diagnosis of dependence was arrived using ICD-10 criteria. In this study, the current prevalence of alcohol was 21.4%, cannabis 3.0%, Heroin 0.2%, opium 0.4% and other opiates 0.1%. Another important finding of this survey was that in the range of 17-29% of current users of various substances were dependent users.^[9]

The prevalence of current use of alcohol ranged from a low of 7% in the western state of Gujarat (officially under Prohibition) to 75% in the North-eastern state of Arunachal Pradesh. There is also an extreme gender difference. Prevalence among women has consistently been estimated at less than 5% but is much higher in the North-eastern states. Significantly higher use has been recorded among tribal, rural and lower socio-economic urban sections.

Alcohol consumption occurs along a continuum, with considerable variability in drinking patterns among individuals starting from occasional or social drinking to moderate and problem or harmful drinking with a clear relationship between daily amount consumed and incidence of medical and psychosocial problems.

Subjects and Methods

Hundred consecutive admissions of alcohol dependence syndrome who were admitted at the department of psychiatry were included into study after written Informed consent was taken.

Study design: Short term prospective study.

Socio-demographic details were collected in a semi-structured pro-forma and Data regarding co-morbid psychiatric and medical conditions were noted. Relevant hematological and biochemical parameters were also recorded.

Each patient was administered MINI to rule out comorbid psychiatric disorders, Alcohol use disorders identification tests (AUDIT) was administered to identify people with hazardous and harmful use of alcohol. Severity of Alcohol dependence questionnaire (SADQ) was used to assess severity of alcohol dependence and Clinical institute of withdrawal assessment revised (CIWA-Ar) was used to rate the severity of withdrawal symptoms.

CIWA-Ar scale was administered once at base line subsequently this scale was administered once daily till the total CIWA-Ar score reached 4(which was defined as successful outcome). Its administration continued till discharge.

Patients were detoxified using either Diazepam or Lorazepam based on clinical profile. Total equivalent dose of Benzodiazepine (BZD) used for detoxification were calculated.

The results were tabulated and Statistical tests applied using SPSS software.

Inclusion criteria

Persons aged between 18 and 65 years.

Those who fulfill the criteria for Alcohol Dependence Syndrome as per ICD-10 criteria

In patients who are able to give valid written Informed Consent.

Exclusion criteria

Patients with primary Axis-I psychiatric diagnosis other than Alcohol Dependence Syndrome.

Alcohol dependence syndrome with major medical problems.

Patients who are dependent on other substance except Nicotine

Out of the 157 consecutive admissions of alcohol dependence syndrome, we excluded

32 patients who had co-morbid psychiatric conditions and 25 patients who had

Co-morbid medical conditions.

Results

Table 1: Age and total education.

	Mean	SD	Range
Age (in years)	38.8	8.98	19-70
Total Education (in years)	5.1	3.86	0-19

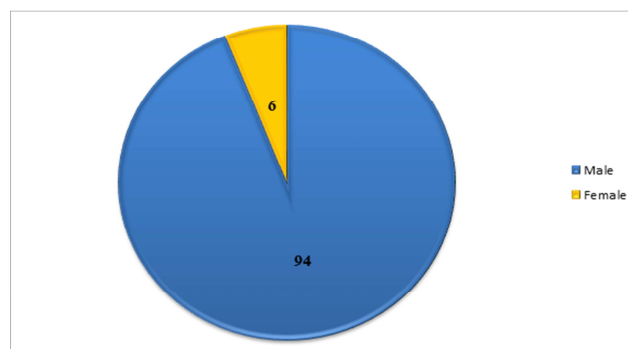


Figure 1: Gender 94% of the sample was males.

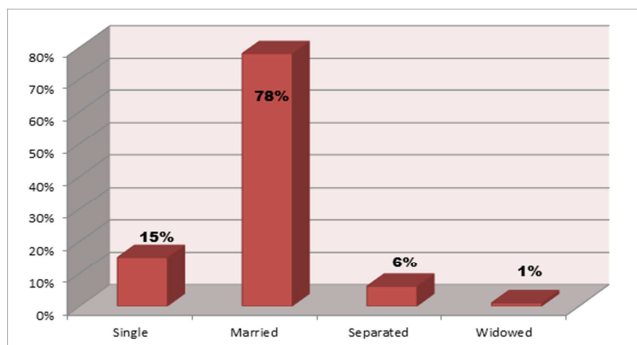


Figure 2: Marital status 78% of the patients were currently married.

