



## Prevalence of Alcohol Consumption and Knowledge About Alcohol at Bhimtar, Sindhupalchowk

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### ABSTRACT

**Introduction:** Alcohol causes several health problems, economic and social consequences across the world. Nepal is a multicultural and multi-ethnic country with an ambivalent regarding alcohol use according to social, religious and cultural values. Alcohol use is very common and easily available everywhere in Nepal. Objective of study is to find the prevalence of alcohol consumption and knowledge of alcohol among people at Bhimtar.

**Methods:** A cross sectional study was conducted on a total of 369 households, age above 20 years of Bhimtar, Sindhupalchowk district on November 2016. Total 41 households were selected using cluster sampling from all nine wards of Bhimtar village development committee.

**Results:** The prevalence of alcohol consumption was 232 (62.9%) in which 144 (77.4%) of males and 88 (48.1%) of females. There was 3.3 times more chance of consuming alcohol in male than female. Majority 137 (37%) consumed Raksi followed by Jaand/Chhyang 115 (31.3%) and mix 97 (26.4%). On knowledge of alcohol consumption, 280 (75.9%) and 288 (78.0%) of current drinker opined that it would effects own health and on the family respectively. After drinking alcohol 118 (31.9%) felt it relieved tiredness followed by felt better 103 (28%) and reduced stress 70 (18.9%). It affects heart and damage liver said by 72 (19.4%) and 59 (16%) respectively. There were family conflict after drinking alcohol replied by 132 (35.8%). They have good knowledge about the affect of alcohol on pregnant women. Only 50 (13.5%) of respondent expressed that it can be given to pregnant women.

**Conclusions:** The prevalence of alcohol consumption was very high. There is markedly differed in alcohol consumption by sex. It is affecting their health and family. Consumption of alcohol is financial burden and makes conflict in the family, which will also make psychological affect on their children. There is significant difference in knowledge of harm on alcohol consumption by education status. It is essential to plan and develop a specific health education program among these at-risk populations for prevention of alcohol consumption.

**Keywords:** *current drinker; economic burden; ever drinker; family conflict; initiation.*

### INTRODUCTION

Alcohol causes several health economic and social consequences across the world.<sup>1</sup> Alcohol is a psychoactive substance with dependence-producing properties that has been widely used.<sup>2</sup> A survey found that 8,974 (67.5%) respondents have consumed alcohol in Nepal.<sup>3</sup> The prevalence of alcohol dependence was found to be 2344 (25.8%) which increased with age to peak in the age group 45–54 years and was more than

twice as common in men as in women.<sup>4</sup>

Current drinkers were found 168 (39.81%) at Kathmandu valley in 2016 and male were more than

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the female on alcohol drink.<sup>5</sup> Youth who start drinking before age 15 years are six times more likely to develop alcohol dependence than who begin drinking after 20 years.<sup>6</sup> Production, sale, and consumption of alcohol are ever on the increase.<sup>7</sup> Alcohol adversely affects the fetus when pregnant women drink.<sup>8</sup>

Objective of study is to find the prevalence of alcohol consumption and knowledge of alcohol in Bhimtar, Sindhupalchowk.

## METHODS

A cross sectional descriptive study was conducted at Bhimtar, Sindhupalchowk district on November 2016. Ethical approval was taken from IRC of Kathmandu Medical College. Written consent was taken from each respondent and confidentiality of information of the respondents was maintained. The information they provided were used only for research purpose. Respondents were permanent resident of the Sindhupalchowk who were willing to participate and present during the study period were included in the study. Only one respondent was taken from each household.

$$n = \frac{Z^2 pq}{e^2}$$

Where n is sample size,

p- prevalence of alcohol consumption = 39.81%

q- prevalence of non alcohol consumption = (100-p)  
= 60.19%

Z= 1.96 at 95% confidence interval

e- allowable error (5%)

$$n = \frac{(1.96)^2 \times 39.81 \times 60.19}{5^2} = 369$$

Total 41 Households were selected using cluster sampling from all nine wards of Bhimtar village development committee.

