



**Research Article**

**SOCIO ECONOMIC STATUS AND SEVERITY OF ALCOHOL DEPENDENCE AMONG  
SELECTED SUBJECTS**

**Karthikeyan R<sup>1\*</sup> and Ithayamalar S<sup>2</sup>**

<sup>1</sup>Department of Psychiatry, Coimbatore Medical College

<sup>2</sup>Department of Nutrition and Dietetics, Seethalakshmi Ramaswami College, Trichy

**ARTICLE INFO**

**Article History:**

Received 06th August, 2018

Received in revised form 14th September, 2018

Accepted 23rd October, 2018

Published online 28th November, 2018

**Key words:**

Alcohol dependence, Alcohol severity, AUDIT, Socio-economic Status

**ABSTRACT**

**Introduction:** Substance abuse becomes an enormous problem worldwide. The substance use and its direct and indirect complication of have many medical, social and economic consequences. Addressing alcohol related problems it not only limited to biomedical field, but it involves socioeconomic and political dimensions also. The severity of Alcohol dependence has a great impact on social, economic and health of the individual, family as well as on the nation. **Aim:** To assess the socio-economic status and the severity of alcohol dependence among the selected subjects. **Methodology:** Based on the inclusion and exclusion criteria 30 cases and 30 controls were chosen. Socioeconomic Scale, Alcohol Use Disorder Identification Test (AUDIT) and Severity of Alcohol Dependence Questionnaire (SADQ) were used to assess the socioeconomic status and severity of alcohol dependence among selected subjects. **Results:** 70% of the patients scored more than 26 out of the maximum score of 40. This indicates the severity of dependence. SADQ categorize the dependence severity. About 50% were categorized as moderate, 27% as severe and very severe based on the scores. Cumulatively 77% of the patients have significant dependence to alcohol. The present study reports severity of alcohol dependence among the selected subjects and reducing the same is the need of the hour which would enable youth to focus on productivity thereby contributing to the growth of the nation

Copyright©2018 **Karthikeyan R and Ithayamalar S**. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

**INTRODUCTION**

Substance abuse is an enormous problem worldwide. The substance use and its direct and indirect complication includes medical, social and economic consequences. Alcohol is socially and legally accepted substance of abuse. Because of its wide availability, aggressive marketing and relatively cheap price attracts the common man towards alcohol for pleasure seeking. (SushamGupta, 2008)

Addressing alcohol related problems, it not only limited to biomedical field, but it involves socioeconomic and political dimensions also. (Terence. G,1987). The main factor which affect the alcohol related problems is policy making. For example, some Governments in India banned alcohol in their states, they have relatively low level of alcohol related problems than the states in which alcohol is sold by the Government owned firms, excluding problems due to illicit alcohol sales.

Alcohol dependence is characterized by repeated alcohol related difficulties for the past twelve-month period in at least three functional areas.

**\*Corresponding author: Karthikeyan R**

Department of Psychiatry, Coimbatore Medical College, Coimbatore

So, it causes many neuropsychiatric syndromes and neurocognitive dysfunctions. They have high morbidity and mortality. Studies of substance abuse is a topic of interest for many public health issues, studies from 1968 to 2000 focuses on alcohol related problems. A meta-analysis by Reddy and Chandrashekar revealed an overall substance use

prevalence is 6.9/1000 for India with rural and urban rates of 7.3 and 5.8/1000 population. The rates in men and women were 11.9 and 1.7% respectively. A study in southern rural India showed that 14.2% of the sample had hazardous use of alcohol. This was assessed using AUDIT. Similar study in a tertiary hospital (Sampath *et al*, 2007) revealed 17.6% of the inpatients have hazardous use of alcohol.

The national household survey of drug use in India is first of its kind in this country which systematically collected data regarding nationwide prevalence of drug use. (Ray *et al* 2004) Apart from tobacco alcohol use is the predominate substance of use. It accounted for 21.4% followed by cannabis (3%) and opioids (0.7%). 17-26% of the studied population satisfied the ICD-10 criteria for alcohol dependence, which contributed to 4% of the general population prevalence (Pratimamurthy *et al*,

2010). The drug abuse and monitoring system (Ray *et al*, 2004) which evaluates the substance of abuse in inpatient population found that the major substance was alcohol (43.9%), opioids (26%) and cannabis (11.6%).

