

Alcohol Use Disorder and Determinant of Alcohol Dependence among Vocational Students in the Northeast of Thailand

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Abstract

Background: Alcohol-related deaths currently comprise 3.2% of all global mortality and alcohol consumption is the 3rd leading health risk factors among Thais after unsafe sex and smoking. This research aimed to determine the pattern of alcohol use disorders and investigate factors associated with alcohol dependence among vocational students in the Northeast of Thailand.

Method: This cross-sectional study was conducted among 1,006 vocational students who were multistage random sampling from five provinces of the Northeast of Thailand to response to a self-administrated structured questionnaire. The Alcohol Use Disorder Identification Test in Thai version was used to identify prevalence of hazardous, harmful, alcohol dependence as well as some specific consequences of harmful drinking. Multiple logistic regression was performed to identify factors associated with alcohol dependence.

Result: Among the total of 1,006 vocational students, more than a quarter was hazardous drinkers (26.34%; 95%CI: 23.64 -29.18), 13.72 % (95%CI:11.65 -15.99) were harmful drinker and 11.43% (95%CI: 9.53-13.56) were alcohol dependence. Factors that were associated with alcohol dependence among vocational students were; stayed in dormitory (adj.OR=2.78; 95%CI: 1.62-4.75), used to drink and drive (adj.OR=2.21; 95%CI:1.64-2.97), studying in higher vocational program (adj.OR=2.04;95%CI: 1.55- 2.69), were tobacco user (adj.OR=1.77; 95%CI: 1.23-2.55), never been arrested for drink driving (adj.OR=1.76; 95%CI: 1.24-2.49), used to access to advertisement on alcoholic beverages from radio or television (adj.OR=1.48; 95%CI: 1.10- 1.99), university did not comply to implement no alcohol advertisement and consumption measures (adj.OR=1.47; 95%CI: 1.10-1.95), had good attitude toward drinking alcohol (adj.OR=1.44; 95%CI: 1.09-1.90) when controlling other covariates.

Conclusion: Almost half of the vocational students had alcohol use disorders, and more than ten percent suffering alcohol dependence. Peer factors, advertisement, other risk behaviors, poor law enforcement as well as personal attitude were associated with alcohol dependence among vocational students in the Northeast of Thailand.

Key words: Alcohol Dependence, Alcohol Use Disorder, Vocational students

Introduction

Drinking alcohol is widely socially accepted for relaxation and pleasure, and some people drink alcohol without experiencing harmful effects^{1,2}. However,

alcohol consumption is a causal factor of more than 200 diseases, injuries, as well as mental and behavioral disorders. The most common alcohol related health problems including alcohol dependence, major noncommunicable diseases such as liver cirrhosis, some cancers and cardiovascular diseases, as well as injuries resulting from violence and road clashes and collisions.

In 2014, the rate of alcohol consumption increased to 32.3%, of which it was 4 times higher among men

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than women³. About 3 million deaths every year resulted from harmful use of alcohol, it represented 5.3 % of all deaths. Alcohol-related deaths currently comprise 3.2% of all global mortality⁴ and the impact of excessive alcohol. Societal burden of health is known in terms of increased psychosocial problems^{5,6} and psychiatric comorbidities, avoidable illness and disability⁷. Beyond health consequences, harmful use of alcohol brings significant social and economic losses to individuals and society at large. The first category of costs is from treating medical consequences of alcohol misuse and treatment of alcohol misuse. The second category of health-related costs includes losses in productivity by workers who misuse alcohol. The third category of health-related costs is the loss to society because of premature deaths due to alcohol misuse. In addition to the health-related costs of alcohol misuse are costs involving the criminal justice system, social care, property losses from alcohol-related motor vehicle crashes and fires, lost productivity of the victims of alcohol-related crime and individuals imprisoned as a consequence of alcohol-related crime⁸.

Alcohol consumption is the 3rd health risk factor among Thais after unsafe sex and tobacco consumption. Youth starts drinking alcohol at the early age of 13 years old, therefore they have the chance to become addicted with alcohol for the rest of their life. Vocational students are more likely to drink more than ordinary students⁹. Beer and wine are popular alcoholic beverages among vocational students, their average first drinking age was 16.7 years old³. In 2014 there were 5.5 million or 37.0% drinkers in the Northeast region. In addition, 23.8% of teenagers aged 15-19 in the region were alcohol drinkers, which was higher than the national average (18.1%)⁹. The results of the consequence on young people who drink alcohol are decreasing the academic performance, low productive work and no relationship with others¹⁰.

