

## ORIGINAL ARTICLE

# Prevalence of Alcohol Consumption among Adults & Elderly- a Community based Study in Uttarakhand

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## Article Cycle

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## Abstract

**Background:** Alcohol is one of the leading causes of the death and disability globally. About two billion people worldwide consume alcoholic beverages and about one-third (nearly 7.6 million) are likely to have one or more diagnosable alcohol use disorders. In India, the economic returns from alcohol override public health issues with the situation being one of “getting less and losing more”. **Aims & Objectives:** To find out the prevalence of alcohol consumption in relation to socio-demographic characteristics among adults and elderly population of Uttarakhand. **Methods and materials:** This is a cross sectional study. In this study we included four different geographic settings (urban, rural, town and slum) of Uttarakhand. A simple random methodology was adopted. **Results:** Out of 400 participants interviewed, alcohol consumption was reported higher in 30-49 years age group (45%), married (38%), employed (58%), males (72%), residing in rural areas (43%). **Conclusion:** In Uttarakhand percentage of alcohol consumption is higher among middle age group (30-49 year). Males are more alcoholic than females.

## Keywords

Cross-Sectional Studies; Prevalence; Alcohol Drinking

## Introduction

Alcohol-abuse and alcoholism are one of the major public-health problems in both developed and developing countries.(1). It is one of the leading causes of the death and disability globally.(2). The 32nd World Health Assembly declared that “problems related to alcohol and particularly to its excessive consumption rank among the world’s

major public health problems and constitute serious hazards for human health, welfare and life”.(3) About two billion people worldwide consume alcohol beverages and about one-third (nearly 7.6 million) are likely to have one or more diagnosable alcohol use disorders.(1) The prevalence of Alcoholism in Uttarakhand is 35.2% among males and 0.3% among females (NFHS 4).(4) Use of Alcohol is one of the acknowledged jeopardy causes for ill-

health.(5) The least understanding of the problems related to alcohol use is its greater socio-economic impact than previously comprehended. This is alarming especially with an upward trend in the prevalence of alcohol use over the last two decades (1). There is a rising indication that apart from the total quantum, the pattern of intake (frequency of use, consumption to intoxication, binge drinking, chronic use) plays an important role in many of the public health abuse viz., decreasing age of initiation, greater permissibility of social drinking, popularity among women, etc., is closely related to globalization, urbanization and migration.(6) A combination of all these proximal and distal factors have made alcohol consumption a common practice, with less understanding of impact of alcohol on health, social and economic areas in the Indian society.

In India, the economic returns from alcohol override public health issues- with the situation being one of 'getting less and losing more". The total Excise revenue from alcohol in India during 2004 was lesser than out-of-pocket expense consequent to alcohol use (214 million INR v/s 244 million INR).(7)

### Aims & Objectives

To know the prevalence of alcohol depending on age, education, other socio-demographic characteristics among adults and elderly in Uttarakhand population.

### Material & Methods

**Study Type:** A community based, Cross sectional study. **Study Population:** Adults and elderly subjects (>18 years and above). **Study Area:** Four different geographic settings (urban, rural, town and slum) of Uttarakhand. A simple random methodology was adopted. For the rural component, five large villages (having at least 750-800 households) of Pauri Garhwal district was identified. Five wards from Haridwar town were chosen to include town population. One large slum was chosen randomly from among the registered slums of Uttarakhand. To cover the urban population, one ward in the Dehradun city with a predominantly middle class population was chosen. **Study duration:** 12 months. **Sample Size:** Considering the prevalence of alcoholism to be 50% the sample size was calculated by the formula:

$$1.96 \times 1.96 PQ/L^2$$

Where, Q = (1-P)

L = allowable error which is set at 5%

i.e.  $n = 3.84 \times 50 \times 50 / 5 \times 5$

$$= 384 \approx 400$$

### Exclusion Criteria:

- Commercial establishments were excluded from the survey in all the four areas during survey time.
- People below 18 years and those who do not give consent for the study.

