

The Relationship between Alcohol Expectancy and Alcohol-Related Problems among Public University Students

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Objective: To examine the relationship between alcohol expectancy and the alcohol-related problem in university students.

Materials and Methods: The total of 410 undergraduate students within 3 programs were sampled from a public university by purposive random sampling. A Thai Adolescent Alcohol Expectancy Questionnaire [TA-AEQ] and Drinking Problem Scale for College Students [DPS-C] were used for the data collection process.

Results: The expectancy regarding the positive effect of alcohol was at moderate level and the alcohol-related problems among university students were mild. In contrary, the health problem was at high risk. The relationship between the alcohol expectancy and alcohol-related problems found to be significant at 0.01 ($r = 0.30$) Which means that, when students have high expectations for the results of drinking alcohol they were likely to drink more and it will lead to a higher risk of problems from drinking alcohol.

Conclusion: According to cognitive social theory, the present study confirmed that alcohol expectancy, especially in expectancy for positive effect related to alcohol use and alcohol-related problems among university students. For the public health policy makers and workers, expectancy about positive effects of drinking alcohol should be one of the major concerns in health promotion and risks prevention.

Keywords: alcohol expectancy, alcohol-related problems, university students, public university

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Although alcohol consumption is linked to many harmful consequences, people continued to consume alcohol as a mean of socialization and celebration of various events. As an accepted societal norm of consuming alcohol at social events conflicted with legal mitigation that attempted to regulate alcohol consumption especially in adolescents.

University students are considered to have a higher risk for alcohol related disorders. Due to the changing society, influences such as alcohol-related advertising and adolescent lifestyle contributed as factors that increased the risk of alcohol consumption

in university students. Data from National Statistical Office in 2014⁽¹⁾ showed that the most common causes of alcohol drinking in students are social, peers influence, and curiosity.

According to social cognitive theory, people learn from observation of model performing and consequences of the performing behaviors. Whether the consequences are perceived as reward or punishment, then the observers may choose whether or not to replicate. Subsequently, the learned consequences transformed into outcome expectancies. To explain drinking behavior, it is the result of learned reward consequences of perceived positive effects of alcohol. The more expectations of the outcome, the more likely to drink. On the other hand, if the outcome is expected to be negative, they tend to drink less or reduced the frequency of drinking⁽²⁾. Expectation of alcohol's effects in adolescence can come from direct

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experiences by using alcohol or observing effects of alcohol on others as well^(3,4).

From literature review, it showed that the consequences of drinking in adolescence are different from adults. Mostly, the effects of alcohol in adult is more serious and has more impact on health than adolescence. In adolescence, alcohol intoxication may caused “hangover” and memory loss also known as “black out”. It also affects their social life such as higher aggressive tendencies both physical and verbal, unintentional sexual intercourse and drunk driving, which lead to accidents^(5,6). Moreover, it also affects their education such as missing class, and impaired academic performance⁽⁷⁾. From literature review, alcohol expectancy is directly and frequently associated with problems in university students. Somehow, the university students feel that these consequences are ordinary⁽⁸⁾.

The objective of the present study is to study the alcohol expectancy which is one of the factors that contributed to alcohol drinking behavior and alcohol-related problems in university students. Moreover, the researcher is interested in the relationship between alcohol expectancy and alcohol-related problems in a group of university students. The university in this study has a large number of students and its campus is located outside the city. Many students live in dormitories. They adapted to the new experiences which was different from the past including living on their own, socialized with friends, and increased peer pressure. They also have easier access to alcohol in this group according to social media, advertising, and friends. The easy access of alcohol may result in drinking behavior that caused alcohol-related problems.

Materials and Methods

The population in the present study was undergraduate student, who studied in the public university in the year 2016, specifically in 3 programs; Social Science and Humanities, Science and Technology, and Health Sciences. The total of 410 students were selected by purposive random sampling using the proportion of the population of each programs, and also willingness to participate. The details are as followed:

Three questionnaires were applied

- 1) Personal data such as gender, faculties, residential, and experiences in drinking alcohol.
- 2) Thai Adolescent Alcohol Expectancy Questionnaire [TA-AEQ] developed by Kheokao et al⁽⁴⁾

Consist of 2 main parts comprise of the 31-item with 4-point Likert scale ranging from ‘Strongly disagree = 1’, ‘Disagree = 2’, ‘Agree = 3’, and ‘Strongly agree = 4’. Scores of negative expectancy items were reversed.