**Aim**

To assess the socio-economic status and the severity of alcohol dependence among the selected subjects

**Objective**

To assess the alcohol related parameters like duration, quantity, frequency and SADQ score

**Inclusion criteria**

- Patients meeting ICD 10-RDC (research diagnostic criteria) diagnostic criteria for alcohol dependence.
- In the age group between 21-50yrs.
- Education status 8<sup>th</sup> Std and above.
- Those who give informed consent for the study.

**Exclusion criteria**

- Patients with past and present history of delirium tremens and seizures.
- Persons having comorbid psychiatric, neurologic and medical illnesses.
- Substance use other than alcohol and tobacco.
- Patients are on or used drugs known to cause cognitive dysfunction.
- Those who are not consented for the study.

The subjects intentionally selected with the education status at and above the 8<sup>th</sup> std to reduce the bias of educational qualification interferes with performance of the test, since certain subtest needs to have knowledge about the English alphabets and good vocabulary

**METHODOLOGY**

The methodology adopted for the present investigation is dealt under the following heads:

- Selection of locale and samples
- Semi structured proforma for socioeconomic and general medical details
- Mini international neuropsychiatric interview
- Alcohol dependence questionnaires (AUDIT, SADQ)

**Selection of the locale and samples**

The study is conducted in Department of psychiatry, Government Rajaji hospital, Madurai. The prior permission from Institutional Ethical Committee was obtained. The patient population is chosen from inpatients who were admitted in deaddiction unit of Dept of psychiatry. Controls were recruited from the non-alcoholic relatives of the patients in dead diction ward and medicine ward. Based on the inclusion and exclusion criteria 30 cases and 30 controls were chosen. The purpose of the study was explained to the participants in regional language. Oral as well as written consent was obtained before the conduct of the study.

**Semi structured proforma for socioeconomic and general medical details**

A pretested proforma was developed to elicit the socio-economic background including details on age, occupation,

marital status, dwelling, socioeconomic status and religion. Based on the details collected, Kuppusamy socio economic scale (Kuppusamy 1981) was used to assess the socio-economic status. General medical details also collected, if any medical illness present, they were excluded from the study.

**Socio economic scale**

Socioeconomic scale consists of scores based on three variables namely education, occupation, and income on the basis often-point scale. It consists of ten categories are grouped with 5 social class namely very high, high, upper middle, lower middle and very low. The 10-point scale consists of 200 scores with equal class interval. The inter-rater reliability is found to be very high (R=0.9). This scale incorporates guidelines to score children, dependent person, married, and unmarried subjects. The general principle applied that the initial scores deals remarkable lower 8 position. The next 60 scores related to average to slightly above position and the scores between 100-200 pertains to the higher position.

**Mini international neuropsychiatric interview**

Structured interview done as per the protocol with the MINI International Neuropsychiatric interview. With the guidelines given in that alcohol dependence syndrome is diagnosed, other major mental illnesses ruled out.

**Alcohol Dependence Questionnaires**

**Alcohol Use Disorder Identification Test (AUDIT)**

Alcohol use disorder identification test is a screening instrument which is specifically designed for international use. (Edith V. Sullivan *et al*, 2002) it is a 10 point questionnaire with 0-4 scores per question. It has a maximum score of 40. A score of 8 or more associated with hazardous drinking, more than 13 in women, 15 in men associated with dependence pattern of alcohol use. It needs 2 mins to complete the questionnaire. (Santanu Ghosh *et al*, 2012)

**Severity of Alcohol Dependence Questionnaire (SADQ)**

Severity of alcohol dependence questionnaire assesses the dependence severity, developed in Maudsley hospital. It covers speed of withdrawal symptom onset, physical and affective withdrawals, craving and frequency of alcohol consumption. It is scored in a 4-point scale, from 0 to 3. A score more than 16 is associated with mild, 16-30 is associated with moderate, more than 30 with severe pattern of dependence.

