

Prevalence and Factors Related to Alcohol Consumption among Undergraduate Students in a Northeast Thailand Province

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Abstract

Background: Alcohol consumption among university students is increasing, especially in the north-east region of Thailand. The objectives of the study were to determine the prevalence and factors related to alcohol consumption among undergraduate students in a Northeast province in Thailand.

Method: This is a cross-sectional study. The participants were undergraduate students from universities in a Northeast province using stratified random sampling, in total was 853 participants. Data were analyzed using descriptive statistics and inferential statistics using Chi-square test with 95% significant differences.

Results: Most of participants were female, first-year undergraduate students, had grade point average (GPAX) in range 3-3.49 (from 4-level), resided in out-university dormitories, lived with friends, their income was from their parents. Their motivation for drinking consumption was mainly forced by senior students and their attitude towards alcohol was at a middle level. The prevalence rate of alcohol consumption was 56.3 percent and half of the participants were low-risk drinkers. Personal factors including sex, year of study, GPAX, place of residence, and attitude towards alcohol consumption were associated with alcohol consumption. Family factors associated with alcohol consumption were parents' occupation, regular consumption of fathers, mothers and siblings.

Conclusions: The finding suggests that personal and family factors are potential factors for undergraduate students' alcohol consumption. These factors need to be controlled in order to prevent alcohol consumption among undergraduate students. Surveillance and prevention should be done in a university, particularly among the first year students, and focusing among drinkers is essential because of drug dependence.

Keywords: alcohol consumption, factor, prevalence, university student

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Introduction

A global report on alcohol showed that alcohol was consumed 6.2 liters of pure alcohol per person among people aged 15 years or older in the year 2010. It means that people consumed 13.5 grams of pure alcohol per day and half of the alcohol consumption (50.1%) was in the form of spirits.¹ According to 50-year follow-up, an increment of the alcohol consumption was globally shown.² There are many consequences due to alcohol consumption both acute and chronic, particularly among adolescents. Children might have an accident, injuries or death due to their alcohol consumption.³ In Thailand, a research indicates that students in secondary and vocational schools might have several effects from alcohol consumption. For examples, a reduction of study and having an accident have been shown among male students, whereas hanging from alcohol consuming and decreasing the ability to learn among female students.⁴

There is no single risk factor for alcohol consumption. The combination of risk factors is environmental and familial risk factors. To clarify, some environmental factors include cultural norms, policies for controlling alcohol consumption, the feasibility of finding alcohol, and the improvement of economy.¹ Moreover, several studies in Thailand illustrate that religion, attitude towards alcohol drinking, community assets, access to alcohol drinks, age, academic success, family assets, and internal assets

are risk factors among north-eastern region adolescent students.⁵

It was reported that Thailand was ranked in the third in South East Asia on alcohol consumption. The Thai National Statistics Office reported that the trend for alcohol consumption is increasing, particularly among males and new drinkers whereas starting age to drink is decrease and lower than 15 years old.⁶⁻⁸ Rural and urban are similar in the number of alcohol consumption and the north-eastern part of Thailand was the highest percentage in occasional drink (nearly 20 percent).⁹⁻¹⁰ The prevalence of alcohol consumption is found to be 63% among early secondary school students⁵ and adolescent students in the north-eastern region are 55% low-risk drinkers.¹¹ Several other studies demonstrate that males drink five times higher than female⁹⁻¹⁰ but female youths were increasing significantly.¹² Additionally, vocational schools have more drinkers than high schools, particularly male drinkers.¹⁰ Ultimately, 47 percent of private higher education students are current drinkers, only 18% are ex-drinkers.¹³

For the pattern of alcohol consumption, more than half (54%) of secondary school male drinkers prefer beer⁵ and more than half of them (50-73%) drink alcohol once a week.^{5,14} This high prevalence and situation might be that average starting age are 19 years old among males and 25 years old among female and the adolescents prefer

to try consuming alcohol, are convinced by friends and drink for their social engagement.⁹⁻¹⁰ It can be summarized that alcohol consumption is increased, rooted in every society, seen to be normal lifestyle, is easy to buy¹⁵ and adolescents are found to be a vulnerable group for facing alcohol consumption.¹⁶

As the information described above, focusing among undergraduate students regarding alcohol consumption, especially the northeastern region in Thailand is needed in terms of prevalence and risk factors. Therefore, this study were to determine the prevalence and factors related to alcohol consumption among undergraduate students in an upper north-eastern province of Thailand. All variables would be constructed from reviewed literature. The results of this study will be used for such alcohol policies as well as interventions for prevention of alcohol consumption among university students.

