



A Cross-sectional Study in an Urban Slum of Meerut on Education of the Head of the Family as an Important Determinant of Alcohol Use

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Authors' contributions

Author RK designed the study, performed the data acquisition, data analysis, statistical analysis, wrote the protocol, wrote the first draft of the manuscript and manuscript review. All authors read and approved the final manuscript.

Original Research Article

Received 23rd May 2013
Accepted 25th September 2013
Published 19th October 2013

ABSTRACT

Objective: To assess the association between the education of the head of the family and alcohol use.

Study Design: A community based cross-sectional study. Participants: All males aged ≥ 15 years.

Sampling: Simple Random Sampling Technique.

Statistical Analyses: Data was analysed by using appropriate statistical tests by SPSS 19.0 version and the results were expressed in proportions. Chi-square test was used and if the cell frequency was less than 5, the result was obtained by Fischer's Exact test.

Results: The association between education of the head of the family and alcohol use is statistically significant (p-value 0.026). The type and the size of the family hold no statistically significant association with alcohol use.

Conclusion: It can be very well concluded that as an educated head of the family has an impact on the use of addicting substances.

Keywords: Alcohol; education of the head of family; Socio-demographic determinants.

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1. INTRODUCTION

The harmful use of alcohol is a particularly grave threat to men. It is the leading risk factor for death in males ages 15–59, mainly due to injuries, violence and cardiovascular diseases. Globally, 6.2% of all male deaths are attributable to alcohol, compared to 1.1% of female deaths. Men also have far greater rates of total burden attributed to alcohol [1].

In 1979, the 32nd World Health Assembly declared in resolution WHA-32.40 that “*Problems related to alcohol and particularly its extreme consumption rank among the World’s major public health problems and constitute serious hazards for Health, welfare and life.*” WHO estimates that there are about 2 billion people worldwide who consume alcoholic beverages & 76.3 million with diagnosable alcohol use disorders [2].

When India became independent in 1947, Mahatma Gandhi and the Indian National Congress Party campaigned against liquor production and sales on the grounds that it was injurious to health [3].

Industrially produced beverages, particularly large style beer, are gaining popularity in many developing countries, due to issues of prestige attached to international brands and increasing marketing efforts by multinational companies [4]. There may be health benefits from replacing cottage –produced with industrially produced alcohol in terms of the purity of the product. However, these benefits should also be empirically verified, since they can easily be overstated [5]. On the other hand, it could be speculated that traditionally produced alcoholic beverages may carry the benefit of having a lower alcohol content, providing lower alcohol opportunities and preserving values of local culture (which may or may not lower the level of alcohol consumption).

The unrecorded alcohol consumption in India is estimated to be 1.7 liters pure alcohol per capita for population older than 15 for the years after 1995 (estimated by a group of key alcohol experts) [6]. The average age of initiation has been reduced from 28 years during the 80’s to 20’s during the recent years [7]. There has been a widespread agreement that the health and well-being of many young people today are seriously being threatened by the use of alcohol. The consumption pattern also varies between different cultures & societies and the last 20 years have seen substantial changes [8].

No study regarding the same has been conducted in Meerut till date. Keeping the above points in view, the present study was conducted.

2. METHODS

Community based cross- sectional study was conducted in an urban Slum, Multan Nagar in the field practice area of UHTC (Urban health and training centre) of the department of Community Medicine, SMC (Subharti Medical College), Meerut.

The study population was all males aged ≥ 15 years residing in the study area. Study period was from September 2010 to October 2011.

2.1 Inclusion Criteria

Males aged ≥ 15 years, residing in the study area have been included in the sampling universe.

2.2 Exclusion Criteria

Males residing in the study area of Meerut for less than 6 months and all the mentally challenged males were excluded from the study.

2.3 Sample Size

Sample size for the proposed study was calculated according to National Family Health Survey-3 [9] where prevalence of alcohol use in U.P. was given as 25.3% in males, therefore the sample size calculated was 324 assuming 10% non-response and considering 5% absolute error.

2.4 Sampling Technique

Simple Random Sampling Technique.

3. METHODOLOGY

The proposed study was conducted in the Urban slum of Multan Nagar in the field practice area of the Department of Community Medicine, SMC, Meerut.

First approval from the ethical committee was obtained. The study was approved by the Board of study meeting of institution. Written consent was obtained from each participant after explaining about the study. The required sample was taken using Simple random sampling technique. Sampling universe was 2112 registered families in the study area and the sampling unit was a family in this study.

All male members aged ≥ 15 years were taken from each household, where on an average there were 2 males aged ≥ 15 years based on the demographic profile of the area, therefore $324/2=162$ households were taken in order to cover the required sample size.

Individual unit (family) constituting the sample was randomly selected by Random number table method. All the male members aged ≥ 15 years were taken from each family. If male aged ≥ 15 years was not found in a family then the next family was visited. If the selected subject was not found at the first interview, date and time was taken from their family members for revisit.