Pre-designed and structured questionnaire was used to collect the data by interview method. Data were analyzed by using SPSS version 22.

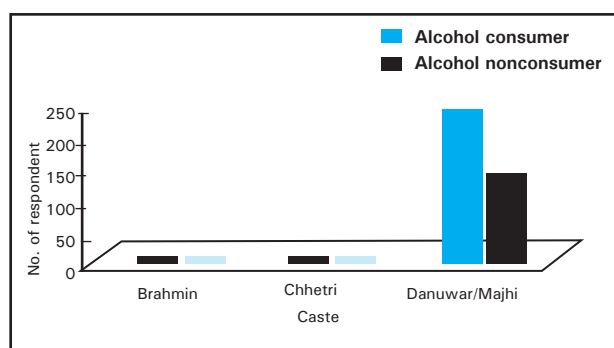
## RESULTS

The mean age of respondent was 40.67 years with 16.6 years of Standard deviation. Of the 369 study population, 186 (50.4%) were male and 183 (49.6%) were female.

**Table 1. Demographic profile of respondents with alcohol consumption.**

	Variable	Currently consuming alcohol		P value	Odds ratio	95%CI
	Yes (%)	No (%)				
Age Group (in years)	20-30	61 (49.6)	62 (50.4)	0.026	0.46	0.23-0.91
	30-40	57 (67.9)	27 (32.1)	0.008	0.99	0.47-2.08
	40-50	41 (69.5)	18 (30.5)	0.858	1.07	0.48-2.39
	50-60	37 (74.0)	13 (26.0)	0.49	1.34	0.57-3.16
	> 60	36 (67.9)	17 (32.1)	-	-	Ref.
Sex	Male	144 (77.4)	42 (22.6)	<0.001	3.33	2.36-5.80
	Female	88 (48.1)	95 (51.9)	-	-	Ref.
Occupation	Farmer	161 (66.5)	81 (33.5)	0.804	1042	0.60-3.33
	Labour	13 (54.2)	11 (45.8)	0.771	0.84	0.26-2.64
	Business	16 (55.2)	13 (44.8)	0.81	0.88	0.29-2.62
	Housewife	13 (48.1)	14 (51.9)	0.467	0.66	0.21-2.01
	Unemployed	15 (65.2)	8 (34.8)	0.62	1.34	0.41-4.36
	Others	14 (58.3)	10 (41.7)	-	-	Ref.
Marital status	Married	194 (64.9)	105 (35.1)	0.714	1.16	0.51-2.66
	Unmarried	22 (50.0)	22 (50.0)	0.93	0.62	0.23-1.67
	Others	16 (61.5)	10 (38.5)	-	-	Ref.

The majorities 123 (33.3%) were in age group 20-30 years. Total of 84 (22.8%) were in 30-40 years of age. Odds ratios increased from 0.46 to 1.34 for age group 20-30 to 50-60 respectively. The prevalence of alcohol consumption was 232 (62.9%) of which 144 (77.4%) among males and 88 (48.1%) among females. There is significant difference in alcohol consumption by sex and there was 3.3 times more chance of consuming alcohol in male than female. Respondents were asked about their main occupation, 242 (65.6%) of them were farmer, 29 (7.9%) were in business. Majority of the respondents 299 (81%) were married (Table 1).



**Figure 1.** Caste wise distribution according to consumption of alcohol.

Maximum 257 (96.7%) of study population were Danuwar/Majhi ethnic group (Figure 1).