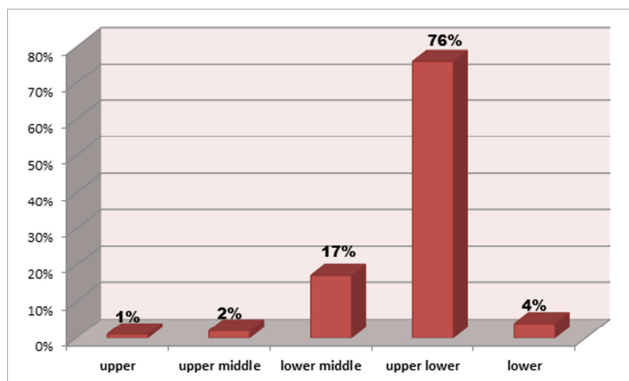


Figure 6: Socio-Economic class Socioeconomic class is calculated according to Kuppusswamy modified classification, which includes education, occupation and family income. 76% of the sample belonged to upper lower class.

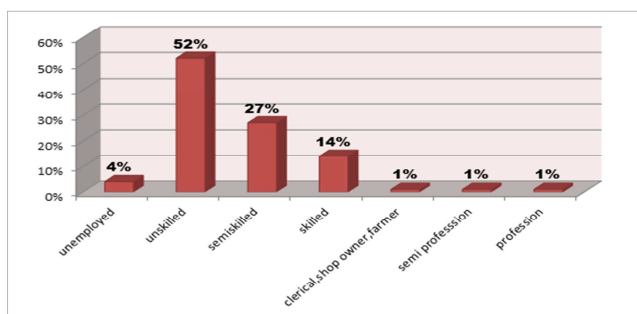


Figure 3: Occupation Sample is predominated by unskilled (52%) and semiskilled (27%) labor population.

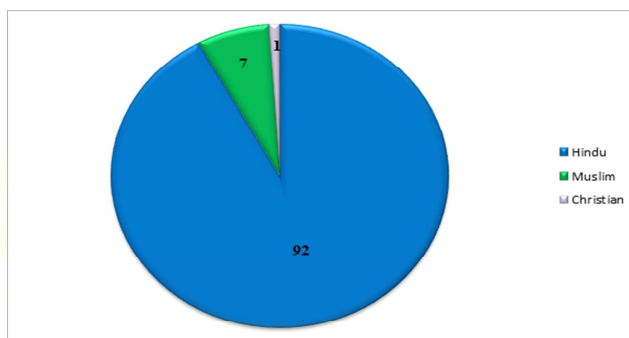


Figure 7: Religion

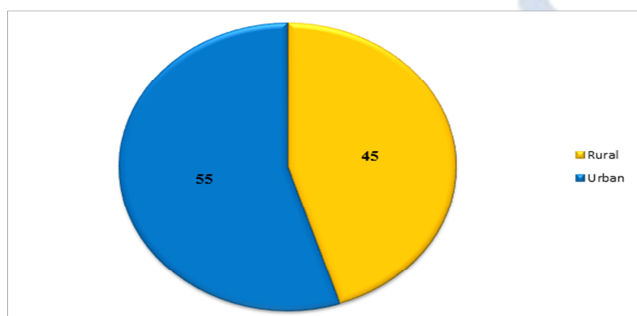


Figure 4: Locality Almost equal representation of urban and rural habitat

Table 2: Alcohol Related Variables.

	Mean	SD	Range
Average money spent on alcohol (in Rupees)/day	142.3	80.25	50-600
Duration of alcohol use (in years)	16.05	6.63	5-40
Age at first drink (in years)	19.7	5.63	5-45
Amount alcohol/ day(ml/day)	446.5	187.06	150-1080
Gram equivalent of ethanol/day	180.6	75.08	60-432
Units/day	15.12	6.2	5-36

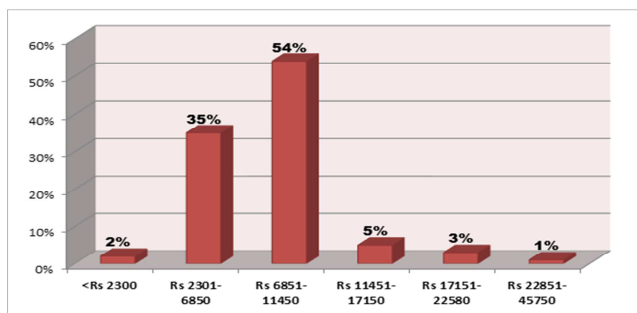


Figure 5: Total Family income 90% of the sample had income less than rupees ten thousand.

