



# A cross-sectional study on sociodemographic profile and drug-seeking situations in alcohol-dependent patients

## Abstract

**Background and aims:** Alcohol dependence is associated with enormous health complications – both psychological and physical. It is important to understand the factors leading to its dependence, which will help to plan strategies to reduce its intake. Hence, we decided to study the sociodemographic profile and drug-seeking situations in alcohol-dependent patients. **Methods:** It was a cross-sectional, observational, hospital-based study of 75 alcohol dependence syndrome patients. A predesigned proforma was used for collecting sociodemographic data and the Inventory of Drug-Taking Situation (IDTS) was used to assess various drug-seeking situations in alcohol-dependent patients. **Results:** Mean age of the study sample was 42 years and duration of alcohol use was 17 years. The common drug-seeking behaviour, assessed using IDTS, was pleasant times with others (positive situations) followed by social pressure and testing personal control (temptation situations). **Conclusion:** Most of the patients in the study were long-term alcohol users with initiation in the young adult age. Identifying the high-risk situations and forming alternate coping strategies for dealing with these particular high-risk situations will help in reducing the severity of alcohol consumption and relapse prevention.

**Keywords:** High-Risk. Coping. Relapse Prevention.

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**Received:** 12 February 2018  
**Revised:** 2 May 2018  
**Accepted:** 24 May 2018  
**Epub:** 12 December 2018

## INTRODUCTION

Since the ancient times, people have been using substances such as herbs, alcohol, and certain drugs to alter their consciousness, reduce pain, increase appetite, and to improve libido. Nicotine, cannabinoids, opioid, sedatives, stimulants, alcohol, inhalants, and hallucinogens are the various psychoactive drugs used.[1] Amongst these, alcohol and nicotine which are licit substances are found to be more commonly used than illicit drugs. Alcohol is well-known and well-studied to have addictive potential and causes or predisposes the consumer to various physical and psychological hazards. Today, alcohol consumption is the world's third largest risk factor for disease and disability.[2] In lower middle income countries like India,[3] risks of disease and disability due to alcohol are greatest amidst other medical causes.[2]

The International Statistical Classification of Diseases and Related Health Problems, tenth revision (ICD-10) defines alcohol dependence syndrome (ADS) as "a cluster of behavioural, cognitive and physiological phenomena that develop after repeated alcohol use and that typically include a strong desire to consume, difficulties in controlling its use,

persisting in its use despite harmful consequences, a higher priority given to alcohol use than to other activities and obligations, increased tolerance and sometimes a physical withdrawal state".[4] ADS disrupts a person's life by causing health, social, work or school, emotional and financial problems.

A number of factors influence the use of alcohol leading to abuse or dependence. A common fallacy when considering the reasons for alcohol misuse is that alcohol is commonly used merely for search of enjoyment. Studies have revealed that less than 20% of individuals have pleasurable situation as the primary reason for drug consumption. Although the most noticeable pleasurable effect is high or buzz, but it is also used for feel of energy and confidence, joyfully dazed and drowsy feeling. Some self-medicate in order to get relief from anxiety, anger, lack of motivation, lack of self-confidence, and withdrawal symptoms.[5] Experimentation, personality factors, underlying psychological problems, and accompanied risk-taking behaviours act as predisposing factors in patients. Environmental factors like easy access to such products, family history of substance use, peer pressure, and advertising of legal substance have also an important role to play.[6]

The main difficulty is not merely withdrawing patient from alcohol but to avoid relapse in future. Even after receiving inpatient treatment, a substantial proportion of individuals with ADS are likely to experience a lapse or relapse within 12 months. Relapse may be defined as the resumption of alcohol drinking following a prolonged period of abstinence and ADS is a chronic relapsing disorder.[7] Closely tied to the phenomenon of relapse is the construct of high-risk drinking situations in which an individual experiences an increased likelihood of drinking alcohol. Appropriate interventions can be used by knowing the high-risk situations and risk factors of the patient to reduce the relapse rate.

