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## **Cultural determinants responsible for development of alcohol dependence – a cross-sectional observational hospital based study**

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### **Abstract**

Alcohol dependence is a growing problem in India. In the Indian society, culture primarily defines how an individual behaves or adapts with the society. Our aim in the study was to determine the role of cultural factors in the development of “Alcohol Dependence” among patients attending drug de-addiction centre in a tertiary Hospital in Mumbai. The objectives of the study were to study the cultural determinants of 100 diagnosed patients of alcohol dependence according to ICD-10 diagnostic criteria, to classify alcoholism as type I and type II based on their etiological factors, age of onset and family history of alcohol dependence and to study the correlation of type I and type II alcoholism with cultural determinants. The tools used in our cross-sectional observational study were Kuppuswamy socioeconomic status scale, Semi-structured questionnaire and a Case record form. In our study we found out that all patients were males, majority had received secondary education(66%), majority were unskilled workers(49%) and had their monthly income ranging from 10,000 to 25,000Rs(40%) thereby belonging to upper middle class(63%) according to Kuppuswamy classification and majority were Hindus(93%) and married(86%).With regards to cultural factors we found out that beliefs(that is 75% and 72%), curiosity(64%) and peer pressure(65%) were major contributors to development of alcohol dependence while customs(21%), positive family history(36% and 22%), novelty seeking(37%) and game related alcohol abuse(21%) were among the less important ones.. A study of background of race, ethnicity and cultural identity of the alcohol dependent helps us in combating this alcohol menace and thereby avoiding the adverse social outcomes of the same. Thus practical measures can be taken and this problem of alcohol dependence can be easily dealt with right from its roots.

**Keywords:** Alcohol dependence, cultural factors, ethnicity, curiosity, peer pressure, beliefs, alcoholism type I and type II.

### **Introduction**

Alcohol Dependence is a very common public health problem in the Indian society and is increasingly expanding owing to the social acceptability of alcohol everywhere. The proportion of dependent users is large and innumerable factors account for it. Alcohol Dependence comes along with various health problems and social damage that includes cirrhosis of liver, toxic psychosis, gastritis, pancreatitis, cardiomyopathy, family disorganisation, crime and loss of productivity. There are many factors responsible for development of dependence. Of these many factors involved, ‘CULTURAL DETERMINANTS’ seem to play a significant role. In a developing country like India, culture plays an essential role in human behaviour.<sup>1</sup>

Cultural factors of customs, beliefs, religion, laws and moral values are deeply involved in developing dependence and studying these would be extremely valuable and imminent in curbing this dependence right from its roots. Alcohol Dependence is a chronic relapsing disorder. The productivity, availability, consumption and drinking patterns of alcohol have undergone phenomenal changes in India and have been influenced by combined effects of globalisation, market

forces, changing government policies, media promotion and changing values of Indian society. Evidence from past researches has shown that some sections of populations such as younger onset drinkers, those with family history of alcoholism, impulsivity and hyperactivity are more vulnerable to develop dependence <sup>1</sup>

According to a study conducted at NIMHANS(National Institute of Mental Health and Neurosciences),Bangalore, in 2005,it was found that 97% of alcohol dependents were\_Hindus, males, belonging to low socioeconomic class and had a strong family history of alcohol dependence.<sup>2</sup>

Another study conducted by Dube et al in 2010 measured correlations between adverse childhood experiences(ACEs) and future substance abuse, wherein the ACEs included abuse(physical, emotional and sexual), neglect( physical or emotional), growing up with household substance abuse, criminality, mental illness of household members, parental discord and illicit drug use.<sup>3</sup> Also the modifiable risk factors that were attributed to alcohol abuse were early aggression, poor social skills, academic failures, exposures to drugs, quality of parenting, socioeconomic status, peer group influences, biological and inherent predisposition towards alcohol dependence.<sup>3,4</sup> A study done by Choi et al in 2012 showed that major stressors like distress, loss and grief, decreased social support, social isolation, financial hardships and worries contributed to alcohol dependence in old age group patients.<sup>6</sup> A study done by Tiwari et al in 2003 to assess the prevalence and patterns of psychiatry morbidity among rural Indians adults, found that mental and behavioural disorders due to substance abuse ranked third among all psychiatry morbidity, wherein it was found that alcohol use was more in males than females, more in low socio-economic age group than middle and high socioeconomic age group.<sup>9</sup>