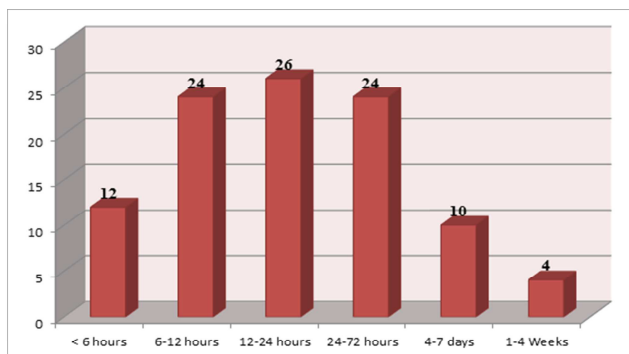


Figure 8: Last drink Majority of the sample (86%) had consumed alcohol with in last 72hrs.

Table 3: Other Clinical Variables

	No	Yes
H/O DELIRIUM TREMENS	86	14
H/O WITHDRAWAL SEIZURES	85	15

H/O OF OTHER ALCOHOL RELATED PROBLEMS	64	36
H/O OF PREVIOUS DEADDICTION TREATMENT RECIEVED	68	32
TOBACCO USAGE	7	93
PSYCHIATRIC ILLNESS	97	3
PAST H/O SUICIDAL ATTEMPTS	92	8
PAST H/O MEDICAL ILLNESS	92	8
FAMILY HISTORY OF ADS	15	85
F H O ALCOHOL RELATED PROBLEMS/DEATHS	74	26
F H O PSYCHIATRIC ILLNESS	98	2
F H O SUICIDE	93	7
F H O OTHER DISEASES	97	3

Table 4: Laboratory Variables

	Minimum	Maximum	Mean	Std. Deviation
BMI	15	33	20.40	2.860
HEMOGLOBIN	8.00	18.00	13.3000	1.97918
MCV	63.70	119.90	91.9670	8.61454
MCHC	29.00	35.70	32.7530	1.51987
TOTAL COUNT	3500	13800	6756.70	1827.280
POLYMORPHS	46	85	66.85	7.685
LYMPHOCYTES	10	52	27.92	7.159
EOSINOPHILS	0	10	2.57	2.121
MONOCYTES	0	14	2.29	2.575
TOTAL BILIRUBIN	.20	4.90	1.1073	.69904
DIRECT BILIRUBIN	.00	2.50	.3620	.37112
TOTAL PROTEIN	3.50	8.40	7.0213	.70747
ALBUMIN	1.30	5.00	3.9762	.62367
ALKALINE PHOSPHATE	3.70	384.00	95.1850	58.22518
SGOT	12.70	651.00	90.8940	92.63335
SGPT	5.00	258.00	53.8590	48.16116

Discussion

The mean age of the study sample was 38.71(±8.85) years which is consistent with existing Indian literature in this area. In a study by Kumar CN.et al 2009,^[10] mean age of the sample was 38yrs. Chandrashekar et al 2001,^[11] reported five years of alcohol deaddiction services in tertiary general hospital and found the mean age to be 39.71 years. In a study of clinical course of alcohol dependence by Mattoo S K et al 1997,^[12] it was found that mean age of the sample was 36.8 years comparable to our study.

In our study out of 100 patients, 94%were male, 6% were female. Studies regarding gender variation of alcohol use state that the prevalence of alcohol use among women in India has consistently been estimated at less than 5 percent. Similar finding has been found in other studies, Lal B and Singh G 1979,^[13] A meta-analysis by Reddy MV and Chandrashekar CR 1998, Murthy et al., 1995, National Family Health Survey 3.^[14-16]

Majority of the study sample were married (78%) and is comparable to study by Chandrashekar et al 2001 in which 86.1% were married.

