Research Article

Alcohol consumption among adult males in urban area of Thanlyin Township, Yangon Region, Myanmar

Win Myint Oo*, May Soe Aung, Pa Pa Soe, Su Htar Lwin, Myat Ohnmar Win

Department of Preventive and Social Medicine, University of Medicine (1), Yangon, Myanmar

*Correspondence:
Dr. Win Myint Oo,
E-mail: drwinuch@gmail.com

ABSTRACT

Background: Alcohol consumption is a major cause of morbidity and mortality worldwide. It is frequently related to health and behavioural problems as well as socio-economic hardship. Therefore, this study was conducted to determine the prevalence and risk factors of alcohol consumption among adult males residing in urban area of Thanlyin Township, Yangon Region.
Methods: A cross-sectional study was conducted among 380 adult males. Multi-stage random sampling was applied. Data entry and analysis was done using Stata 11.0 statistical package.
Results: The prevalence of current alcohol drinking, ex-drinking and never drinking were 20.5%, 9.0% and 70.5%, respectively. There was a significant decreasing trend of alcohol consumption across the levels of age-group. Age, education status and practicing other health-risk behaviours such as smoking and betel chewing were detected as significant risk factors of alcohol consumption. Ever smokers and ever betel chewers were about 4 times more likely to be ever alcohol user compared to their counterparts even if age and education level were adjusted. By controlling smoking and betel chewing habits, 79.2% and 76.6% of existing prevalence of alcohol consumption among respondents would be reduced, respectively.
Conclusions: There is an urgent need to curb the habit of alcohol consumption among adult males living in urban area, especially young adults. Alcohol and tobacco control policies in Myanmar should be strengthened or reinforced. Tobacco control program also needs to be intensified. Health education and health promotion activities should be enhanced in order to reduce alcohol consumption in the country.

Keywords: Adults, Alcohol consumption, Males, Urban, Yangon

INTRODUCTION

Alcohol consumption is a worldwide problem and frequently related to health, behavioural and socio-economic problems.[1-4] The occurrence of these alcohol related problems is higher in males than in females of the same age group.[5,6] Almost 6% of total global deaths (7.6% for males and 4% for females), or 3.3 million deaths were related to alcohol consumption in 2012.[7] Besides, alcohol consumption is the leading cause of deaths among males between the ages of 15 and 59 years,

or among people aged 15-49 years.[8,9] In the United States of America, it is the third leading cause of preventable deaths and alcohol related problems cost US$ 223.5 billion in 2006.[6,10] Globally, it is the fifth leading cause of premature death and disability.[8] In Myanmar, non-communicable diseases are growing concern due to changing life styles and socio-economic development.[11,12] Previous surveys showed that the prevalence of alcohol consumption ranged between 16.2%[13] and 44.6%.[11] Therefore, the present study was conducted to determine the prevalence and risk factors of alcohol consumption

among adult males living in urban area of Thanlyin Township, Yangon Region during 2013.

METHODS

A cross sectional analytic study was conducted in 2013 at four randomly selected wards of Thanlyin Township. Multistage random sampling procedure was applied. Four wards (out of ten) were chosen randomly at the first stage. Then households were selected using systematic random sampling procedure. Finally one adult male of a particular household was chosen randomly. Epi-info version 7 statistical package was used in calculating sample size, and estimated prevalence of alcohol consumption was set at 16.2%[13] with 95% confidence level and 5% precision. A total of 380 adult males were recruited into the study. The necessary data were collected by face-to-face interviews after getting informed written consent.

The sufficient time for responses was allowed as well as privacy was observed for accurate and detailed information on household's income and the use of alcohol. Questionnaire used in the study was pretested. The information on alcohol consumption, smoking and betel chewing was based on self-report of the participants. The reported habit of alcohol consumption was categorized into current drinker, ex-drinker and never drinker for descriptive purposes. However, this habit was regrouped into ever drinker and never drinker in assessing the risk factors. The habits of smoking and betel chewing were also classified into two groups; ever user and never user. Therefore, ever user included both ex-user and current user. Age, education, marital status, occupation, household's monthly income and other health-risk behaviours such as smoking and betel chewing were considered as potential risk factors of alcohol consumption.