**Sampling Technique:** Multi-stage random sampling was applied for selection of study participants. A total of 400 study participants was selected, i.e. 200 from urban and 200 from rural areas. From 13 districts of Uttarakhand, two districts had been selected randomly. From each of these districts, two rural blocks was selected randomly and from each of the selected blocks, one village was selected randomly making a total of four villages. In each of these villages, starting from one-point house to house survey was done and every adult (>18 years) had been included till a sample size of 50 was met after excluding those who do not give consent for the study. In this way, a total of 200 participants were selected from 4 villages. Similarly, from urban areas of both the districts, 50 participants were selected from slum area and 50 from non-slum areas making a total of 200 participants from urban area. **Data Collection:** Data was collected after taking informed verbal consent from the participants, by means of a pre-designed, pre-tested and semi-structured questionnaire by trained research staff.

The primary sampling unit was the individual household. Preliminary information was collected from responsible adult (being aware of all family details) of the household. Focus of information gathering was on socio-demographic characteristics and alcohol use among individual adult male and female members. Any individual with history of alcohol use in the 12 months prior to the date of survey was considered as an alcohol user for the purpose of this study.(8) Each household was classified as an alcohol user or alcohol non user household for the purpose of this study.

One respondent in each alcohol-user household was randomly chosen (by lottery method) for detailed interview. Female alcohol users, whenever available, were preferentially interviewed. Information pertaining to type, frequency, duration and context of alcohol was collected. Users was classified as light (less than five drinks in one sitting), or heavy users (more than five drinks in one setting ), or frequent (consuming at least once a week to daily or nearly

daily basis), or infrequent drinkers (consuming at least once a month to once or twice in a year). Effect of alcohol on health and other socio-economic condition was also assessed during the interview.

Alcohol consumption was self-reported by respondents. Respondents who either have never consumed any alcoholic beverage (lifetime abstainers) or who have previously consumed alcohol but have not done so in the previous 12 months period (former drinkers) were not asked about the frequency and quantity of their alcohol consumption. Respondents who had consumed any alcoholic beverage at least once in the last 12 months (current drinkers) were asked the detailed questions regarding the frequency and quantity of alcoholic beverages they consumed. Alcohol consumption was estimated by asking about the quantity (number of drinks per drinking day and size of a typical drink) and average frequency of the consumption of alcoholic beverages in the past 12 months. **Ethical Approval:** Ethical approval was taken from institutional ethical committee of AIIMS, Rishikesh. **Statistical Analysis:** Alcohol consumption and its socio-demographic pattern measured in percentage.

## Results

[Table 1] showed that among the 400 participants interviewed, higher percentage of alcohol consumption was seen in age group 30-39 years (45%) followed by 30% in 15-29 years age group, and 25% in >50 yrs age group.

72% of males were alcoholic as compared to only 28% females.

Majority (38%) of married participants were alcoholic as compared to 33% widow/separated/divorced and 28% unmarried participants.

Participants who were SC/ST were alcoholic (38%) as compared to OBC (34%) and other (28%).

58% of employed participants were alcoholic as compared to 42% of unemployed ones.

Participants living in rural areas (43%) were alcoholic as compared to participants living in urban (40%) and slum area (17%)

## Discussion

Various studies have been conducted in the past to determine the prevalence of alcohol consumption in general population. In our study alcohol consumption was reported higher (45%) in 30-49 years age group which was similar to the findings reported by Kumar *et al* (9) and Easwaran M *et al*

(10). However, Ghosh S *et al* (11) reported higher (65.8%) prevalence among adults of less than 25 years of age.

It was found that prevalence of alcohol consumption among males was 72% while females were only 28% alcoholic. The study findings were comparable to study done by Chethana KV *et al* (12), Bal R *et al* (13), Pati S *et al* (14), Vidhukumar K *et al* (15), Anandi B S *et al* (16), Barik A *et al* (17) and Ramanan V V *et al* (18) who also reported maximum prevalence among males i.e. 49.2%, 38.4%, 38%, 29%, 25.4%, 19% and 17.1% respectively. However, Verenkar Y J *et al* (19) reported higher (40.6%) prevalence of alcohol consumption among females.

It was found that prevalence of alcohol consumption was more among married (38%) which was comparable to study done by Ramanan V V *et al* (18) and Bal R *et al* (13).

Our study reported higher (58%) prevalence of alcohol consumption among employed whereas studies done by Kumar G *et al* (20), Ramanan V V *et al* (18) and Bal R *et al* (13) reported higher prevalence among unemployed.