**RESULTS AND DISCUSSION**

**Comparison between Sociodemographic Profile of Alcohol Dependence and Non-Alcoholics**

| Item           | Variables           | Alcohol dependence (n=30) | Per cent | Non alcoholics (n=30) | Per cent | P value |
|----------------|---------------------|---------------------------|----------|-----------------------|----------|---------|
| Age            | 21-30 yr            | 8                         | 27       | 17                    | 57       | 0.033*  |
|                | 31-40 yr            | 18                        | 60       | 11                    | 37       |         |
|                | 41-50 yr            | 4                         | 13       | 2                     | 7        |         |
| Education      | Middle High School  | 7                         | 23       | 12                    | 40       | 0.312   |
|                | High Sec.           | 16                        | 53       | 13                    | 43       |         |
|                | More Than High Sec. | 4                         | 13       | 1                     | 3        |         |
|                |                     | 3                         | 10       | 4                     | 13       |         |
| Marital Status | Married             | 25                        | 83       | 20                    | 67       | 0.136   |
|                | Unmarried           | 5                         | 7        | 10                    | 33       |         |
| Domicile       | Urban               | 17                        | 57       | 20                    | 67       |         |

|                       |              |    |    |    |    |       |
|-----------------------|--------------|----|----|----|----|-------|
| Religion              | Rural        | 13 | 43 | 10 | 33 | 0.426 |
|                       | Hindu        | 26 | 87 | 27 | 90 |       |
|                       | Muslim       | 4  | 13 | 2  | 7  | 0.431 |
|                       | Christian    | 0  | 0  | 1  | 3  |       |
| Socio Economic Status | Lower Middle | 1  | 3  | 6  | 20 | 0.093 |
|                       | Middle       | 26 | 87 | 23 | 77 |       |
|                       | Upper Middle | 3  | 10 | 1  | 3  |       |

About 27 and 57 per cent of the subjects were in the age group of 21-30 years while 60 and 37 per cent of the subjects were in the age group of 31-40 years and only 13 and 7 per cent of the subjects were in the age group of 41-50 years in alcohol and non-alcohol group respectively. There is significant difference in the age group because patients predominantly from 31-40 group, controls from 21-30 group. But it is not the significant factor which affect the outcome of the study.

About 23 and 40 per cent of the subjects had completed middle school of education, 53 and 43 per cent of the subjects had completed high school while a minimum of 13 and 3 per cent had completed more than high school in alcohol and non-alcohol group respectively. Almost 83 and 63 per cent of the subjects were married and remaining 5 and 10 per cent were unmarried in alcohol and non-alcohol group respectively. Majority of 57 and 67 per cent of the subjects hailed from urban while remaining 43 and 33 per cent of the subjects were from rural in alcohol and non-alcohol group respectively.

Almost 87 and 90 per cent of the subjects were Hindus; while 13 and 7 were Muslims in alcohol and non-alcohol group respectively. Only 3 per cent of the subjects were Christians in non – alcohol group. Majority of 87 and 77 per cent of the subjects belonged to middle income; while 3 and 20 were lower middle income and 10 and 3 were upper middle income in alcohol and non-alcohol group respectively

**Mean Audit Score of Alcohol Dependent Subjects**

| Score | Number | Per cent |
|-------|--------|----------|
| 15-25 | 9      | 30       |
| 26-40 | 21     | 70       |
| Total | 30     | 100      |

Audit is a screening tool for alcohol dependence. Almost 30 per cent of the subject in alcohol dependent group score ranged 15-25 while 70 per cent of the subjects score ranged 26-40. This shows that most of the patients scored significantly high in AUDIT score.

**Severity of Alcohol Dependence Questionnaire**

| Severity of alcoholism | Number | Per cent |
|------------------------|--------|----------|
| Mild                   | 7      | 22       |
| Moderate               | 15     | 50       |
| Severe                 | 7      | 23       |
| Very severe            | 1      | 4        |
| Total                  | 30     | 100      |

Severity of alcohol dependence questionnaire revealed that 50 per cent of the subjects were moderate dependent while 22 percent scored mild, 23 percent represented severe dependence. 4 per cent were very severe drinkers. This infers that majority of the selected subjects reported heavy drinking pattern.