3.1 Definitions Used in the Study

The following definitions were used according to AUDIT:

Current Drinker: Current drinkers are those who accepted drinking alcohol during the past one year.

Problem Drinkers: Persons scoring 8 or more on AUDIT were considered as problem drinkers.

Non-problem Drinkers: Persons scoring 1-7 on Audit were considered as non problem drinkers.

Teetotallers: Persons scoring 0 on AUDIT score were considered as teetotallers. Flemming (1996) allows the classification of problem drinkers into more specific subgroups as hazardous, dependent and harmful drinkers.

Questions 1-3 assess quantity and frequency of drinking and are used to detect 'at risk' alcohol consumption. A combined AUDIT score > 4 classifies drinking as hazardous.

Questions 4-6 screen for signs and symptoms of alcohol dependence.

A combined AUDIT score > 4 indicates the emergence of alcohol dependence.

Questions 7-10 enquire about problems caused by alcohol consumption and adverse consequences of drinking. A combined AUDIT score > 4 indicates the existence of harmful drinking.

4. RESULTS

Alcohol use is more common among the uneducated (22.9%) as compared to non-users (16.7%) though in other groups the values are almost similar with statistically significant difference (p-value 0.026). Similarly 10.4 % of the current drinkers had their head of the family graduate while 19.3% of the teetotallers had the same educational status. It was further observed that none of the current drinkers had their head of the family professional while 3.9% of the teetotallers were of the same group and this association was found to be statistically significant (Table 1).

Table 1. Association between teetotallers and drinkers with education of the head of the family

Education (Head of the family)	Pattern of drinking according to AUDIT score				Total n=324	
	Teetotallers (Audit score=0) n=228		Drinkers (Audit score >0) n=96		No.	%
	No.	%	No.	%		
Illiterate	38	16.7	22	22.9	60	18.5
Primary School	17	7.5	6	6.2	23	7.09
Middle School	27	11.8	22	22.9	49	15.1
High School	63	27.6	24	25.0	87	26.8
Intermediate	30	13.2	12	12.5	42	12.9
Graduate	44	19.3	10	10.4	54	16.6
Professional	9	3.9	0	0	79	24.3

$$\chi^2 = 14.226, df=6, pvalue=0.026$$

When logistic regression was applied, the education of the head of the family did not retain its significance.

The current drinkers and teetotallers were almost equally distributed in the study population as far as the type of family was concerned and the difference in the two groups has not been found to be statistically significant (p-value 0.588); (Table 2).

65.6% of the current drinkers and 59.6% of the teetotallers had family size of 5-9 while the current drinkers and teetotallers were found to be equally distributed in the family size of 1-4 and this association was not found to be statistically significant (p-value 0.375); (Table 3).

Table 2. Association between alcohol use and the type of family of respondent

Type of Family	Teetotallers (Audit score=0) n=228		Current Drinkers (Audit score >0) n=96		Total n=324	
	No.	%	No.	%	No.	%
Nuclear	116	50.9	52	54.2	168	51.9
Joint	112	49.1	44	45.8	156	48.1
Total	228	100	96	100	324	100

$$\chi^2 = 0.239, df = 1, p\text{-value} = 0.588$$

Table 3. Association between alcohol use and the size of family of respondent

Family Size	Teetotallers (Audit score=0) n=228		Current Drinkers (Audit score >0) n=96		Total n=324	
	No.	%	No.	%	No.	%
1-4	61	26.8	25	26.0	86	26.5
5-9	136	59.6	63	65.6	199	61.4
≥10	31	13.6	8	8.3	39	12.0
Total	228	100	96	100	324	100

$$\chi^2 = 1.960, df = 2, p\text{-value} = 0.375$$

4. DISCUSSION

Distribution of the study population is that almost half (51.9%) of the study population was having as nuclear type of family while 48.1% were having joint family in the present study which is consistent with that of John A et al. [10].

Surprisingly, no such study has been found till date which was based on the relationship of the education of the head of the family with alcohol use.

As far as the type of family is concerned, the teetotallers and current drinkers were almost equally distributed in accordance with the type of family in the present study which is consistent with the findings of John A et al. [10].

The association between family type and alcohol use was not statistically significant in the index study which is comparable with that of Goswami et al. [11].

On the other hand, when family size is taken into account, the association between family size and alcohol use was not statistically significant which is consistent with our findings in Ahmad A et al. [12].

5. CONCLUSION

This study is a cornerstone in enlightening the determinants of alcohol use where the education of the head of the family plays an important role. Thus, it is very important to know that literacy of the head of the family in itself plays an important role towards addiction which needs to be curbed in order to win over the rising trend of non-communicable diseases.

ETHICAL APPROVAL

The study was approved by the board of study meeting of institution.

SOURCE OF FUNDING

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors

ACKNOWLEDGMENTS

I would like to thank the almighty who helped to make this research a real original piece of work.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:

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