Negative alcohol expectancies comprised of two factors:

- 1) Cognitive-motor-emotional impair (9 items) and

- 2) Religion, law and health (8 items).

Positive alcohol expectancies comprised of three factors:

- 1) Pleasure (5 items),
- 2) Sex appeal (4 items), and
- 3) Power and image (5 items)

The reliability of this questionnaire scale using Cronbach’s alpha coefficient was 0.91.

3) Drinking Problem Scale for College Students [DPS-C] created and developed by Sakulsripraset⁽⁵⁾ comprised of the 38-items with 6 rating scales (0 to 5 point) as 0 is “never” to 5 is “more than 10 times”. The scale was divided into 8 factor of problems from drinking alcohol in university students. The respondents have to choose answers that match their own experience within 1 year period. The reliability of this questionnaire scale was 0.96.

Data analysis

The data were analyzed with descriptive statistics to described the general characteristics of the population in addition to demonstration of frequency, percentage, mean and standard deviation. Pearson’s correlation coefficient analysis is used to find the relationship between variables of alcohol expectation and Alcohol-related problem in university students.

Ethical consideration

The present study was conducted with the approval of the Siriraj Institutional Review Board [SIRB], Faculty of Medicine, Siriraj Hospital, Mahidol University; Si. 124/2016.

Results

Demographic data

The data were collected from 410 students in 3 different programs and willing to participate in the present study; there were 175 males (42.7%), and 253 females (57.3%).

In the past one year, 153 students (37.7%) have not used alcohol, whereas 257 students (62.7%) have used it. Half of the students had their first drink

Table 1. Population and sample of each group divided by programs

Programs	Number of students		
	Population	The sample was calculated	Sample group
Social Science and Humanities	11,517	196	197
Science and Technology	9,257	157	155
Health Sciences	3,312	56	58
Total	24,086	409	410

between 17 to 18 years old (40.4%). The average age was 17.1 years old. The reason behind their first drink involved curiosity (26.8%) and pressure from peer or relatives (25.1%). It was also found that drinking as a method of celebration in various special occasions was the most common reason (40.7%). Beer was the most common alcoholic beverage consumed (45.6%).

Alcohol expectancy in university students

Alcohol expectancy in university students were moderate (2.21), both negative and positive expectancies were also in moderate degree (2.19 and 2.40). Also insignificant difference between male and female in alcohol expectancy (2.27 and 2.17).

From Table 2, when considered the negative expectancy domain, factor 2, which composed of religion, law and health, was at moderate level (2.56). Factor 1, which consisted of cognitive-motor-emotional impair, was in the low level of 1.90. For the positive expectancy domain, factor 3, which indicated pleasure, and factor 5, which signified power-image, was in moderate level (2.48 and 2.66, subsequently). Factor 4, sex appeal, was in the low level (1.98).

There is no difference in expectancy between students who drink and students who do not drink. Also, no difference in expectancy between male and female, as shown in Table 3.

Alcohol-related problem in university students

The mean score of DPS-C in group of students who have drink in the past one year ($n = 257$) was 22.08. The students who had drink were classified into 3 groups by using percentile. Group with percentile at 33 (DPS-C score < 9) was classified as 'mild problem'. Group with percentile at 67 (DPS-c score > 23) was classified as 'severe problem'. For the group which DPS-C score was more than 9 and lower than 23 was classified as 'moderate problem'.

There were 93 students (36.2%) in the group

with mild problem, 78 students (30.3%) in the group with moderate problem and 86 students (33.5%) in the group with severe problem.

As shown in Table 4, the highest problems from drinking alcohol in students were in health, followed by memory and cognition in both male and female students, but the 3rd most common alcohol-related problem differ in male and female students. It was study and work problems in male, but in female was emotional problems.