Reason for relapse in the earlier studies revealed positive family history of substance use, significant number of hospitalisations, to be using maladaptive coping strategies, have experienced a higher number of undesirable life events, and exposed to high number of high-risk situations.[8,9] Appropriate use of coping strategies, especially the adaptive skills helped patient to remain abstinent from alcohol. As per relapse precipitants profile, exposure to higher number of high-risk situations were common among patients who had relapsed. The above risk factors were assessed using relapse precipitants, coping strategies, self-efficacy, stressful life events, and perceived social support; but, none of the studies used structured scale for high-risk situations.

So, we decided to conduct this study to understand the high-risk factors leading to alcohol use using a structured scale which will help to plan strategies to reduce its intake. This is especially relevant for developing countries like India, where alcohol use continues to be common, notwithstanding the recognition of harmful consequences of its usage. The aims and objectives of the study was sociodemographic profile and drug-seeking situations in ADS patients admitted for de-addiction in a private psychiatry hospital.

## MATERIAL AND METHODS

It was a hospital-based cross-sectional observational study and was conducted after obtaining clearance from the Institutional Ethics Committee of Sowmanasya Hospital. It was conducted in Sowmanasya Hospital & Institute of Psychiatry, Tiruchirapalli, Tamil Nadu, India. Purposive sampling method was used with a sample size of 75, completed in a period of one year between 2012 and 2013. The patients who were diagnosed as ADS with age of 18 years or more and availing the inpatient service of the hospital were included in the study. Exclusion criteria were people who did not give consent for the study, comorbid substance use, except tobacco, as most of the patients were using it, and patients with acute/unstable medical illness, sufficiently severe enough to hamper current clinical interview. Patients were interviewed after the detoxification phase and patients in delirium tremens were recruited once they were out of it. Written informed consent was taken from all the subjects after explaining the details mentioned in the subject information sheets which was designed in both Tamil (local language) and English. The assessments were separate from their regular managements. No investigation or treatment was suggested or advised for the study. Socio-demographic proforma was filled up and the MINI International Neuropsychiatric Interview

(M.I.N.I.)[10] was used to diagnose ADS. The Inventory of Drug-Taking Situation (IDTS)[11] was administered to assess the drug-seeking situation in alcohol-dependent patients.

### Semi-structured proforma for collecting sociodemographic and clinical data for the study

This proforma was predesigned by the Sowmanasya Hospital and was used for detailed evaluation of the patients. The sociodemographic details of the patient included age, gender, place of residence, education, occupation, total family income, and family history of ADS. This proforma was completed on the basis of information given by the patient and his or her accompanying relative.

### MINI International Neuropsychiatric Interview (M.I.N.I.)

It was designed as a brief structured interview for the major Axis I psychiatric disorders in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and ICD-10.[10] Validation and reliability studies have been done comparing M.I.N.I. to the Structured Clinical Interview for the revised third edition of DSM (DSM-III R) Patient Edition (SCID-P) and the Composite International Diagnostic Interview (CIDI, a structured interview developed by the World Health Organization). The results of these studies showed that M.I.N.I. has similar reliability and validity properties, but can be administered in a much shorter period of time (mean 18.7±11.6 minutes, median 15 minutes) than the above referenced instruments.

### Inventory of Drug-Taking Situation (IDTS)

This instrument in the current form was designed by Annis and Martin.[11] It is used to assess relative frequency of heavy drinking across specific situations. IDTS, a 50-item self-report form, evaluates situations in which subjects most often use alcohol. Scores range from zero to 100 for three global categories and eight subscales: 1) Negative situations (Unpleasant Emotions, Physical Discomfort, Conflict with Others), 2) Positive situations (Pleasant Emotions, Pleasant Times with Others), and 3) Temptation situations (Social Pressure, Urges/Temptations, Testing Personal Control). Cronbach's coefficient alpha, an internal consistency measure, was used to estimate the reliability of each of the eight subscales. Two subscales had alphas 0.88 or better, suggesting substantial internal consistency. Remaining six subscales had alphas ranging from 0.67 to 0.87 and were shown to be reliable. All items were positively correlated to their subscale. Overall, the results provide strong support for the reliability of IDTS subscales. As no previous Indian study has used the scale, a pilot study was done in the same institute for validity and reliability of the items in Indian population, and was found to be adequate. The question items were in English and were also translated in the native language Tamil. The scale was translated in Tamil with experts in both English-Tamil and Tamil-English to retranslate it.