**Table 2.** Education status of respondents with alcohol consumption.

Education Status	Currently consuming alcohol		P value	Odds ratio	95%CI
	Yes (%)	No (%)			
Illiterate	144 (67.6)	69 (32.4)	0.106	2.38	0.83-6.84
Primary	50 (71.4)	20 (28.6)	0.700	2.85	0.91-8.92
Secondary	23 (46.0)	27 (54.0)	0.963	0.96	0.30-3.09
Higher Secondary	8 (38.1)	13 (61.9)	0.607	0.70	0.18-2.69
Bachelor and above	7 (46.7)	8 (53.3)	-	-	Ref.

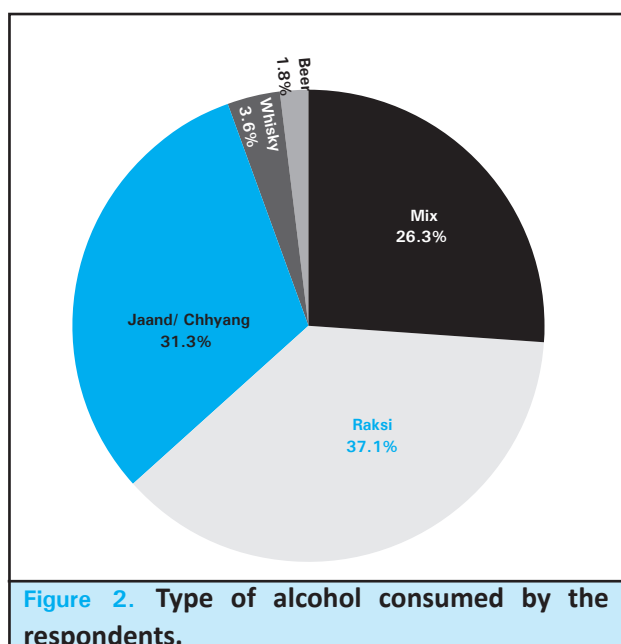
**Table 3.** Knowledge and practice of respondents about alcohol consumption by education status.

Statement		Illiterate/ Primary n (%)	Secondary and above n (%)	P value
Alcohol consumption affect's own health	Yes	198 (70.0)	82 (95.3)	<0.001
	No	85 (30.0)	4 (4.7)	
Effect on the family by alcohol consumption	Yes	214 (75.6)	74 (86.0)	0.041
	No	69 (24.4)	12 (14.0)	
Alcohol can be given during pregnancy	Yes	42 (14.8)	8 (9.3)	0.189
	No	241 (85.2)	78 (90.7)	
Drink huge amounts at once	Yes	18 (9.8)	0 (0.0)	0.020
	No	165 (90.2)	51 (100.0)	
Drink more now than when first started	Yes	113 (52.8)	14 (27.5)	0.001
	No	101 (47.2)	37 (72.5)	
Drinking ever cause problems at home or work	Yes	47 (22.0)	5 (9.8)	0.049
	No	167 (78.0)	46 (90.2)	
Ever felt your needed a drink as eye opener	Yes	33 (15.4)	7 (13.7)	0.761
	No	181 (84.6)	44 (86.3)	
Ever felt you needed to cut down your drinking	Yes	123 (57.5)	33 (64.7)	0.364
	No	91 (42.5)	18 (35.3)	
Felt annoyed by people criticizing your drinking	Yes	69 (32.2)	8 (15.7)	0.019
	No	145 (67.8)	43 (84.3)	
Felt guilty about drinking	Yes	107 (50.7)	23 (45.1)	0.472
	No	104 (49.3)	28 (54.9)	

Majority of the respondents 209 (57.7%) were illiterate and out of them 144 (67.7%) consumed alcohol. There is more than two times chances of consuming alcohol with the low level of education (illiterate and primary) compared to higher level of education (Table 2).

In Nepal, the legal age for alcohol drinking is 18 years. This study showed that majority of the respondents initiated drinking alcohol before the legal age of drinking. The mean age of initiation of alcohol consumption was 16.7 years with standard deviation of 5.2 years. Among those who consumed alcohol, 72 (31.0%) consumed daily and mostly 118 (50.9%) in the evening. The study found that majority 206 (88.9%) consumed alcohol at home.