Materials and Methods

This research was a cross-sectional analytical research and conducted in an upper north-eastern province of Thailand. Target population was undergraduate students in a north-eastern province of Thailand.¹⁷ Sample size was calculated for the estimation of proportion among population using the equation¹⁸ providing sample size of 853 students who participated in this study. A stratified random sampling

method was applied.

Data were collected using questionnaire containing four parts (I-IV) developed by researcher and literature review. Part I contains individual and socio-economic information such as sex, year of study and source of income. Part II involves two questions for motivation related to alcohol consumption. Part III has 16 questions concerning attitude towards alcohol consumption. Each question has three options (strongly agree, agree, and disagree) scoring from one to three. The total possible score is 30 and classified as low, middle and high level of attitude. High level of attitude means low chance to consume alcohol. Part IV contains questions from the Alcohol Use Disorders Identification Test (AUDIT) Thai version.¹⁹ It has 10 questions and scored one to four in each question. The total possible score is 40 and can be categorized as a low-risk drinker (0-7 points), hazardous drinker (8-15 points), harmful drinker (16-19 points) and dependence drinker (20 points or more). Internal consistency was carried out (Cronbach's alpha=0.89).

Ethical consideration was concerned from the approval committee for research grant (WS010/2556). The presidents of three universities were also asked for a permission for data collection. The participants were informed as voluntarily participation before data collection. Thereafter, informed consent form was signed by each participant. Each participant took approximately fifteen

minutes to complete the questionnaire.

Descriptive statistics using percentage, mean and standard deviation and inferential statistics using Pearson Chi-square test for the association between dependent and independent variables at 95% significant level.

Results

Descriptive results showed that most of the participants were female (55.6%), aged between 20–21 years old, studied in the first year of bachelor degree (32.2%), had grade point average (GPAX) in range 3–3.49 (from 4 levels) (32.3%), resided in out-university dormitories (41.4%) and lived with friends (54.5%). Most of participants gained income from their parents (93.1%), had one sibling (40.2%). Their income was between 3,100–6,000 baht per month (61.9%), their parents lived together (83.2%), their parents' occupations were both agriculturists, whereas their fathers and mothers graduated from

primary schools (40.7 and 51.8 percent, respectively). See Table 1.

The motivation for alcohol consumption was that the participants were forced by senior students (56.4%), followed by traditional events from the major they are in (50.4%). The participants consumed alcohol because they were challenged (73.7%) and needed acceptance from peers (48.9%). Most of drinking participants drank in the situation when their friends or relatives come (86.5%) and when graduation ceremony is conducted (43.4%). Most of the participants would like to drink with their friends (86.3%), followed by traditional academic chain (5.3%). Most of them had no alcohol in their places (85.0%) and newspapers/magazines was a main enabling factor contributing alcohol consumption (72.0%). The result indicated that most of participants were in the middle level and high level, accounted 68.6 and 26.4 percent, respectively.

Table 1 Socio-demographic information of the participants (n=853)

General information	No.	Percent
Gender		
Female	474	55.6
Male	379	44.4
Age (n=845)		
18–19 years	176	20.8
20–21 years	366	43.4
22 years and above	303	35.8
Mean=20.83 S.D.=1.45 Min=18 Max=29		

Table 1 Socio-demographic information of the participants (n=853)

General information	No.	Percent
Year of study (n=844)		
First year	269	32.2
Second year	178	14.8
Third year	125	21.1
Forth year	272	31.9
Grade point average (GPAX) (n=692)		
Less than 2.00	21	3.0
2.00-2.49	106	15.3
2.50-2.99	214	30.9
3.00-3.49	223	32.3
3.50-4.00	128	18.5
Mean=2.95 S.D.=0.51 Min=1.00 Max=4.00		
Place of residence (n=793)		
Out-university dormitory	328	41.4
Hired house	237	29.9
In-university dormitory	172	21.7
Family/relatives house	54	6.8
Others	2	0.2
Person to live with		
Friends	465	54.5
Senior/junior students	152	17.8
Alone	141	16.5
Parents	51	6.0
Partners	27	3.2
Relatives	17	2.0
Income per month (n=792)		
Less than 3,001 baht	216	27.3
3,001-6,000 baht	490	61.8
6,001-9,000 baht	72	9.1
More than 9,000 baht	14	1.8
Mean=4,208.84 S.D.=2,428.81 Min=1,000 Max=40,000		