Patients were asked to report frequency of heavy drinking within each 50 situations over the past year and rated on a

scale from one (never drank heavily in that situation) to four (always drank heavily in that situation). It took around 20-30 minutes to complete the questionnaire.

Analysis of data was carried out using Statistical Package for the Social Sciences Version 16.0. Inferential statistics was applied depending on the nature and distribution of the data. Sociodemographic variables were analysed using descriptive statistics like proportions and percentile; IDTS was analysed using mean and standard deviations (SDs).

## RESULTS

During the study period, a total of 77 individuals were admitted in hospital; two of them refused to give consent for the study. Both male patients were excluded from the study. Total of 75 individuals participated in the study.

The mean age of total sample ( $n=75$ ) was 42.37 years ( $\pm 8.34$ ) and mean duration of alcohol use was 16.81 years ( $\pm 8.02$ ) with mean age of initiation of alcohol as 24.2 years ( $\pm 5.43$ ). Most of the patients in the sample were male (97% [73]), literate (59% [44]), and skilled workers (61% [46]). Sixty nine per cent (52) were earning around rupees 10000 or more, were from semi-urban and urban population (85% [64]), and 96% (72) had family history of ADS (Table 1).

Drug-seeking behaviour was studied using IDTS. After applying it, the mean scores of the subscales of the three global categories were evaluated. In the subscales, the mean score was found to be highest in pleasant times with others (34.32 [ $\pm 22.25$ ]) followed by social pressure (33.16 [ $\pm 23.4$ ]), and testing personal control (32 [ $\pm 16.77$ ]) (Table 2).

## DISCUSSION

The mean age of total sample was 42 years showing that majority of the patients with ADS coming for treatment fall in the middle age group, which is in keeping with the findings from the Bangalore Study and Davidson study.[12,13] The average duration of alcohol use in the sample was 16 years with early age of alcohol use which correlates with the study done by Girish *et al.*[14] as well as the Bangalore study.[12] These findings suggest that there was an early age of initiation and long-term use of alcohol (more than ten years of use) in the study sample. These factors probably led to an increase in severity of dependence and fell in high-risk category of relapse.[15]

Majority of the sample was male, which is similar to the studies done by Reddy *et al.*[16] and Almeida-Filho *et al.*,[17] suggesting a strong gender difference in ADS which can be due to the Indian cultural tradition where females generally do not take alcohol. Also, in females, owing to lesser tolerance to alcohol, medical complications tend to occur at lesser doses and frequency of alcohol intake. Most of the patients were literate 44 (58.7%) and were doing a skilled job. This was probably due to the urban and semi-urban nature of the sample and similar findings were noted by Girish *et al.*[14]

The family incomes of the sample were mostly between rupees 10,000 and above and most were from semi-urban and urban population. These findings were different from the previous study,[12] as in their sample, majority of the patients were mainly from rural and semi-rural population, and the total

**Table 1:** Sociodemographic profile (N=75)

Variables		N	%
Gender	Male	73	97.3
	Female	2	2.7
Education	Illiterate	3	4.0
	Primary	28	37.3
	Secondary	21	28.0
	Graduation and above	23	30.7
Occupation	Unemployed	0	0
	Self-employed	22	29.3
	Unskilled	7	9.4
Family income (in rupees)	Skilled	46	61.3
	1000 and below	0	0
	1001-5000	3	4.0
Residence	5001-10000	20	26.7
	>10000	52	69.3
	Rural	11	14.7
Family history of ADS	Urban	30	40.0
	Semi-urban	34	45.3
Family history of ADS	Absent	3	4.0
	Present	72	96.0