When the effect of alcohol consumption on health were asked to respondents, 198 (70.0 %) and 82 (95.3%) of illiterate/ primary and secondary and above opined that it would effects own health respectively which is significant difference. There will be effect on the family by alcohol consumption positively replied by 214 (75.6%) and 74 (86.0%) of illiterate/ primary and secondary and above respectively (Table 3).



Majority of respondent consumed local or homemade alcohol, 86 (37.1%) consumed Raksi and 73 (31.3%) consumed Jaand/ Chhang (Figure 2).

## DISCUSSION

The mean age of initiating drinking alcohol was found to be 16.7 years. The prevalence of alcohol consumption was 62.9% of which 77.4% among males and 48.1% among females. Among the study population, 62.8%

were current drinker and 73.8% were ever consumed of alcohol. This result is similar to study conducted by Maharjan et al at Bhaktapur in 2017 where it was 67.2%.<sup>9</sup> "Adolescents and Youth Survey 2011" conducted by Ministry of Health and Population revealed that 18% of adolescents and youth reported having ever used alcohol.<sup>7</sup> In contrast to this study, result obtained from the study conducted on NCDs risk factors showed that 12.6% of age 15–29 year old respondents were current drinkers.<sup>10</sup> In the present study, odds ratio was seen to increase from 0.46 to 1.34 for age group 20–30 and 50–60 respectively. This may be due to cultural practice in that particular ethnic group. The prevalence of alcohol consumption was 48.1% among female in present study which is higher than 16.6% the findings of study conducted by Niraula et al at Sunsari.<sup>11</sup> This marked difference in prevalence may be due to study area in the present study high majority of ethnic groups Majhi/ Danuwar where alcohol is used traditionally. In the present study, the mean age of initiating drinking alcohol was found to be 16.7 years. This result was consistent with studies conducted by Khanal P,<sup>12</sup> Thapa P,<sup>5</sup> and Maharjan PL<sup>9</sup> where mean age of first exposure was 17.94 years, 17 years and 17 years respectively. In present study half of current drinkers drank at evening which is consistent with the result of Thapa P where it was 45.24%.<sup>5</sup> In the present study, one third of the respondents (31%) were found to drink daily. In contrast to this result, study conducted by Thapa P<sup>5</sup> showed that (13.1%) the respondents consumed alcohol daily and study by Dhital R reported only 11% consumed daily.<sup>13</sup> In this study, most of the respondents (37%) consumed Raksi. This finding was remarkably higher than finding of Thapa P where it was 13.69%.<sup>5</sup>

The present study revealed that 26.3% of respondent consumed mix alcohol which was higher than the finding of Maharjan PL<sup>9</sup> where it was 19.4% and lower than finding of Thapa P where it was 30.36%.<sup>5</sup>

When the effect of alcohol consumption on health were asked to respondents, 198 (70.0 %) and 82 (95.3%) of illiterate/ primary and secondary and above opined that it would affects own health respectively which is significant difference (P value <0.001). There will be effect on the family by alcohol consumption positively replied by 214 (75.6%) and 74 (86.0%) of illiterate/ primary and secondary and above respectively. There is significant difference in knowledge of harm on alcohol consumption by education status (P value <0.05).

Limitations of present study were larger sample size and different community participants will give clearer picture.

## CONCLUSIONS

The prevalence of current alcohol consumption was very high when compared to study conducted on STEPS Survey Nepal 2013. Gender wise there is markedly differed in alcohol consumption. It is affecting their health and family. Consumption of alcohol is financial burden and makes conflict in the family, which gives psychological impact on their children. There is significant difference in knowledge of harm on alcohol consumption by education status. It is essential to plan and develop a specific health education program

for prevention of alcohol consumption in high risk populations.

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**Conflict of Interest: None.**

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