Alcoholism researcher Robert Cloninger studied the impact of personality trait and novelty seeking in people over their lifetimes, found that individuals who became addicted had three distinct personality features-Novelty seeking, harm avoidance and reward dependence.<sup>10</sup> Alcohol dependence is only one form of recurrent and self defeating pattern of misconduct.

According to the GATEWAY DRUG THEORY/GATEWAY HYPOTHESIS, use of less deleterious drugs like alcohol, tobacco and cannabis may lead to future risk of using more dangerous hard drugs like heroin, cocaine and marijuana. Gateway substances prime the brain for addiction to other substances. It has been noticed that both alcohol and tobacco tend to precede cannabis and cocaine use. Lifetime drinkers are also 6 times more likely to be dependent on illicit drugs than non-drinkers. <sup>11</sup>

A qualitative observational research of various cultural factors is needed to provide insights into the alcohol dependent's lifestyle, behaviour, their knowledge, feelings ,attitude and opinion values. This study will also fill up the lacunae in the existing knowledge and also aid in interventions in mental health services for early detection of alcohol dependents and their treatment.

## **Materials and methods**

### **STUDY DESIGN**

Type of study: Cross-sectional observational type

Sampling frame: Sample size consisted of 100 already diagnosed cases of alcohol dependent patients based on ICD-10 (International classification of diseases) criteria. <sup>(10)</sup>

### **INCLUSION CRITERIA**

- 1) All those diagnosed as Alcohol dependent based on ICD-10 diagnostic criteria, attending drug de-addiction centre in our tertiary care Hospital.

- 2) All those willing to give a written informed consent and participate in the study.

## EXCLUSION CRITERIA

1. All those who are not willing to give a written informed consent.
2. Those patients with problems of speech, hearing and vision.
3. Patients with other underlying psychiatric disorders and mental illnesses.

## METHOD:

After taking the Institutional Ethics Committee permission, the study was carried out at the de-addiction centre of department of psychiatry in a tertiary care Hospital in Mumbai .About 40-50 new alcohol dependence patients come to the OPD per month. In a span of 3 months out of 156 patients, 122 met the inclusion and exclusion criteria. Out of them, 100 consented for the study. These 100 patients were selected and were given questionnaire forms to be filled.

The study was conducted in two phases

### Phase 1- Framing of the questionnaire

23 questions related to cultural factors responsible for alcohol dependence, was framed by the principal and the co-investigator for the questionnaire to be administered to the patients. To get a rough estimate of face validity, five senior faculty members independently scored each question as 'right' or 'wrong'. Of the 23 questions there was 100% agreement on 9 questions. Therefore, only those 9 questions were selected for administration to the test population.

The questionnaire was initially constructed in English and was later translated into Hindi and Marathi.

Phase 2: Administration of questionnaire to the study population. 100 patients diagnosed as alcohol dependent according to ICD-10 were selected. A duly signed written informed consent was taken from the patient and socio-demographic details were taken on a case record form. A pre validated semi structured questionnaire was administered.

## TOOLS USED:

1. CASE RECORD FORM: A Case Record Form was used from which socio-demographic profile of patient was obtained.
2. SEMI-STRUCTURED QUESTIONNAIRE: A pre validated questionnaire consisting of 9 questions pertaining to the below mentioned cultural factors was designed and was filled by the patients themselves. Out of these 9 questions, 1 question was on customs, 2 on beliefs, 2 on family history, 1 on curiosity, 1 on novelty seeking, 1 on peer pressure and 1 on game-related alcohol abuse.
3. KUPPUSWAMY SOCIOECONOMIC STATUS SCALE<sup>12,13</sup> Kuppaswamy Socioeconomic Status Scale that takes the summation of education, occupation and income of the person and is used for urban households and the class from I TO V was allotted.