Table 1 Socio-demographic information of the participants (n=853)

General information	No.	Percent
Source of income (more than one source is applied)		
Parents	794	93.1
Guardians	271	31.8
Loan/scholarship	78	9.1
Self-working	39	4.6
Others	9	1.1
Parental status		
Living together	710	83.2
Separated	62	7.3
Divorced	58	6.8
Widowed	23	2.7
Number of sibling (n=845)		
No sibling	110	12.9
One sibling	343	40.2
2-3 siblings	341	40.0
4 siblings or more	59	6.9
Year of study (n=844)		
First year	269	32.2
Second year	178	14.8
Third year	125	21.1
Forth year	272	31.9
Father's occupation (n=813)		
Agriculturists	371	45.7
Government officials	150	18.4
Merchants	109	13.4
General workers	95	11.7
Company workers	70	8.6
Others (house-workers/fishermen)	18	2.2
Mother's occupation (n=797)		
Agriculturists	367	46.1
Merchants	142	17.8
Government officials	86	10.7
Housewives	80	10.0
General workers	73	9.2
Company workers	46	5.8
Fisherwomen	3	0.4

Table 1 Socio-demographic information of the participants (n=853)

General information	No.	Percent
Father's education (n=822)		
Primary school	334	40.7
Secondary school	131	15.9
High/vocational school	151	18.4
Higher vocational school	56	6.8
Bachelor degree	106	12.9
Higher than bachelor degree	39	4.7
Others	5	0.6
Mother's education (n=810)		
Primary school	420	51.8
Secondary school	117	14.4
High/vocational school	111	13.7
Higher vocational school	42	5.2
Bachelor degree	85	10.5
Higher than bachelor degree	31	3.8
Others	4	0.5

Table 2 Alcohol consumption information of participants and their family members (n=853)

Alcohol consumption information	No.	Percent
Family members		
Father's alcohol consumption (n=841)		
Regular (more than 3 times/week)	106	12.6
Occasion (less than 3 times/week)	297	35.3
Only celebration/ special time	248	29.5
None drinkers	190	22.6
Mother's alcohol consumption (n=852)		
Regular (more than 3 times/week)	14	1.6
Occasion (less than 3 times/week)	222	26.1
Only celebration/ special time	141	16.5
None drinkers	475	55.8

Table 2 Alcohol consumption information of participants and their family members (n=853)

Alcohol consumption information	No.	Percent
Siblings' alcohol consumption (n=774)		
Regular (more than 3 times/week)	44	5.7
Occasion (less than 3 times/week)	221	28.5
Only celebration/ special time	173	22.4
None drinkers	336	43.4
Participants		
Types of drinker		
Current drinkers	480	56.3
Non-drinkers	240	28.1
Ex-drinkers	133	15.6
Age (years) of start drinking (n=613)		
Lower than 15 years	181	29.5
15 - 19 years	313	51.1
20 years and above	119	19.4
Mean=16.6 s.d.=2.50 min=5 max=23		
First time drinking in university (n=606)		
After examination	265	43.8
Traditional senior chain	148	24.4
Party with friends	134	22.1
Willing to drink	59	9.7
Having close friends are drinkers (n=613)		
Yes	542	88.4
None	71	11.6
Thinking of impact from drinking consumption towards the study(n=603)		
No impact	446	73.9
Decreased impact	127	21.1
Increased impact	30	5.0

Among participants, the prevalence of current drinkers was 56.3 percent, while that of non-drinkers was 28.1 percent. Most of the participants who were drinkers and ex-drinkers started drinking alcohol during 15 - 19 years old (51.1%) and the majority

of them drank first time after the first-year student' s examination (43.8%). Most of the drinkers had friends who drink alcohol (88.4%) and half of them drank alcohol once a week. The majority of drinkers thought that there was no impact on their studies

(73.9%). According to the drinking patterns among participants' family members, most of their fathers drank alcohol less than 3 times per week (35.3%), while most of their mothers and sibling were non-drinkers (55.8

and 43.4 percent respectively). See Table 2. In addition, among current drinkers, almost half of them were low-risk drinkers and one-third were hazardous drinkers as showed in Table 3.