Little is known on alcohol use disorder (AUD) situations as well as the factors influencing the most serious form of AUD, the alcohol dependence among vocational students in the Northeast of Thailand. Therefore, the objective of this study was to determine the pattern of AUD and investigate the factors associated with alcohol dependence.

Meterial and Method

Study Design

This cross-sectional study was conducted among 1,006 vocational students who were recruited by using a multistage random sampling from vocational universities from five provinces of the Northeast of Thailand including Ubon Ratchathani, Roi Et, Sakon Nakhon, Udon Thani and Chaiyaphum provinces. The inclusion criteria were students aged 15-24-year-old, lived in Northeast of Thailand and were studying in vocational program of vocational educational institutes. The Alcohol Use Disorder Identification Test (AUDIT) in Thai version was used to identify the prevalence of hazardous, harmful, alcohol dependence as well as some specific consequences of harmful drinking. In addition, factors associated with alcohol dependence among vocational students will be determined.

Data Analysis

A simple logistic regression was used to identify the association between each independent variable and alcohol dependence. The independent factors that had p-value<0.25 were processed to the multivariable analysis using the multiple logistic regression to identify the association of all determinants and alcohol dependence when controlling the other covariates. The magnitude of association was presented as adjusted odds ratio(adj.OR), 95% confidence interval(CI). P-value<0.05 was a statistically significant level.

Result

Among a total of vocational students 1006, 73.96% were males with the average age of 18.14±1.54 years old. Around one-third of them were in first year high vocational certificate (34.39%) and the highest proportion where in factory mechanical factory program (33.70%). More than half of them lived outside the municipal area (51.39%), 64.25% lived with parents. Almost all got financial supports from their parents (91.15%). Most of the parents lived together a couple (72.66%). The highest proportion of parents were employees (44.94%) with the median monthly income of 15,000 Baht.

Refer to the risk factors, 17.70% of vocational students was current smokers and 18.59% of the students drank alcohol every day to every week, 32.01%

consumed alcohol 8 to 11 days per year. About one-fifth of them had good attitude toward drinking alcohol (20.18%). 60.14% of stores put warning signs “Do not sell alcoholic beverages to younger than 18 years old persons” or “Drinking can reduce vehicles driving ability”, 60.44% of schools complied to implement no alcohol advertisement and no consumption measures in school. More than half of vocational students were sometimes drink driving, and most of them never been arrested by police officers from drink driving (79.32%), 63.22% of the stores sometimes complied to implement “Do not sell alcohol to younger than 18-year-old

persons” and more than half of stores sometimes sold alcohol during no selling alcohol periods. About 30% of these students ever hear or saw alcohol advertisement in radio or television.

More a quarter of vocational students were hazardous drinkers (26.34 %; 95%CI: 23.64-29.18), 13.72 % (95%CI:11.65-15.99) were harmful drinker and 11.43% (95%CI: 9.53-13.56) were alcohol dependence. It means that less half of the vocational students were low risk of alcohol drinking disorder (48.51%; 95%CI: 45.37-51.64) (Table1).

Table 1. Number and percentage of alcohol use disorder (AUD). (n=1,006)

AUD	Number	Percent	95%CI
Low risk drinker (0-7points)	488	48.51	45.37-51.64
Hazardous drinker (8-15 points)	265	26.34	23.64 -29.18
Harmful drinker (16-19 points)	138	13.72	11.65 -15.99
Alcohol dependence (≥ 20 points)	115	11.43	9.53- 13.56

The individual independent variable was test of association on alcohol dependence of vocational students using a simple logistic regression. The factors which had p-value less than 0.25 were proceeded to the multivariable analysis using multiple logistic regression. These factors were; used to drink and driving staying at a dormitory (adj.OR= 2.78; 95%CI: 1.62-4.75), (adj.OR=2.21; 95%CI: 1.64-2.97), were studying in a high vocational certificate program (adj. OR=2.04; 95%CI:1.55-2.69), were current smokers (adj.

OR=1.77; 95%CI: 1.23-2.55), never been arrested for drink driving (adj.OR=1.76; 95%CI: 1.24-2.49), used to hear, see alcohol advertisement on radio and television (adj.OR=1.48; 95%CI: 1.10-1.99), university did not comply with no alcohol advertisement and no alcohol consumption (adj.OR=1.47; 95%CI: 1.10 -1.95), had good attitude toward drinking alcohol (adj.OR=1.44; 95%CI: 1.09-1.90) when controlling other covariates (Table 2).