The relationship between the alcohol expectancies and the alcohol-related problem in students

The relationship between alcohol expectancies and alcohol-related problem correlated positively ($p < 0.01$) as well as the positive and the negative expectancy which correlated positively with the alcohol-related problem ($p < 0.05$). Considering the factors, factors 3, 4 and 5 correlated positively with the alcohol-related problem ($p < 0.05$). Only factor 2 in negative expectancy (Religion, law and health) did not related to alcohol-related problem.

Discussion

Drinking data

In Thailand, the drinking age restricted that below 18 years old is illegal, and prohibited people under 20 years old from purchasing alcohol⁽⁹⁾. According to Thailand's law, there must have no grocery stores or entertainment places which sell alcohol beverages within 500 meters away from school or university. From the research, it can be noticed that the average age of first drink was under 18 years old which is illegal and it was also the age of many first year undergraduates. This was conducted under the assumption that most of students drink alcohol for the first time when they entered university. The reasons for drinking were curiosity and pressure from peers and relatives which are the same reasons as in the other

Table 2. Descriptive statistics for negative and positive alcohol expectancy (n = 410)

Expectancy	Factor	Item	Mean \pm SD
Negative	1. Cognitive-motor-emotional impair (9 items)	Total	1.90 \pm 0.50
		1. drinker lose control	1.70 \pm 0.71
		2. drinker can't react quickly after drink	1.78 \pm 0.69
		3. Alcohol makes drinker careless	1.63 \pm 0.64
		4. Drinking makes less concentrate	1.91 \pm 0.77
		5. Alcohol slow down thinking process	1.77 \pm 0.67
		6. Alcohol makes people act that they feel sorry later	2.50 \pm 0.82
		7. Drinking makes more likely to say embarrassing things	2.02 \pm 0.72
		8. People get into argument after drink	1.87 \pm 0.70
		9. A few drinks make people get into fighting easier	1.93 \pm 0.71
	2. Religion, law and health (8 items)	Total	2.56 \pm 0.51
		1. Drinking has adverse effects future	2.47 \pm 0.84
		2. Drinking contradicts with religion beliefs	2.50 \pm 0.86
		3. Alcohol makes people become sinner	2.85 \pm 0.82
		4. Good person will not drink alcohol	2.87 \pm 0.81
		5. Drinking makes people at risk of breaking the laws	2.04 \pm 0.65
		6. Alcohol is bad for health	1.63 \pm 0.60
		7. Alcohol makes people hang over	1.91 \pm 0.58
		8. Alcohol causes problems with stomach and liver	1.66 \pm 0.59
Positive	3. Pleasure (5 items)	Total	2.48 \pm 0.54
		1. Alcohol has pleasant taste	2.08 \pm 0.71
		2. Alcohol lower tension	2.51 \pm 0.75
		3. Drinking add friendships	3.11 \pm 0.73
		4. Drinking is enjoyable	2.40 \pm 0.71
	4. Sex appeal (4 items)	5. Drinking makes drinker feel good	2.31 \pm 0.78
		Total	1.98 \pm 0.57
		1. A few drinks makes person sexier	1.78 \pm 0.70
		2. Alcohol makes people enjoy having sex	1.90 \pm 0.71
		3. Alcohol makes drinker a better lover	2.24 \pm 0.79
	5. Power-image (5 items)	4. People are more attractive after a few drinks	2.01 \pm 0.73
		Total	2.66 \pm 0.39
		1. Alcohol makes people express feelings easier	3.30 \pm 0.61
		2. Drinking makes drinker flushed	3.07 \pm 0.63
		3. Drinking makes drinker less shy	2.98 \pm 0.58
		4. Drinking makes drinker tell other people do as I want	2.01 \pm 0.63
		5. Drinking make drinker tell people to stop talking things they don't like	1.98 \pm 0.62