## RESULTS

Among the 100 patients that were administered the questionnaire the following was noted:

### 1. SOCIO-DEMOGRAPHIC DETAILS:

As shown in the Table. 1, all patients were males, majority had received secondary education(66%), majority were unskilled workers(49%) and had their monthly income ranging from 10,000 to 25,000Rs(40%) thereby belonging to upper middle class(63%) according to Kuppuswamy classification<sup>12,13</sup> and majority were Hindus(93%) and married(86%),majority of the patients had received secondary education (66%) that is studied up to 10<sup>th</sup> standard followed by graduates (15%), primary education (12%) and higher secondary education (7%),majority of patients who were alcohol dependent belonged to upper middle class(63%) followed by upper lower class (19%) and lower middle class (18%).

As shown in Figure 1, majority of alcoholism type II patients (40%) had their monthly incomes between 10,000 to 25,000 Rs suggesting these were from middle income families, followed by those having monthly incomes between 5,000 to 10,000 Rs (25%) and least were from those earning more than 50,000 Rs. Also seen in the figure is type I alcoholism patients(32%),wherein majority of these patients(37.5%) had their monthly incomes between 10,000 to 25,000 Rs, followed by those having monthly incomes less than 5000 Rs(31.25%) and least belonged to the ones having monthly income more than 50,000 Rs(3.12%).

### 2. CULTURAL FACTORS AND THEIR CORELATION WITH ALCOHOL DEPENDENCE:

As shown in the Table.2,beliefs(that is 75% and 72%), curiosity(64%) and peer pressure(65%) were major contributors to development of alcohol dependence while customs(21%), positive family history(36% and 22%), novelty seeking(37%) and game related alcohol abuse(21%) were among the less important ones.

As shown in table 3, 32 subjects belonged to type I alcoholism their mean age of onset being 33 years,20 out of 32(62.5%) had beliefs, 15 out of 32 (46.8%)had positive family history,19 out of 32(59.37%) had curiosity,9 out of 32(28.2%) had novelty seeking and 15 out of 32(46.85%) had peer pressure as important cultural factors for development of alcohol dependence, whereas on the other hand 68 subjects belonged to type II alcoholism, their mean age of onset being 17 years, 52 out of 68(76.47%)had beliefs, 43 out of 68(63.23%) had positive family history, 45 out of 68(66.17%) had curiosity, 28 out of 68(41.17%) had novelty seeking and 50 out of 68(73.52%) had peer pressure as major factors responsible for development of alcohol dependence.

As shown in Figure 2, curiosity stands as a prime factor responsible for development of alcohol dependence as evident by 64 yes responses seen in the figure.

As shown in Figure 3, peer pressure accounts for 65 percent of alcoholics to develop dependence hence proving that it is a major factor responsible for the same.

As shown in figure 4, game related alcohol abuse accounted for 21 % of yes responses for dependence, novelty seeking as 37 %, positive family history as 36 % and customs as 21 % of yes responses for development of alcohol dependence

thereby showing that these were less important cultural factors and accounted as minority factors for development of alcohol dependence.

## Discussion

Alcohol is one of the recognized risk factors for ill-health.<sup>15</sup> 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.<sup>14</sup> 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.<sup>16</sup> 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.<sup>17</sup> A combination of all these proximal and distal factors have made alcohol consumption a common practice, with less understanding on impact of alcohol on health, social and economic areas in the Indian society.

In our study it was found that among the 100 subjects encountered, all were males, were married adults had completed high school education and were unskilled workers in keeping with the previous studies done by Gururaj et al<sup>18</sup> and Jindal et al.<sup>19</sup>

Traditionally and across cultures, alcohol consumption among women has been lower than among men, as has the incidence of problems. Changing trends in women's role in society and other factors have resulted in increased alcohol consumption in some places.<sup>26</sup>

Though with increased globalisation, industrialisation and trends to adapt western culture, the number of females consuming alcohol and developing dependence are on a rise, in our study it was found that all study subjects were males and not a single female reported to have developed dependence. The reasons for this may be fear of defamation from the society, abandonment of females by family members and less moral and social support from friends and family members in an order to seek for medical help for treatment.