**Duration of Alcoholism**

| Duration       | Number | Per cent |
|----------------|--------|----------|
| Lessthan 5yrs  | 1      | 3        |
| 5-10yrs        | 11     | 37       |
| Morethan 10yrs | 18     | 60       |
| Total          | 30     | 100      |

The duration of alcoholism among the alcohol dependent group was segregated as less than 5 years, 5-10 years and more than 10 years respectively. 60 per cent of the subjects were alcoholic dependent for more than 10 years; while 37 per cent of the subjects were alcoholics for the past 5-10 years and only 3 per cent of the selected subjects for the past 5 years

**Table VI** Quantity of Intake of Alcohol

| Quantity/day   | Number | Per cent |
|----------------|--------|----------|
| 180ML          | 5      | 16       |
| 180-360ML      | 11     | 37       |
| MORETHAN 360ML | 14     | 47       |
| Total          | 30     | 100      |

Quantity of intake of alcohol was studied among the selected subjects in order to assess the intensity of alcoholism. Data revealed that majority of 47 per cent of the subjects drank more than 360 ml per day while almost 37 per cent of the subject’s drink ranged from 180-360 ml per day and only 16 per cent drank 180 ml per day.

**DISCUSSION**

In this study majority of the patients belongs to 31-40 age group. The said to have started alcohol intake in the late teens. They fulfill the criteria for dependence on alcohol at least for the past 2-5yrs. Johnson Pradeep *et al*, 2010, in his paper discussed that age of onset of alcohol intake is 18yrs, they take another 6yrs to have the first criteria for dependence, in another 4 yrs they become full blown alcohol dependence patients. The finding in the present study also correlated with the findings of the paper.

The subjects intentionally selected with the education status at and above the 8<sup>th</sup> std to reduce the bias of educational qualification interferes with performance of the test, since certain substest needs to have knowledge about the English alphabets and good vocabulary. In this study 53% were from high school grade. 10% of the subjects finished their graduation. Since there is less no of highly educated people in this sample, it makes me to thought that education is also a possible protective factor against the alcohol use and dependence.

In the subjects 83% of the persons married. In controls 63% of them married. In considering the marital status of the patients, it is one of the important factors which bring the patient to the hospital. Patients say because of the wife’s wish and considering the future of the children only I came for treatment. The constant check by wife on the drinking pattern and the quantity of intake at least reduce the onset of the dependence pattern.

The urban rural difference is not significant in the present study. (57% from urban, 43% from rural). Family Health Survey Data collected in 2005-06, published in September 2007, showed that proportion of users among rural and urban population is very similar (32% and 31% respectively). This finding is similar to the findings in the present study.

Considering the religion Hindu predominates (87%) and majority from middle socioeconomic class. These factors can be taken us mere representation of the cross section of the population. But one factor should be thought of is the religious prohibition of alcohol in muslims reduce the incidence of drinking in their population. Middle income people joint together and take alcohol for pleasure in the beginning of their

alcohol usage, but at last they lose most of their revenue in buying alcohol. This has major public health impact not only on the life of the patient but also on the life of the family members also.

Alcohol and tobacco are like conjoint twins, they go together in most of the situations. People who are willing to quit alcohol are not willing to quit tobacco. They considered tobacco as innocuous substance. There are two forms of tobacco use which predominates in Tamil Nadu are smoking and chewing. In the present study 97% of the patients population smoke tobacco to the level of dependence. This finding is consistent with several literatures (Timothy C. Durazzo and Stefan Gazdzinski, 2007 *et al*). In the controls only 20% are smokers, their pattern of smoking is also not severe. Whenever assessing an effect of alcohol on the brain and other systems, it is a major hurdle, because various substances in tobacco affect the whole system, so it complicates the picture and we cannot assess the sole effect of alcohol.