Table 3. Comparison of alcohol expectancy between groups

Factor	Mean \pm SD		Mean \pm SD	
	Non-drinking	Drinking	Male	Female
Factor 1	1.71 \pm 0.48	2.01 \pm 0.47	1.99 \pm 0.52	1.83 \pm 0.47
Factor 2	2.38 \pm 0.48	2.66 \pm 0.50	2.63 \pm 0.54	2.50 \pm 0.48
Factor 3	2.10 \pm 0.50	2.70 \pm 0.43	2.53 \pm 0.56	2.37 \pm 0.39
Factor 4	1.86 \pm 0.52	2.05 \pm 0.59	2.02 \pm 0.58	2.44 \pm 0.52
Factor 5	2.50 \pm 0.40	2.76 \pm 0.36	2.69 \pm 0.36	2.64 \pm 0.42

Table 4. Alcohol-related problem in each factor of the students (n = 257)

Factor	Mean \pm SD	
	Male	Female
Study and work	3.32 \pm 4.32	1.38 \pm 2.51
Behavioral risk	2.38 \pm 3.24	0.72 \pm 1.68
Relationship	2.69 \pm 3.04	1.43 \pm 1.84
Memory and cognition	4.29 \pm 4.89	2.56 \pm 2.28
Health	8.23 \pm 6.32	5.26 \pm 4.09
Emotion	3.21 \pm 4.66	1.95 \pm 2.57
Social	2.19 \pm 2.94	1.40 \pm 2.31
Alcoholism	2.30 \pm 3.39	0.91 \pm 1.35

studies (reference). The study of freshman by Morean et al⁽¹⁰⁾ found that university students who drink alcohol at younger age were more likely to drink heavily and developed alcohol related problems. According to the study of Ohannessian et al⁽¹¹⁾, it was found that adolescents who started drinking alcohol at an early age were associated with the increased of frequency and heavy drinking at the age of 20. They were more likely to have drinking problems in adulthood. Similarly, the study from Chaihanit and Dangdomyouth⁽¹²⁾ found that the age of onset in patients with alcohol dependence were negatively correlated to alcohol consumption behavior; the patients who started drinking at the age of 12 to 20 years had higher risks of psychiatric disorders. Hence, the participants in the study who started drinking at earlier age may have higher risk for development of drinking problem in the future.

Alcohol expectancy in university student

In the present study, alcohol expectancy was at moderate level. Although both positive and negative expectancy were moderate, but the score of positive expectancy was higher than the negative one. It was confirmed by the larger number of students who drink (62.7%) in comparison to students who do not drink (37.7%) which indicated that positive expectancy make people believed that they will benefited from alcoholic beverages. If people had negative expectancy more than positive ones, they were more likely to refrain themselves from drinking alcohol beverage. These finding corresponded to the study of Kheokao et al⁽⁴⁾ which studied alcohol expectancy in Thai adolescents. The study demonstrated the sample group which has higher number of subjects of those who do not drink

more than the ones who does. As a group, the score of negative expectancy was higher than the score of positive expectancy. The population with higher negative expectancy tended to have people who do not drink more than people who drink.

The work of Promchart and Ua-kit⁽¹³⁾ also supported this finding. They found that the factors which determined whether or not the subjects consumed alcoholic beverage depended on the outcome expectancy and external stimuli; if the person expected positives outcomes from drinking alcohol, they were more motivated to drink. However, if they perceived as having negative outcomes, they tend to avoid drinking alcohol.

In the present study, gender has no role in alcohol expectancy-both positive and negative expectancy as the expectancy in this questionnaires asked general questions without specification of gender. Focus group interview or open-ended questions regarding the expectancy of alcohol use would further clarified the topic clearly. The positive expectancy from alcohol may have led to many participants' first drink, the negative expectancy could have the opposing effect as limitations of alcohol consumption. However, if people drink and did not meet the expected response's goals it could caused the continuation in behaviors⁽¹⁴⁾.

Alcohol-related problems in university student

Most of these sample groups have mild to moderate problems (36.2% and 30.3%). However, from the DSP-C, item regarding health, and memory and cognition were the two problems with the highest scores found in student who had drink.