79% of the study sample belonged to the unskilled and semiskilled labor group and nearly 90% had less than 10years of education. Mean years of education was 5 years. Ghulam et al (1996),^[17] in Rajasthan observed that upto 45% of the labor classes was involved in heavy drinking. The study on burden and impact of alcohol by Gururaj et al (2006a),^[18] showed the greater use of alcohol among those who had less than the 8 grade of education (85%), lower and medium levels of income (<.6000 in 84%), among

skilled and unskilled workers (74%). The data from NFHS 3 2007 revealed that a majority of the alcohol users were illiterate and belonged to the poorer sections of society. In a study by Kumar C.N.et al 2009,^[19] mean years of education was 7yrs. In study by Chandrashekar et al 2001 mean years of education is 10 years which is comparable to our study.

Socioeconomic class is calculated using Kuppusamy classification 80% of sample belonged to lower socioeconomic status. In a study by Chandrashekar et al 2001, it was found that, based on the socioeconomic status scale (kuppusamy) majority of patients belonged to the upper lower (iv) and lower (v) socioeconomic classes (35.9% and 29.1% respectively). In a study by Foster et al 2000 (95) majority of sample were from a lower social class (75%).

Mean family income of the sample is 2700 rupees per month. Most of the sample were low income group, 40% were below 6000 per month. 55% were below 10000 per month.

In a study by Kumar C.N.et al 2009 most of the sample belonged to range of group Rs1700-3600(50%), and rest belonged to < Rs3600 group which is comparable. Gururaj et al (2006a) showed the greater use of alcohol among those who had lower and medium levels of income (<6000 in 84%).^[18]

55% belonged to urban and 45% to rural which indicates almost equal representation from rural and urban areas.

In our sample, average money spent to procure alcohol is Rs.4260 per month.

Findings from a study of alcohol dependent persons in Bangalore, India by Benegal et al 2000 19stated that,

individuals spent more than they earned by most people taking loans to support their habit, 59 % families were supported by income from other family members and 10 % sent children under 15 to work to supplement family income. Thus it is likely that our sample also spent more money to procure alcohol than they earned.

The individuals in our sample consumed a mean of 446.5ml/ day (180gm/day) of alcohol with a mean duration of alcohol use of 16.05 years and age of first drink of 19.7yrs. In a study by Kumar C.N. et al 2009, it was found that the sample consumed a mean of 250gm/day of alcohol which was comparable. In a study by Shaw et al 1998, the mean amount of alcohol consumed was 300gms/day which is high as per capita consumption may be high in west.

In a study by Benegal et al in Bangalore, it was reported that the individuals in their sample consumed 223.74 ml. of alcohol per day, had been dependent for 7.71 years and had first used alcohol at 23.5years. The mean consumption is low in this study probably because it was a community study.

14% of our sample had past history of Delirium Tremens and 15% had history of withdrawal seizures.

In a study by Foy et al, who studied the course of alcohol withdrawal in a general hospital, it was reported that 20.9% of the sample had history of past complicated withdrawal in the form of Delirium or seizures which were comparable to our study.^[20]

32% of our sample had a history of receiving previous deaddiction treatment.

In the study described above by Foy et al, it was reported that 30% of the sample had received previous deaddiction treatments which is comparable to our study.

85% of our study sample had family history of Alcohol dependence and 7% had a family history of suicide.

In a study by Chandrasekaran et al, 1998 it was reported that 67.1% had a positive family history of Alcohol dependence and 14.3% had a family history of suicide.

Our sample had a stronger family history of Alcohol dependence. It is known that positive family history of Alcohol dependence is associated with more severe dependence which is reflected in our study sample.

Thus our sample was found to be comparable on most parameter with similar studies in this area.

Only SGOT levels in our study were found to be significantly high which explains the severity of alcohol dependence and recent heavy consumption of alcohol in our sample.

In a study by Wetterling et al, it was reported that Alcohol markers' like carbohydrate deficient transferrin (CDT), gamma glutamyltransferase (GGT), alanine aminotransferase (ALAT), aspartate aminotransferase (ASAT), or mean red cell volume (MCV) only showed a weak correlation with the severity of Alcohol Withdrawal

Symptoms, and particularly the sensitivity was too low for a screening test in general hospital.

In our study also, though the severity of Alcohol withdrawal symptoms at admission was high (CIWA-Ar score 14.5), laboratory parameters showed only an elevated SGOT whereas other parameters were normal.

Conclusion

The mean age of the sample was 38.71(±8.85) years out of which 94% were males and 78% of the sample was married and 15% still unmarried. 79% of the sample belonged to skilled and semi-skilled labors. The mean education of the sample was 5 yrs and 16% were illiterate. The mean family income was 2700 rupees with 80% of the sample belonging to lower socio-economic strata..

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