All alcohol users remarked alcohol consumption was extremely common and accepted on social occasions like festivals and parties.<sup>18</sup>

The rate of drinking in males more than 15 years of age was about 50% as shown by study done by Lal and Singh.<sup>20</sup> Also study done by Mohan et al in 1980<sup>21</sup> showed that among rural population 58.3% of males consumed alcohol.

Taking socio-economic status scale into consideration, in our study it was found that 63% belonged to upper middle class and 19% belonged to upper lower class thereby showing congruency with the studies conducted by Muthurabootham in 1989<sup>22</sup> and Magdalena Cerda in 2011.<sup>23</sup>

Chakravarthy reported alcohol use to be from 26% to 50% among rural south Indian males and prevalence is higher among those who were illiterate and had completed secondary school education.<sup>24</sup> Our study hence shows matching findings with this study with respect to education and alcohol dependence, wherein in our study we had 66% patients who had received secondary school education. Mohan et al (1979)<sup>25</sup> found out that prevalence rate of alcohol dependence among high school students was 12.7% and among university students was 32.6% hence proving the fact that teenagers are a vulnerable age group for developing dependence.<sup>33</sup>

Substance use was significantly higher among age groups 20 -24 years, factors like substance abuse by parents, unemployment, sibling and peer pressure and educational status were significantly associated with substance abuse by study subjects. Most common reasons for initiation of substance use among study subjects were peer pressure followed by substance use by parents and sibling pressure. Other reasons were lucrative advertisements of such substances by celebrities,<sup>27</sup> thereby keeping with our study finding that peer pressure(65%) and novelty seeking(37%) are important factors for development of alcohol dependence.

It was found that in 67 % of patients in a study done by Satindar Pal Singh et al<sup>28</sup> curiosity was the most common reason for development of alcohol dependence. 64% of our study sample also reported the same thereby keeping parallelism between the two study findings.

Some researchers have suggested that current Indian drinking may be a product of the early ceremonial use of alcohol (Abbott 1996). Spicer (1997) reported that most Indians who drink are ambivalent about alcohol. On the one hand, they view drinking as a social mechanism that facilitates interactions with family and friends and increases bonding; on the other hand, alcohol abusers are acutely aware of the destruction it has wrought in their lives.<sup>29</sup>

Also in our study we found out that beliefs regarding the use of alcohol among dependents, that they can stop drinking by themselves once they start, shows congruency with researches done above<sup>29</sup> and study done by Malhotra et al.<sup>30</sup>

37 % of our study subjects said that they started consuming alcohol as a pleasure seeking activity, a finding which is comparable to the studies done by Arora et al<sup>31</sup> and Catherin et al.<sup>32</sup>

In a study done by Naresh N et al<sup>33</sup> on demographic and clinical profile of substance abuse among women, it was seen that a typical case was of 36.3 years of age, married(65%),urban(61%),nuclear family(59%) based housewife(56%) with good to fair social support(69%). The commonest substance of abuse was tobacco (60%) followed by opioids (27%), alcohol (15%) and benzodiazepines (13%). The commonest reasons for initiation of substance abuse were to alleviate frustration and stress (49%) and curiosity (37%). Family history of alcohol dependence (43%), co-morbidity (26%) and impairment in health(74%), family (57%) and social domains (56%) were common.

There is a three-to-five-fold increased risk of alcoholism in the relatives of alcoholic.<sup>34</sup>This study thus shows results comparable to our study wherein it was found that 36% of patients said that they had one member in the family who was alcohol dependent.

Problem gambling and substance misuse are prevalent among young people. For instance, 17% of youth reported gambling 52 or more times in the past year. Alcohol problems and gambling problems show high co-occurrence, especially for male youth and black youth.<sup>35</sup> Our study also had 21 patients reported to have consumed alcohol while playing cards thus keeping with this study.