In the present study, the most common problem of alcohol affects found in students was that it made them feel sick, affects their thinking process, and their memory. These problems may contributed to other problems such as late or absence attendance from class and impaired responsibility in homework completion regardless of gender. These findings are supported by Ham and Hope⁽¹⁵⁾ who concluded that alcohol-related problems in university student were difference from problems found later in adulthood. The former variable acted as a transitory course which heavy drinking patterns were consistent into adulthood. Most of the problems found were hangover, missing class, impulsiveness, regrettable actions, falling behind in school, argument with friends, memory loss, unplanned or unprotected sexual activity, property damaged, injuries, and get into trouble with law

Table 5. Ranking of Alcohol-related problem in each factor divided by gender

Rank	Problem	Mean
1 st in male and female	Health	- Alcohol makes drinker insomnia - Have stomachache or vomiting after drinking
2 nd in male and female	Memory and cognition	- Alcohol slow down thinking process
3 rd in male	Study and work	- Late for class or work because of drinking or hangover or feel sick
3 rd in female	Emotion	- Guilt about drinking alcohol

Table 6. The relationship between the alcohol expectancy and the alcohol-related problem

	Factor	r
Alcohol expectancy		0.308**
Negative expectancy	Total	0.113*
	Factor 1 cognitive-motor-emotional impair	0.118*
	Factor 2 religion, law and health	0.073
Positive expectancy	Total	0.377**
	Factor 3 pleasure	0.380**
	Factor 4 sex appeal	0.178**
	Factor 5 power-image	0.319**

* Correlation is significant at the 0.05 level (2-tailed), ** Correlation is significant at the 0.01 level (2-tailed)

enforcement etc⁽¹⁵⁾.

The relationship between alcohol expectancy and alcohol-related problems

The results of the study found that alcohol expectancy was positively related to alcohol-related problems with statistically significant level of 0.01 ($r = 0.30$). In other words, when students have higher expectancy from alcohol consumption they were more likely to consume more and continue drinking. These drinking behaviors would subsequently lead to more problems which supported by the hypothesis in this research. According to Kijthormtham⁽¹⁶⁾, alcohol expectancies have the most positive influences on university students' drinking behavior which in turns influenced the outcomes of drinking alcohol. In addition, the study of Arthur and Brady⁽¹⁷⁾ found that alcohol expectancies are associated with positive effects of alcohol consumption significantly.

Both positive and negative expectancy, found to be positively correlated with alcohol-related problems were of statistical significant at 0.01 and 0.05 ($r = 0.11$ and 0.37 , respectively). This indicated that if these expectancy are manipulated in some ways, they will affect the students decision to drink. In other words, if the person expected a more positive outcome from

drinking the more likely they will be consuming alcohol and increased the risk of alcohol-related problems. If the person who expect the outcomes in negative way, they will drink less and it will reduced alcohol-related problems. The research of Lewis and O'Neill⁽¹⁸⁾ which studied university students found that problem drinkers held more positive alcohol expectancies than non-problem drinkers. In addition, they also have positive expectations about the immediate effects of alcohol consumption rather than long-term effects.

Expectation of alcohol effect such as drinking for pleasure feeling (factor 3), for making themselves more sexual appeal (factor 4) and for better power image (factor 5) were correlated to a western study which found that arousal expectancies, sexual enhancement, cognitive/motor function, pleasure and social assertion were found to be correlated to alcohol-related problems. For example, students who were problem drinkers had greater sexual enhancement expectancies than the students who were non-problem drinkers and related to greater problem drinking or student problem drinkers had greater expectancies for improvements in social behavior than non-problem drinkers^(15,18).

Conclusion

The alcohol expectation in university students

is at moderate level for both positive and negative expectancy while positive expectancy is higher than the negative expectancy. The alcohol-related problems in university students are mild and the alcohol expectancy is positive and statistically significant with alcohol-related problems. Prevention programs in university should aim to campaign for decrease in positive expectancy and increase the negative expectancy of using alcohol in and around university campus.

What is already known on this topic?

In Thailand, there are several of studies regarding the variables that related to drinking behavior among university students.

Some research found that alcohol expectancy was the strongest effect factor to drinking behavior and consequence in undergraduate students.

What this study adds?

The present study has shown the expectation from drinking alcohol in university students. Also, the problem that alcohol affects students. Moreover, it can be seen that which factor from the alcohol expectancy were correlated to alcohol-related problems.

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Potential conflicts of interest

None.

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