For alcohol dependence AUDIT questionnaire and SADQ questionnaire were applied. AUDIT is a simple screening tool, 70% of the patients scored more than 26 out of the maximum score of 40. This roughly indicates the severity of dependence. SADQ categorizes the dependence severity. In that 50% scored for moderate, 27% scored for severe and very severe categories. Cumulatively 77% of the patients have significant dependence to alcohol. The questionnaires assess the dependence with various parameters like duration, quantity, physical and psychological craving and withdrawal, but they typically lack the quality to assess the cognitive functions. (Iliia theotoka, 2006, Sushamgupta *et al*, 2008)

Sixty per cent of the cases took alcohol for more than 10 years that too almost daily, 47% of them consume more than 360ml, cumulatively 84% consume more than 180ml daily. This shows that they are heavy consumers of alcohol. There are no international standards in local shops. The standard in Tamil Nadu is 90ml and 180ml. Cases consume roughly 50gm to 160gm of alcohol per day. Hamin lee, SungwonRoh *et al*, 2009, White.A.M *et al*, 2003 found that duration of alcohol intake, pattern and quantity of intake significantly affects the cognitive functions. Finding in the present study is also consistent with the above findings.

## CONCLUSION

The present study reports severity of alcohol dependence among the selected subjects and reducing the same is the need of the hour which would enable youth to focus on productivity thereby contributing to the growth of the nation.

### How to cite this article:

Karthikeyan R and Ithayamalar S (2018) 'Socio Economic Status and Severity of Alcohol Dependence among Selected Subjects', *International Journal of Current Advanced Research*, 07(11), pp. 16264-16267.  
DOI: <http://dx.doi.org/10.24327/ijcar.2018.16267.2999>

## References

- Edith V. Sullivan, Rosemary Fama, (2002) 'A Profile of Neuropsychological Deficits in Alcoholic Women', *Neuropsychology*, vol.16, No.1, 74-83
- Hamin lee, sungwonRoh, (2009) 'Alcohol Induced Blackout', *International Journal of Environmental Research and Public Health*, 6, pp 2783-2792.
- Iliia theotoka (2006) 'Cognitive Impairment in Alcoholism' Oral Presentation, *Annals of General Psychiatry*, p. 1
- Kuppuswamy B (1981). *Manual of Socioeconomic Status (Urban)*. 1st ed. Delhi: Manasayan; p. 66-72.
- Pratimamurthy, N. Manjunatha (2010), 'Substance Use and Addiction Research in India', *Indian Journal of Psychiatry*; S189-99
- Ray R. (2004) *The Extent, Pattern and Trends of Drug Abuse In India*, National Survey, Ministry of Social Justice and Empowerment, Government of India and United Nations Office on Drugs and Crime, Regional Office for South Asia.
- Reddy MV, Chandrashekhar CR. (1998), Prevalence of Mental and Behavioural Disorders in India: A Meta-Analysis. *Indian J Psychiatry*. ;40:149-57.
- Sampath SK, Chand PK, Murthy P. (2007), Problem Drinking Among Male Inpatients in a Rural General Hospital. *Indian J Community Med.*; 32:93.
- Santanu Ghosh, Amrita Samanta (2008), 'Patterns of Alcohol Consumption among Male Adults at a Slum in Kolkata, India', *J Health Popul Nutria*, 30 (1) 73-81.
- Sushamgupta, James warner, 'Alcohol Related Dementia: A 21<sup>st</sup> Century Silent Epidemic?', *The British Journal of Psychiatry* (2008) 193, 351-353
- SushamGupta, James warner (2008), 'Alcohol Related Dementia: A 21<sup>st</sup> Century Silent Epidemic?', *The British Journal of Psychiatry* 193, 351-353
- Terence Wilson. G (1987) 'Cognitive Process in Addiction', *British Journal of Addiction*, 82, 343-35
- Timothy C. Durazzo, Stefan Gazdzinski, (2007) 'The Neurobiological And Neurocognitive Consequences of Chronic Cigarette Smoking in Alcohol Use Disorders', *Alcohol and Alcoholism*, vol.42, no. 3,, pp. 174-185,
- White, A.M. (2003), *What Happened? Alcohol, Memory Blackouts, and The Brain*. *Alcohol Res. Health*, 27, 186-196.

\*\*\*\*\*