Cloninger C classified alcoholism as type I and II based on certain factors, his findings and our study findings almost matched with regards to age of onset, novelty seeking and positive family history.<sup>38</sup>

Hence from above discussion we see that most of the findings run parallel with the previous studies and thereby emphasize the huge contribution of socio-demographic and cultural factors in alcohol dependence in development of alcohol dependence.

## Conclusion

Thus from our study we conclude that both socio-demographic profile as well as cultural factors are responsible for alcohol dependence in the patients. Amongst the cultural factors beliefs, curiosity and peer pressure stand are of utmost importance in comparison to customs, positive family history, novelty seeking and game related alcohol abuse, suggesting that adolescence is the most vulnerable age group to develop dependence and hence to curb this problem of dependence it is imminent we nip these factors in the bud before they start emerging as serious factors for alcohol dependence and cause serious health problems.

Adolescence is an important period of human life as it is a transitional phase wherein an individual in neither a kid nor an adult, and hence they are easily influenced by habits and behaviours of their parents, siblings or peers and initiate substance use in an attempt to create their own identity and look “cool”. Hence it is important to target and focus our interventions towards them. Family influences are strongly responsible for shaping up of the personality of an individual; hence health education of parents is urgently needed so that the parents either stop using the substance or at least not use the substance in front of their children.

Policy responses to date from federal and state government have been inadequate and inconsistent results in unopposed promotion of liquor in most of the country. It can be anticipated that alcohol use and related problems will grow in India in future. Unless planned policy changes are designed and vigorously implemented these problems are likely to produce excessive burden on this developing country’s resources.<sup>36</sup>

Therefore to conclude, alcohol menace is growing alarmingly in India and before it turns out to be a giant monster encroaching upon our youths, we need to focus our attention in curbing this problem not only by diagnosing and treating alcohol dependent patients by proper interventions but also to tackle the promotion of alcohol so as to not allow development of dependence at all.

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**Table.1 Socio-demographic details of study patients**

<b>SOCIODEMOGRAPHIC FACTORS</b>	<b>CATEGORIES</b>	<b>FINDINGS</b>
1.GENDER	a)MALES	100
	b)FEMALES	-
2.EDUCATION	a)PRIMARY	12
	b)SECONDARY	66
	c)HIGHER SECONDARY	7
	d)GRADUATE	15
3.OCCUPATION	a)UNSKILLED WORKER	49
	b)SKILLED WORKER	34
	c)NON-WORKER	17
4.MONTHLY INCOME	a)<5,000 Rs	27
	b)5,000-10,000Rs	25
	c)10,000-25,000Rs	40
	d)25,000-50,000Rs	5
	e)>50,000Rs	3
5.KUPPU-SWAMY CLASS	a)UPPER MIDDLE	63
	b)LOWER MIDDLE	18
	c)UPPER LOWER	19
6.RELIGION	a)HINDU	93
	b)MUSLIM	5
	c)CHRISTIAN	2
7.MARITAL STATUS	a)MARRIED	86
	b)SINGLE	14

**Table.2 Cultural factors and their correlation with development of alcohol dependence**

CULTURAL FACTORS	YES	NO	NOT SURE
1.CUSTOMS Alcohol is needed on special occasions like birth of a child, weddings, graduation etc	21	69	10
2.BELIEFS- a)The person can stop drinking alcohol by himself once he starts drinking it	75	22	3
b)The person believes that if he drinks alcohol regularly, he becomes an alcoholic	72	24	4
3.FAMILY HISTORY AND INFLUENCES- a)Positive Family History present	36	63	1
b)Money given by family members to buy alcohol(easy availability)	22	78	-
4.NOVELTY SEEKING	37	62	1
5.CURIOSITY	64	35	1
6.PEER PRESSURE	65	32	3
7.GAME RELATED ALCOHOL ABUSE	21	78	1

**Table 3 Type I and Type II alcoholism and their co-relation with cultural factors**

ALCOHOLISM TYPE	TYPE I	TYPE II
NUMBER	32	68
MEAN AGE OF ONSET	33 years	17 years
MEAN MONTHLY INCOME	13253.1 Rs	14073.5 Rs
CUSTOMS	7	14
BELIEFS	20	52
FAMILY HISTORY POSITIVE	15	43
CURIOSITY	19	45
NOVELTY SEEKING	9	28
PEER PRESSURE	15	50
GAME RELATED ALCOHOL ABUSE	4	17

