

# PATTERN OF ALCOHOL DRINKING AMONG ADULTS IN PHA-AN TOWNSHIP, MYANMAR

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**ABSTRACT:** Alcohol drinking is one of the most risky health behaviours that might lead to several health problems and even to the death. The objective of this study was to assess the alcohol drinking patterns among the adults in Pha-An township, Myanmar which is located in South East part of Myanmar. *Method:* Data collection was conducted by face to face interviews to total participants 378, in which 264 from urban and 114 from rural areas. A structured questionnaire consisted of Alcohol Use Disorder Identification Test (AUDIT) and Time Line Follow Back (TLFB) for the last two weeks was used for face to face interviews. The data collected were analysed by descriptive analysis. *Result:* The results described more than 50 % of participants have alcohol drinking in their life time and alcohol drinking is more common in male participants. The three most preferred types of alcohol consumed in this area were Palm Tree Juice (86.5% of drinkers), Beer (61.3% of drinkers) and Home-made alcohol (42.3% of drinkers) in their life time. Among the participants who drank alcohol in the last two weeks, about 60% drank alcohol 1 to 5 times and over 30% drank more than 30 standard drinks (2.14 SD per day) in the last two weeks. *Conclusion:* According to the findings of this study, more than 50% of participants drink alcohol and it is more common in male participants than female participants. Palm tree juice and homemade alcohol drinking were common in that area. *Recommendation:* It is strongly recommend testing the quality, safety and strength of the alcohol commonly consumed in that areas especially palm tree juice and homemade alcohols.

**Keywords:** Alcohol, Alcohol drinking, Myanmar

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## INTRODUCTION

Alcohol can be defined as ethyl alcohol and can be produced by fermentation or distilling of grains, seeds and fruits. There are so many varieties of alcohol around the world. However, the hazards and consequences of alcohol could not be ignored.

In every year, the harmful use of alcohol results in 3.3 million death [1]. Harmful use of alcohol has been recognized as a major risk factors for morbidity and mortality [2]. The harmful alcohol use plays as the third largest contributor for GBD (global burden of disease) which result in 3.8% of all deaths and 4.6% of all DALYs (disability adjusted life years lost) [3].

In our South East Asia region, the alcohol

consumption is increasing gradually and total Adult Per Capita consumption (APC) was 2.20. The unrecorded APC is 1.52 and this is the 69% of total APC for South East Asia region [4]. In Myanmar, total population is over 48 million, population over 15 years is 73% and Population in urban areas is 31%. World Bank ranks Myanmar as a Low income country. Total APC for Myanmar is 0.9 (recorded is 0.5 and unrecorded is 0.4) [4]. Therefore, 44.4% of total APC of Myanmar is contributed by unrecorded APC. For the drinkers only, total APC is 7.22 (male is 7.43 and female is 4.44). The percentage of heavy episodic drinker of male is 18.7 and for female is 3.3 [4].

Pha-An township is a capital city of Karen State and is situated beside the Asia Highway. Therefore, it is one of the important areas in the trading between Thailand and Myanmar and it is also a central point

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and entrance city to Karen state. After cease firing agreement between the Myanmar government and Karen National Union, the economy of the Karen state started growing very quickly and the areas around the Pha-An Township became crowded and developed. As alcohol is a legal and easily available substance, it can be said to be increased for those kind of situation. Generally, the alcohol consumption is highest in the adult and start to increase from the age group of 18 to 24 which is the highest age group for alcohol consumption and it started to reduce from age group of 55 years to 64 years [5].

Therefore this study aimed to assess the pattern of alcohol drinking among the adult people from Pha-An Township, Karen state, Myanmar and to get the information about the alcohol consumption of that area.

### METHOD AND MATERIALS

This study was a cross-sectional study and conducted in Pha-An Township, Myanmar, targeted to adults from both urban and rural areas. The total number of participants for this study was 378 and it was calculated by using Krejcie Morgan formula.

$$S = \frac{X^2NP(1-P)}{d^2(N-1) + X^2P(1-P)}$$

$$= \frac{3.841(32,262)(0.5)(1 - P)}{(0.05)^2(32262 - 1) + 0.5(1 - 0.5)}$$

$$= 378$$

S = sample size

$X^2$  = Table value of chi square for one degree of freedom at the desired level of confidence, which is 3.841 for the 95% confidence level

N = the given population size of adult people (32,262)

P = the population proportion (assumed to be 0.05 because this would provide the maximum sample size)

d = the degree of accuracy expressed as a proportion (0.05)

The samples were collected 70% from urban areas and 30% from rural areas according to the distribution of urban and rural population. There were two stages in sampling, purposive sampling to choose the study township, cluster sampling for choosing urban areas and purposive sampling for the rural areas. A structured questionnaire was used and included four parts, 1) Socio-demographic characteristics 2) Assessments of alcohol drinking 3) Alcohol used disorder identification Test and 4)

Time line follow back (TLFB). AUDIT is a standard screening tool developed by WHO to assess the excessive alcohol drinking [6, 7]. TLFB is a tool to assess the drinking pattern (type, amount and frequency) of the participant only in the last two weeks because it would not be easy for them to memorize their drinking pattern long time ago [8]. A standard drink was defined as a drink containing 10 grams of pure ethanol.