Table 3 Number and percent of current drinkers regarding level of risk (n = 438)

Level of Risk	No.	Percent
Low-risk drinker (0 – 7 points)	213	48.6
Hazardous drinker (8 – 15 points)	139	31.7
Harmful drinker (16– 19 points)	34	7.8
Dependence drinker (20 points or above)	52	11.9

Mean = 9.33 S.D. = 7.869
Min = 0 Max = 40

The finding found that sex, year of study, GPAX, place of residence, fathers' and mothers' occupation, attitude towards alcohol consumption, alcohol consumption among fathers, mothers and siblings were associated to alcohol consumption with significant difference ($p < .05$). See Table 4.

Table 4 The association between independent variables and alcohol consumption

Independent variables	Alcohol consumption			χ^2	p-value
	Drinker	Non-drinker	Total		
	No. (%)	No. (%)	No. (%)		
Gender					
Male	274 (72.3)	105 (27.7)	379 (100)	71.17	<0.01*
Female	206 (43.5)	268 (56.5)	474 (100)		
Year of study					
First year	144 (53.5)	125 (46.5)	269 (100)	12.87	0.005*
Second year	121 (68.0)	57 (32.0)	178 (100)		
Third year	63 (50.4)	62 (49.6)	125 (100)		
Fourth year	148 (54.4)	124 (45.6)	272 (100)		

* 0.05 level of significance

Table 4 The association between independent variables and alcohol consumption

Independent variables	Alcohol consumption			χ^2	p-value
	Drinker	Non-drinker	Total		
	No. (%)	No. (%)	No. (%)		
Grade Point Average					
Less than 2.00	18 (85.7)	3 (14.3)	21 (100)	29.16	<0.01*
2.00 – 2.49	74 (69.8)	32 (30.2)	106 (100)		
2.50 – 2.99	141 (65.9)	73 (34.1)	214 (100)		
3.00 – 3.49	111 (49.8)	112 (50.2)	223 (100)		
3.50 – 4.00	62 (48.4)	66 (51.6)	128 (100)		
Place of Residence					
In-university dorm	101 (58.7)	71 (41.3)	172 (100)	7.95	0.04*
Out-university dorm	167 (50.9)	161 (49.1)	328 (100)		
Hired house	174 (58.6)	123 (41.4)	297 (100)		
Family house	38 (67.9)	18 (32.1)	56 (100)		
Father's occupation					
Farmer	189 (50.9)	182 (49.1)	371 (100)	8.08	0.04*
Permanent worker	134 (60.9)	86 (39.1)	220 (100)		
Merchant	68 (62.4)	41 (37.6)	109 (100)		
Non-professional worker	60 (53.1)	53 (46.9)	113 (100)		
Mother's occupation					
Farmer	191 (52.0)	176 (48.0)	367 (100)	9.36	0.02*
Permanent worker	77 (58.3)	55 (41.7)	132 (100)		
Merchant	141 (63.5)	81 (36.5)	222 (100)		
Non-professional worker	37 (48.7)	39 (51.3)	76 (100)		
Father's alcohol consumption					
Regular	71 (67.0)	35 (33.0)	106 (100)	19.79	<0.01*
Occasion	178 (59.9)	119 (40.1)	297 (100)		
Only celebration	140 (56.4)	108 (43.6)	248 (100)		
None drinker	82 (43.2)	108 (56.8)	190 (100)		
Mother's alcohol consumption					
Regular	12 (85.7)	2 (14.3)	14 (100)	22.39	<0.01*
Occasion	149 (67.1)	73 (32.9)	222 (100)		
Only celebration	79 (56.0)	62 (44.0)	141 (100)		
None drinker	239 (50.3)	236 (49.7)	475 (100)		