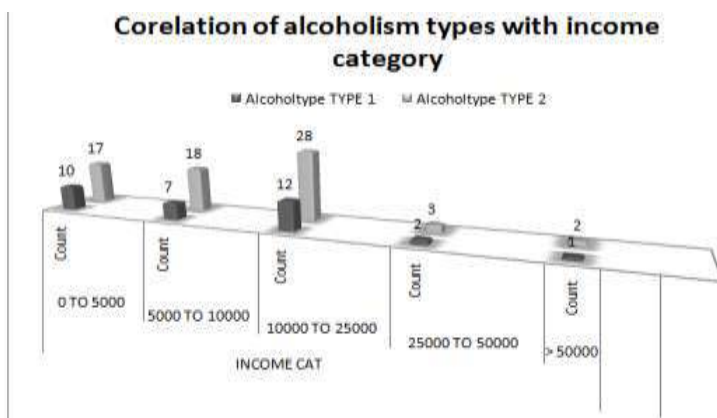


Figure 1: Co-relation of alcoholism types with income category

### Curiosity as a factor of alcohol dependence

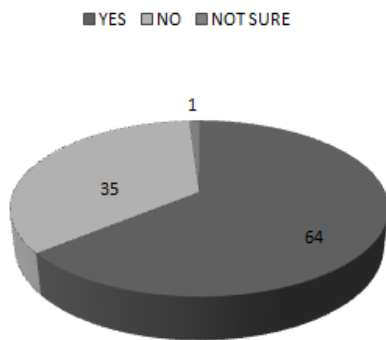


Figure 2: Curiosity as a factor of alcohol dependence

### Peer pressure as a factor for alcohol dependence

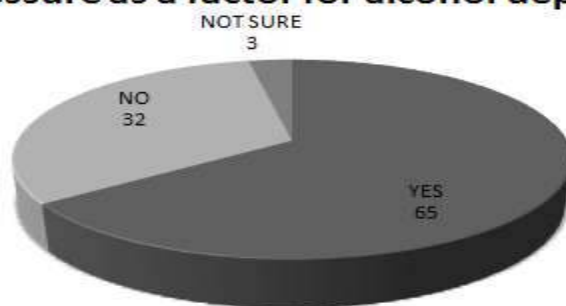


Figure 3: Peer pressure as a factor of alcohol dependence

### Cultural factors and patients responses to their contribution in development of alcohol dependence

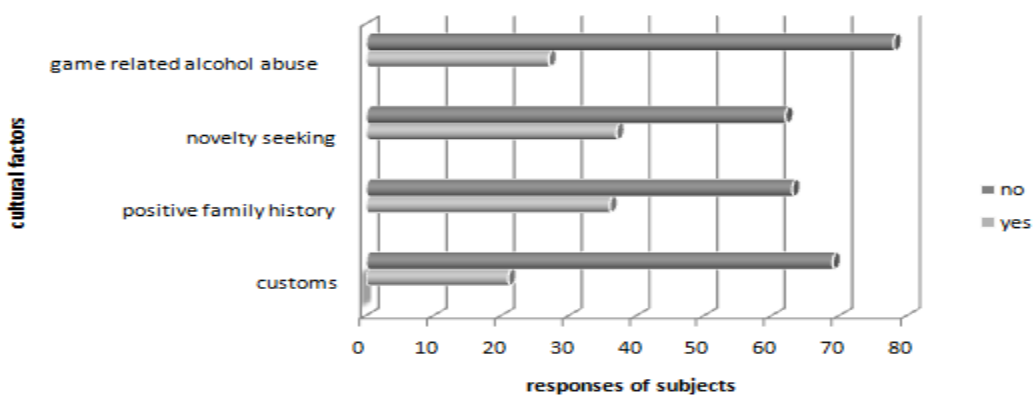


Figure 4 Cultural factors and patients responses to their contribution in development of alcohol dependence