### DATA ANALYSIS

Data analysis was carried out by using SPSS version 16.0 (University's license). Descriptive analysis was used to describe the socio-demographic characteristics and patterns of alcohol consumption.

### ETHICAL CONSIDERATION

The ethical consideration was approved by the ethical committee of Chulalongkorn University and the number of approval certificate was COA No. 036/2014.

### RESULTS

Seventy percent of participants were from urban areas and thirty percent from rural areas. The detail characters of socio-demography were described in Table 1. The major population in this study was Buddhist, 62.7% followed by population of Christian 34.9%. The population of Karen participants in this study contributed 66.7% and Burmese was 29.4%. Chinese and Indian were minority in this study.

Among total participants of 378 in this study, 56.9% (215 participants) drank alcohol in their life time. In each gender, 77.9% of male participants and 32.1% of female participant had alcohol drinking behavior.

In this study, six types of alcohol commonly consumed in the study were listed and among them palm tree juice drinking was common in this study areas and it contributed 86.5% in life time drinking and 56.2% in one year drinking. It was followed by beer drinking in life time 61.3% and one year beer drinking 46.5% as mentioned in Table 2. In one month and one week alcohol drinking, beer drinking was higher than that of palm tree juice. However it can be concluded that the three most preferred types of alcohol for life time drinking in this study areas were palm tree juice, beer and homemade alcohol as described in Table 2.

Time line follow back for the last two weeks was conducted to assess the frequency and amount of alcohol drinking in the last two weeks. It would be better if the drinking pattern could be assessed for more than two weeks in TLFB but it was not

**Table 1** Demographic characteristics n=378

Variables	Urban n=264		Rural n=114		Total n=378
	Male n=143 n (%)	Female n=121 n (%)	Male n=61 n (%)	Female n=53 n (%)	
<b>Age (years)</b>					
19-24	49 ( 34.3% )	39 (33.2%)	21(34.4%)	15(28.3% )	124(32.8%)
25-44	51 ( 35.7% )	41 (33.9%)	18(29.5%)	26(49.1%)	136(36%)
45-65	43 ( 30.0% )	41 (33.9%)	22(36.1%)	12 (22.6%)	118(31.2%)
<b>Religion</b>					
Buddhist	95(66.4%)	60(49.6%)	46(75.4%)	36(67.9%)	237(62.7%)
Christian	43(30.1%)	57(47.1%)	15(24.6%)	17(32.1%)	132(34.9%)
Hindu	2(1.4%)	2(1.7%)	0(0%)	0(0%)	4(1.1%)
Islam	3(2.1%)	2(1.7%)	0(0%)	0(0%)	5(1.3%)
<b>Ethnicity</b>					
Burmese	58(40.6%)	45(37.2%)	4(6.6%)	5(9.4%)	112(29.6%)
Karen	76(53.1%)	70(57.8%)	57(93.4%)	48(90.6%)	251(66.4%)
Indian	5(3.5%)	4(3.3%)	0(0%)	0(0%)	9(2.4%)
Chinese	4(2.8%)	2(1.7%)	0(0%)	0(0%)	6(1.6%)
<b>Educational status</b>					
Never been to school	0(0%)	2(1.6%)	3(4.9%)	0(0%)	5(1.3%)
Primary	12(8.4%)	18(14.9%)	11(18.0%)	17(32.1%)	58(15.3%)
Middle	18(12.6%)	18(14.9%)	19(31.2%)	17(32.1%)	72(19.1%)
High school	48(33.6%)	50(41.3%)	24(39.3%)	15(28.3%)	137(36.2%)
Graduate and above	65(45.4%)	33(27.3%)	4(6.6%)	4(7.5%)	106(28.1%)
<b>Monthly income (US \$)</b>					
0	41(28.7%)	51(12.3%)	17(27.9%)	17(32.1%)	126(33.3%)
1-99	27(18.9%)	27(22.2%)	31(50.8%)	35(66.0%)	120(31.7%)
100-299	53(37.1%)	36(29.7%)	6(9.8%)	1(1.9% )	96(25.4%)
≥ 300	22(15.3%)	7(5.8%)	7(11.5%)	0(0%)	36(9.5%)
<b>Occupation</b>					
Government employee	22(15.4%)	16(13.2%)	1(1.6% )	1( 1.9% )	40(10.6%)
Private employee	17(11.9%)	8(6.6%)	6(9.8%)	0(0%)	31(8.2%)
Business	41(28.7%)	19(15.7%)	9(14.8%)	9(16.9%)	78(20.6%)
Farmer	0(0%)	0(0%)	25(41.0%)	11(20.8%)	36(9.5%)
Vendor	9(6.3%)	21(17.4%)	1( 1.6% )	13(24.5%)	44(11.6%)
Unemployed	41(28.7%)	51(42.1%)	17(27.9%)	17(32.1%)	126(33.3%)
Other (Taxi drivers, daily workers and etc.)	13(9.0%)	6(5.0%)	2(3.3%)	2(3.8%)	23(6.1%)