ADS=Alcohol dependence syndrome, N=Number

**Table 2:** Mean scores of subscales of IDTS in patients with ADS

Global categories	Subscales	Mean	SD
Negative situations	Unpleasant emotions	26.83	14.6
	Physical discomfort	23.89	17.38
	Conflict with others	25.97	17.68
Positive situations	Pleasant emotions	29.60	61.64
	Pleasant times with others	34.32	22.25
Temptation situations	Testing personal control	32.00	16.77
	Urges/temptations	23.51	14.94
	Social pressure	33.16	23.40

IDTS=Inventory of Drug-Taking Situation, ADS=Alcohol dependence syndrome, SD=Standard deviation

income was between rupees 3001 and 6000. The possible reason for difference in finding is that the study population belonged mainly to urban and suburban population, and earning is high among this population as compared to the rural, especially the patients visiting the private psychiatry hospital.

Majority of the patients were having family history of alcohol dependence (72 [96%]). This finding correlated with study done by Dawson *et al.*[18] which suggests that patients belonging to families with alcoholic parents or sibling are twice more likely to have ADS as compared to those without family history and modelling of family member. This further increases the risk of relapse rate in them.[8]

The common high-risk situation in our study were in pleasant times with others, social pressure, and testing personal control. The exposure to alcohol-related cues and celebrations can be the reasons for increased consumption

in positive situations and social pressure from peer groups, increased craving, and low will power to limit consumption are the likely reasons for increased consumption in temptation situations. These findings were different from the past studies which showed that negative situations like unpleasant emotion, physical discomfort, and conflict with others were the important high-risk situations.[8,9,19,20] The difference in finding could be due to more number of exposure to novelty-seeking situation and stress from peers in the present study and higher number of episodes of anger, frustration, depression in the past studies. The increased use of alcohol in negative situations of unpleasant emotions and conflict with others can be due to the anxiolytic properties of alcohol which probably helps to overcome the stress and the related anxiety during these situations. Thomas *et al.*[15] found that testing personal control over alcohol was the most common risk factor for relapse which correlates with our study. This pattern of high-risk situation drinking may explain the reason for difficulty in treatment of patient and high relapse rate.[8,9,19,20]

### Strength

The strength of the study was use of a structured scale for assessing the high-risk situation in patients with ADS in Indian setting.

### Limitation

As it was a hospital-based study, results cannot be generalised for community sample. Recall bias while doing IDTS scale could have occurred.

Future studies can be designed using other variables such as pattern of drinking, amount and type of alcohol intake for more comprehensive analysis. Further study can also be designed by rating the severity of alcohol use and finding its correlation with high-risk situation using specific scale for both.

### Conclusion

Alcohol is a long-standing relapsing disorder. Early age of initiation of alcohol leads to increased duration and severity of consumption. Increased relapse rate in ADS patients is due to various risk factors like drug-seeking situations, personality factors, and comorbid psychiatric illness. Appropriate management can be sought by knowing the reason for relapse in the patient. So, these patients need holistic approach for addressing the disorder, as early intervention may reduce the severity, improve the prognosis, and reduce the cost for the family. Most of the patients in our study were long-term users with initiation in the young adult age. Patients in our study were more vulnerable to pleasant times with others, social pressure, and testing personal control; which may lead to increase in severity of dependence and frequent relapse. Forming alternate coping strategies for dealing with these particular high-risk situations helps in reducing the severity of consumption and relapse prevention.