Statistical analysis

After checking the survey forms for consistency and completeness, data entry and analysis was done using Stata 11.0 statistical package. Pearson Chi-square test as well as Chi-square test for trend was used. Multivariate logistic regression analysis with backward deletion procedure was applied in assessing the risk factors of alcohol consumption. Those variables whose p value was ≤0.25 in univariate analysis were selected as candidate variables for multivariate analysis.

RESULTS

Altogether 380 adult males from urban area of Thanlyin Township were recruited into the study. Most of the respondents (45.8%) were between the ages of 41 and 60 years. Age, education status, monthly household's income, occupation and marital status of the participants are shown in Table 1.

Table 1: Age, education status, monthly household's income, occupation and marital status of respondents.

General characteristics	Frequency (n=380)	Percent
Age group (years)*		
20-40	99	26.0
41-60	174	45.8
>60	107	28.2
Education status		
Low	83	21.8
Medium	232	61.1
High	65	17.1
Monthly household's income		
Low (<median)	157	41.3
High (≥median)	223	58.7
Occupation		
Present	349	91.8
Absent	31	8.2
Marital status		
Currently married	351	92.4
Currently single	29	7.6

*Mean ± SD age of the respondents were 51.3 (14.8) years.
**Median (range) household's income was 200000 (5000-2000000) kyats.

The proportions of current drinkers, ex-drinkers and never drinkers among respondents were 20.5%, 9.0% and 70.5%, respectively. The prevalence of self-reported habits of alcohol consumption, smoking and betel chewing are shown in Table 2. The prevalence of betel chewing was the highest (47.1%) whereas that of alcohol consumption was the lowest (29.5%) among participants.

Table 2: The habits of alcohol consumption, smoking and betel chewing among respondents.

Variables	Frequency	%	95% CI
Alcohol consumption			
Ever drinker	112	29.5	24.9, 34.3
Never drinker	268	70.5	65.7, 75.1
Smoking			
Ever smoker	168	44.2	39.1, 49.4
Never smoker	212	55.8	50.6, 60.9
Betel Chewing			
Ever user	179	47.1	42.0, 52.3
Never user	201	52.9	47.7, 58.0

There was a significant decreasing trend of alcohol consumption across the levels of age-group (p=0.019). It means that the older the age of the male urban dwellers, the lesser the habit of alcohol consumption among them. However, opposite finding was observed between education status and alcohol consumption. Although the trend was not statistically significant (p=0.093), the prevalence of alcohol consumption among respondents was increasing along with their education status. Monthly household's income, occupation and marital status were not significantly related to alcohol consumption. There

was significant relationship between alcohol consumption and other health-risk behaviours such as smoking and betel chewing (Table 3). Attributable fractions of smoking and betel chewing on alcohol consumption were 79.2% (95% CI: 65.6%, 87.5%) and 76.6% (95% CI: 61.2%, 86.0%), respectively. It means that about 80% of the existing prevalence of alcohol consumption would be avoided by controlling smoking or betel chewing habits among study population.

Table 3: Relationship between alcohol consumption and potential risk factors.

Potential risk factors	Alcohol consumption		p value
	Present	**Absent**	
Age group			
20-40 (n=99)	34 (34.3%)	65 (65.7%)	
41-60 (n=174)	57 (32.8%)	117 (67.2%)	0.0.19*
>60 (n=107)	21 (19.6%)	86 (80.4%)	
Education			
Low (n=83)	22 (26.5%)	61 (73.5%)	
Medium (n=232)	64 (27.6%)	168 (72.4%)	0.093*
High (n=65)	26 (40.0%)	39 (60.0%)	
Monthly income			
Low (n=157)	49 (31.2%)	108 (68.8%)	0.533**
High (n=223)	63 (28.3%)	160 (71.7%)	
Occupation			
Present (n=349)	102 (29.2%)	247 (70.8%)	0.723**
Absent (n=31)	10 (32.3%)	21 (67.7%)	
Marital status			
Married (n=351)	104 (29.6%)	247 (70.4%)	0.817**
Single (n=29)	8 (27.6%)	21 (72.4%)	
Smoking			
Ever smoker (n=168)	79 (47.0%)	89 (53.0%)	<0.001**
Never smoker (n=212)	33 (15.6%)	179 (84.4%)	
Betel chewing			
Ever user (n=179)	80 (44.7%)	99 (55.3%)	<0.001**
Never user (n=201)	32 (15.9%)	169 (84.1%)	

*Chi-square test for trend; **Pearson Chi-square test

Table 4: Results of univariate and multivariate analyses in assessing the risk factors of alcohol consumption.