**Table 2** Type of alcohol consumed by adult people n=215

Type of alcohol	Life time n (%)	One year n (%)	One month n (%)	One week n (%)
Palm Tree Juice	186 (86.5%)	121(56.2%)	64(29.7%)	34(15.8%)
Beer	132(61.3%)	100(46.5%)	70(32.5%)	58(26.9%)
Homemade alcohol	91(42.3%)	50(23.2%)	35(16.2%)	31(14.4%)
Spirit	90(41.8%)	50(23.2%)	38(17.6%)	32(14.8%)
Rum	75(34.8%)	19(8.8%)	5(2.3%)	3(1.3%)
Wine	39(18.1%)	7(3.2%)	0(0%)	0(0%)

easy for the participant to memorize and therefore TLFB was conducted only for the last two weeks. The number of participants assessed by TLFB was 118. Apart from the participants who did not drink any types of alcohol in the last two weeks, the group of participants who drank alcohol 1 to 5 times was

the highest and contributed 56.8% (67 participants). The second highest group was group of participants who drank 6 to 10 times in the last two weeks as described in Table 3.

For the assessment of amount of alcohol drinking in the last two weeks, the group of participants who

**Table 3** Comparison of frequency of alcohol drinking in the last two weeks between gender and residence n=118

Frequency of alcohol drinking/ Two weeks	Urban		Rural		Total n=118
	Male n=73 n (%)	Female n=13 n (%)	Male n=25n (%)	Female n=7 n (%)	
1-5 times	44 (60.3%)	6 (46.1%)	15 (60%)	2 (28.6%)	67(56.8%)
6-10 times	21 (28.8%)	4 (30.8%)	6 (24%)	3 (42.8%)	34(28.8%)
11-14 times	8 (10.9%)	3 (23.1%)	4 (16%)	2 (28.6%)	17(14.4%)

**Table 4** Comparison of amount of alcohol drinking in the last two weeks between gender and residence n=118

Amount of alcohol drinking/ Two weeks	Urban		Rural		Total n=118 n(%)
	Male n=73 n (%)	Female n=13 n (%)	Male n=25 n (%)	Female n=7 n (%)	
1-5 SD	14(19.2%)	2(15.4%)	3(12%)	1(14.3%)	20(17%)
6-10 SD	15(20.5%)	3(23.1%)	2(8%)	0(0%)	20(17%)
11-15 SD	6(8.2%)	0(0%)	5(20%)	0(0%)	11(9.3%)
16-20 SD	8(11%)	1(7.7%)	7(28%)	1(14.3%)	17(14.4%)
21-25 SD	4(5.5%)	1(7.7%)	1(4%)	0(0%)	6(3.6%)
26-30	2(2.7%)	2(15.4%)	0(0%)	0(0%)	4(3.4%)
Above 30 SD	24(32.9%)	4(30.8%)	7(28%)	5(71.4%)	40(35.3%)

drank more than 30 SD (2.1 SD/day) in the last two week (35.3%) was highest and it was followed by the participants who drank 6-10 SD (0.4 -0.7 SD/day) in the last two weeks (17%) as shown in Table 4. The amount of standard drink in this study was defined as a drink containing 10 grams of pure ethanol same as with Thailand, New Zealand and Australia.

## DISCUSSION

The results of this study indicated that 56.9% of all participants had alcohol drinking practice in their life time and 77.9% of total male participants and 32.1% of female had alcohol drinking. Furthermore, it could be concluded that alcohol drinking was more common in male participants than in females. It is probably due to the risk taking behavior and peer pressures among the male participants and it has consistent finding with a study from Korea [9].

The three most commonly used types of alcohol in area were palm tree juice, beer and homemade alcohol while another study from Thailand described the three most preferred types of alcohol were beer, spirit and white spirit [10]. Palm tree juice is easily available and cheap in this study areas and therefore palm tree juice became the one the most preferred types of alcohol. The other factors affecting the types of commonest alcohol in these two studies might be differences in socio-economic statuses of two different study areas.

In this study, the group of participants who drank alcohol 1 to 5 times in the last two weeks contributed 31.2% of total drinkers 215 participants.

Percentage of drinkers who drank more than 6 times in the last two weeks was 23.7% of drinkers. Another study from Israel mentioned that 60% of drinkers drank less than 5 time and only 5.1% of drinkers drank more than 6 times in the last two weeks [11]. Furthermore, it could be concluded that percentage of frequent drinkers was higher in this study.

## CONCLUSION

According to the results of this study, it can be concluded that about 60% of participant drink alcohols and percentage male drinker is higher than that of female. Three commonest types of alcohol this study areas were palm tree juice, beer and homemade alcohol. Amount and frequency of alcohol drinking in this study area were relatively higher.

## RECOMMENDATION

Alcohol control programs like buying, selling and taxation were recommended to implement and it is also recommended to target to male individuals. The quality, strength and safe of palm tree juice and homemade alcohol were recommended to be tested.

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