Prevalence of alcohol consumption was found to be higher (43%) among rural population whereas study done by Bal R *et al* (13) reported higher (39.5%) prevalence in urban areas.

## Conclusion

In Uttarakhand, percentage of alcohol consumption is higher among middle age group (30-49 years). Total 72% of male consuming alcohol whereas females were having lower percentage for the same. Consumption of alcohol was reported higher among employed, married population. Rural population also reported higher percentage of alcohol consumption

## Recommendation

Our population requires a paradigm shift in its behavioral pattern which contributes greatly to its prevalence. A nationwide initiative to create awareness among the people of community regarding harmful effects of alcohol with main focus on children, adolescents and adults, so as to deter early initiation of alcohol

## Limitation of the study

- The results are based on cross-sectional survey, so the direction of relationship could not be established.

- Alcohol consumption is often associated with social stigma, thus systematic under-reporting could lead to a social desirability bias.

### Relevance of the study

India is generally considered as a traditional 'dry' or 'abstaining' culture (21). The present study is significant as we can know the prevalence and pattern of alcohol use in Uttarakhand population depending on age, education and other population socio-demographic characteristics, as these determinates are helpful to formulate preventive strategies.

### Authors Contribution

SR: Data collection and manuscript writing, SK: Designing the study and critical review of the paper, AP: Designing the study, NV: Data collection

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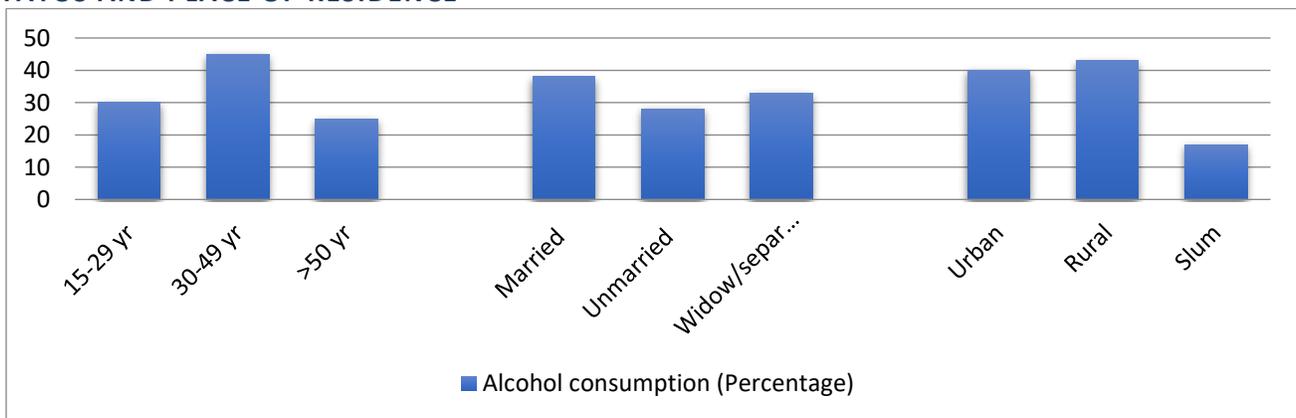
**Tables**

**TABLE 1 PREVALENCE OF ALCOHOL CONSUMPTION ACCORDING TO SOCIO-DEMOGRAPHIC CHARACTERISTICS**

Variables	Characters	Percentage (%)
<b>Age group</b>	15-29 years	30
	30-49 years	45
	>50 years	25
<b>Sex</b>	Male	72
	Female	28
<b>Marital status</b>	Married	38
	Unmarried	28
	Widow/separated/Divorced	33
<b>Caste/Social group</b>	SC/ST	38
	OBC	34
	Other	28
<b>Occupation</b>	Employed	58
	Unemployed	42
<b>Place of residence</b>	Urban	40
	Rural	43
	Slum	17

**Figures**

**FIGURE 1 PREVALENCE OF ALCOHOL CONSUMPTION ACCORDING TO AGE GROUP, MARITAL STATUS AND PLACE OF RESIDENCE**



**FIGURE 2 PREVALENCE OF ALCOHOL CONSUMPTION ACCORDING TO GENDER AND OCCUPATION**