Potential risk factors	Univariate analysis		Multivariate analysis	
	OR (95% CI)	**p value**	**OR (95% CI)**	**p value**
Age	0.98 (0.96, 0.99)	0.003	0.98 (0.96, 0.99)	0.019
Marital status*				
Single	Reference			
Married	1.11 (0.47, 2.58)	0.817		
Level of education				
Low	Reference		Reference	
Medium	1.06 (0.60, 1.86)	0.850	0.99 (0.53, 1.87)	0.980
High	1.85 (0.92, 3.71)	0.083	2.34 (1.05, 5.22)	0.038
Occupation*				
Absent	Reference			
Present	0.87 (0.39, 1.91)	0.723		
Monthly household's income	0.99 (0.99, 1.00)	0.135		
Smoking				
Never smoker	Reference		Reference	
Ever smoker	4.81 (2.98, 7.78)	< 0.001	4.40 (2.64, 7.35)	<0.001
Betel chewing				
Never user	Reference		Reference	
Ever user	4.27 (2.64, 6.89)	< 0.001	3.53 (2.09, 5.98)	< 0.001

*Not selected for multivariate analysis because p value in univariate analysis was >0.25 (i.e., cut-off points); **Selected for multivariate analysis but not included in the final model.

Results of univariate and multivariate logistic regression analyses are shown in Table 4. Age, education, and other health-risk behaviours such as smoking and betel chewing were identified as significant risk factors of alcohol consumption. Smokers and betel chewers were about 4 times (4.4 times for smokers and 3.5 times for betel chewers) more likely to be alcohol drinkers compared to their counterparts even if their ages and education levels were adjusted.

DISCUSSION

The proportions of current drinkers and ex-drinkers detected in the present study were lower than those found in a nation-wide survey done in Myanmar during 2009[11] (20.5% versus 31.2% for current drinkers, and 9.0% versus 13.4% for ex-drinkers). This may be due to difference in study area because the present study was conducted in urban area of one township. Therefore, findings of the present study did not represent the country's situation, or people residing in the study area practiced this health risk behaviour less than those living in the rest of the country. Similarly, the prevalence of ever drinking habit among study population was lower than those of previous studies conducted in regional countries (such as Thailand[5] and India[4,14,15]) as well as extra-regional countries (such as Brazil,[16] England[17] and USA[18,19]).

These discrepancies may be due to differences in the time of study or in age and sex distribution of the subjects or in data collection method or in operational definition of alcohol consumption used in the studies. According to the World Health Organization, alcohol consumption is the leading cause of death among males aged 15-59 years globally while it is the most important risk factor for disease and disability in middle income countries.[8] In the present study about one third of adult males aged 20-60 years were found to be ever users of alcohol. Therefore, alcohol consumption among study population should be regarded as a priority health problem that needs to be controlled urgently.

Age, education and other health-risk behaviours such as smoking and betel chewing were identified as risk factors of alcohol consumption in this study. These findings are consistent with those of previous studies carried out in different countries. Independent studies done in India[4], Cambodia,[20] Thailand,[3,5,21] Brazil[16] and United States of America[22] reported that age was significantly related to alcohol consumption. Similarly, studies conducted in Thailand,[3] Cambodia[20] and Brazil[16] concluded that education was significantly associated with the use of alcohol. The significant relationship between smoking and alcohol consumption was also found out in previous studies.[20,22,23] This finding highlights that health-risk behaviour has never come alone; all health-risk behaviours have to be controlled simultaneously.

CONCLUSION

There is an urgent need to curb the habit of alcohol consumption among adult males living in urban area, especially young adults. Alcohol and tobacco control policies in Myanmar should be strengthened or reinforced. Tobacco control program also needs to be intensified. Health education and health promotion activities should be enhanced in order to reduce alcohol consumption in the country.

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