* 0.05 level of significance

Table 4 The association between independent variables and alcohol consumption

Independent variables	Alcohol consumption			χ^2	p-value
	Drinker	Non-drinker	Total		
	No. (%)	No. (%)	No. (%)		
Sibling's alcohol consumption					
Regular	35 (79.6)	9 (20.4)	44 (100)	21.43	<0.01*
Occasion	140 (63.4)	81 (36.6)	221 (100)		
Only celebration	101 (58.4)	72 (41.6)	173 (100)		
None drinker	165 (49.1)	171 (50.9)	336 (100)		
Attitude toward alcohol consumption					
Low (23 - 31 points)	38 (84.4)	7 (15.6)	45 (100)	15.96	<0.01*
Medium (32 - 40 points)	315 (53.8)	270 (46.2)	585 (100)		
High (41- 48 points)	127 (57.0)	96 (43.0)	223 (100)		

* 0.05 level of significance

Discussion

Overall, the study indicated that the prevalence of alcohol consumption among undergraduate students was 56.3 percent while that of non-drinkers was 28.1 percent. This prevalence was lower than the prevalence of alcohol consumption among vocational college students, showing that current drinkers are 74.5%.²⁰ However, the prevalence rate in this study is higher than several other studies showing that current drinkers in private universities were 34.8 percent¹³ and among high school students were 47.1%.²¹ It might come from free-time availability. For example, public universities have more relax times than private universities or high schools. Additionally, 18.2 percent were ex-drinkers among high school students¹³ while in this study was 15.6%, which is quite a similar percentage. In this study,

more than half of drinkers started drinking alcohol in period of 15 - 19 years which differs to a study conducted among vocational and high school students showing that starting age is 13-15 years old.²⁰⁻²¹ Either stating time is in the period of 13-15 years old or 15-19 years old but the prevalence of current drinkers will be high among undergraduate students. The transition to adolescents makes the students wishing to consume alcohol. Therefore, attitude and norms related to alcohol consumption should be implemented in the early adolescent period.²²

When analyzing the association between independent variables and alcohol consumption among undergraduate students, males are almost double than females in association with alcohol consumption. Several other studies also

show the association between sex and alcohol consumption, such as among vocation students.²¹ It might be that undergraduate students, particular males would like to be accepted from persons surrounding them²³ as they would like for social engagement and are challenged by other people. Moreover, this study showed that year of study, especially earlier years of study associated with alcohol consumption as well as seniority. Therefore, provision on gender perspective and social engagement among undergraduate students in the right way is essential and should be done in the first year of study or when undergraduate students register to a university. Otherwise, junior students will be forced for alcohol consumption from the senior students.²⁴

In this study, a lower GPAX was a risk of alcohol consumption and many drinkers thought that there was no impact on their studies from alcohol consumption. Additionally, their attitude towards alcohol consumption is at low level which is a factor for alcohol consumption in this study and another study too.²⁵ These results are in line with several other studies showing that university students go to drink with their friends and think there is no effect to their studies.²⁶⁻²⁷ Low GPAX students in this study was in a high-risk group because they might have more pressure to pass their study than those having high GPAX. They were easy to consume alcohol and being alcohol dependence. Hence, they need

to be focused on prevention and reduction of alcohol consumption.

It is apparent that family factors were associated with alcohol consumption among undergraduate students. It means that university students who had a family member is alcohol drinker, they are at risk for alcohol consumption in a university. These family determinants are found among high school students too.²⁰ Luckily, the participants in this study were low-risk drinkers which are similar among high school students (51.7%).²⁰ Strengthen family is a way to prevent or postpone for consuming alcohol.

Conclusion and suggestion

To sum up, overall prevalence of alcohol consumption among undergraduate students is 56.3 percent (prevalence among males is 72.3 percent, whereas among females is 43.5 percent). There are some various factors associated with alcohol consumption among undergraduate students which are sex, year of study, grade point average (GPAX), place of residence, parents' occupation, alcohol consumption patterns among fathers, mothers and sibling, and attitude toward alcohol consumption. Also, for those who are drinkers (evaluated using AUDIT), most of them are low-risk drinkers.

The results suggest that effective intervention strategies among university students should be implemented during

orientation for new undergraduate students, in order to prevent alcohol consumption. Risk groups among undergraduate students should take into consideration. Moreover, for those who are drinkers, intervention for alcohol reduction is needed to prevent alcohol dependence and hazardous drinking.

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