### REFERENCES

- Pomara C, Cassano T, D'Errico S, Bello S, Romano AD, Riezzo I, *et al.* Data available on the extent of cocaine use and dependence: biochemistry, pharmacologic effects and global burden of disease of cocaine abusers. *Curr Med Chem.* 2012;19:5647-57.
- World Health Organization. Global status report on alcohol and health. Geneva: World Health Organization; 2011.
- The World Bank. World development indicators: 2013 [Internet]. Washington DC: International Bank for Reconstruction and Development/The World Bank; 2013 [cited 2018 Feb 8]. Available from: <http://databank.worldbank.org/data/download/WDI-2013-ebook.pdf>.
- World Health Organization. The ICD-10 classification of mental and behavioural disorders: clinical descriptions and diagnostic guidelines. Geneva: World Health Organization; 1992.
- Nutt J, Law F. Substance use disorders. In: Gelder M, Andreasen N, Lopez-Ibor J, Geddes J. *New oxford textbook of psychiatry.* 2nd ed. New York: Oxford University Press; 2012:426.
- Hawkins JD, Lishner DM, Jenson JM, Catalano RF. Delinquents and drugs: what the evidence suggests about prevention and treatment programming. In: Brown BS, Mills AR, editors. *Youth at high risk for substance abuse.* Rockville, MD: National Institute on Drug Abuse; 1987:81-131.
- Becker HC. Alcohol dependence, withdrawal, and relapse. *Alcohol Res Health.* 2008;31:348-61.
- Mattoo SK, Chakrabarti S, Anjaiah M. Psychosocial factors associated with relapse in men with alcohol or opioid dependence. *Indian J Med Res.* 2009;130:702-8.
- Sarada K, V A, Radharani S. A study to compare the relapse precipitants between abstinent and relapsed individuals with alcohol dependence. *IOSR Journal of Dental and Medical Sciences.* 2016;15(11):53-6.
- Sheehan D, Lecrubier Y, Harnett-Sheehan K, Janavs J, Weiller E, Bonors L, *et al.* Reliability and validity of the MINI International Neuropsychiatric Interview (M.I.N.I.): according to the SCID-P. *Eur Psychiatry.* 1997;12:232-41.
- Annis H, Martin G. *Inventory of Drug-Taking Situations.* Toronto, Canada: Addiction Research Foundation; 1985.
- Gururaj G, Girish N, Benegal V. Burden and Socio-economic impact of alcohol. The Bangalore study. *Alcohol control series 1.* New Delhi: World Health Organization, Regional Office for South East Asia; 2006.
- Davidson KM. Diagnosis of depression in alcohol dependence: changes in prevalence with drinking status. *Br J Psychiatry.* 1995;166:199-204.
- Girish N, Kavita R, Gururaj G, Benegal V. Alcohol use and implications for public health: patterns of use in four communities. *Indian J Community Med.* 2010;35:238-44.
- Thomas B, Shaiju B, Sharma V. An exploratory study to identify the risk factors for relapse in patients with alcohol dependence following abstinence in selected drug de addiction and rehabilitation centers of New Delhi, India. *Int J Sci Res.* 2016;5:153-7.
- Reddy VM, Chandrashekar CR. Prevalence of mental and behavioural disorders in India: a meta-analysis. *Indian J Psychiatry.* 1998;40:149-57.
- Almeida-Filho N, Lessa I, Magalhaes L, Araújo MJ, Aquino E, Kawachi I, *et al.* Alcohol drinking patterns by gender, ethnicity, and social class in Bahia, Brazil. *Rev Saude Publica.* 2004;38:45-54.
- Dawson DA, Harford TC, Grant BF. Family history as a predictor of alcohol dependence. *Alcohol Clin Exp Res.* 1992;16:572-5.
- Shafiei E, Hoseini AF, Bibak A, Azmal M. High risk situations predicting relapse in self-referred addicts to bushehr province substance abuse treatment centers. *Int J High Risk Behav Addict.* 2014;3(2):e16381.
- Stewart SH, Conrod PJ, Samoluk S, Pihl RO, Dongier M. Posttraumatic stress disorder symptoms and situation-specific drinking in women substance abusers. *Alcohol Treat Q.* 2000;18(3):31-47.

Vivekananth AK, Mohan M, Ganesan G. A cross-sectional study on sociodemographic profile and drug-seeking situations in alcohol-dependent patients. *Open J Psychiatry Allied Sci.* 2018 Dec 12. [Epub ahead of print]

Source of support: Nil. Declaration of interest: None.