Table 2: The multivariable analysis of factors associated with alcohol dependence among vocational students in the Northeast of Thailand. (n=1,006)

Factors	Number	% AUD	OR	adj. OR	95%CI	P-value
Stay at						<0.001
Home	926	43.95	1	1		
Dormitory	80	71.25	3.16	2.78	1.62-4.75	

Cont.... Table 2: The multivariable analysis of factors associated with alcohol dependence among vocational students in the Northeast of Thailand. (n=1,006)

Factors	Number	% AUD	OR	adj. OR	95%CI	P-value
Drink driving						<0.001
Never	342	31.58	1	1		
Used to	664	53.61	2.50	2.21	1.64- 2.97	
Education Level						<0.001
Vocational certificate year 1-3	553	39.06	1	1		
High vocational certificate year 1-2	453	54.75	1.88	2.04	1.55 - 2.69	
Tobacco use						0.002
Nonsmoker	828	42.75	1	1		
Smoker	178	61.80	2.16	1.77	1.23-2.55	
Arrested by police from drank driving						0.001
Used to	798	41.98	1	1		
Never	208	62.02	2.25	1.76	1.24 - 2.49	
Hear/see advertisement on alcoholic beverages on radio and television						0.010
Never	707	43.28	1	1	1	
Used to	299	52.84	1.46	1.48	1.10- 1.99	
School complied with no alcohol advertisement and alcohol consumption measures						0.007
Comply	608	41.28	1	1		
Did not comply	398	53.52	1.63	1.47	1.10 -1.95	
Attitude toward drinking alcohol						0.009
Bad	531	39.17	1	1		
Good	475	53.89	1.81	1.44	1.09 - 1.90	

Discussion

More a quarter of vocational students were hazardous drinkers (26.34 %), 13.72 % were harmful drinker and 11.43% were alcohol dependence. It means

that only less half of the vocational students were low risk of alcohol drinking disorder (48.51%). The finding was in line with a study among Chinese adults in Hong Kong which stated that 12.03% of young men were

alcohol dependence. They first drinking was at 15.89 years of age¹¹. In addition, a study on factors influencing problematic drinking among adolescents in Khon Kaen Province reported that their average age was 17 years old, and 54.6% of them were abnormal drinking. This may be due to the nature of adolescents who were younger than 18 years of age that they are not mature enough to make right decision, too sensitive, curiosity in trying and finding new experiences in their student life¹².

The results on factors associated with alcohol dependence among vocational students in the Northeast of Thailand were used to drink and driving, staying at dormitory, studying in year 1-2 year high vocational certificate programs, smokers, never been arrested for drink driving, used to hear or see advertisement on alcoholic beverages from radio and television, school complied with no alcohol advertisement and no alcohol consumption measures, had good attitude toward drinking alcohol. All these factors were considered as determinants of alcohol dependence

Vocational students who were staying in dormitory was more likely to be alcohol dependence. They had more freedom staying a dorm to do things they like. The finding was supported by a study on youth in Nakhon Ratchasima province¹³ reported that adults lived in the areas near the shops selling alcohol had better access to alcohol.

High vocational certificate students are students who finished 3 years in vocational certificate programs. Therefore, many of them have started drinking alcohol for more than 3 years from first beginning to drink alcohol because they want to try and explore new experience^{12,13}. Drinking is consider as socially accepted in most places, and is frequently used as a social lubricant especially among young men^{1,2}. Peers or close friends had influence on alcohol drinking of vocational students. They believed that drinking alcohol can help them making friends by knowing and understanding each other in same age^{12,13}. Moreover, in this study it was found that having positive attitude toward alcohol consumption was associated with alcohol dependence among the vocational students. Many studies confirmed that attitude on alcohol had influence on consumption behaviors¹³ because attitude is a feeling that lead to decisions which depend on awareness of positive or negative effects drinking¹⁴. In

addition, among teenagers who had positive opinions on alcohol that it was not a drug or dangerous, were more likely to drink¹⁵. Some studies found that high school students who had a positive attitude toward drinking alcohol were 5.96 times more likely to drink alcohol than those with negative attitudes^{16,17}.

Refer to law enforcement, used to drink driving and never been arrested by police for drink driving had influence on alcohol dependence. These factors lead to road traffic crashes, violence, suicides and fatal alcohol-related injuries tend to occur in younger age groups⁴. Regular alcohol consumption among adolescences is associated with increased accidents, risky behaviors (including unprotected sex, antisocial behaviors and violence), as well as decreased family, social and educational functioning. There was also evidence of association between hazardous alcohol consumption among adolescence and increased level of alcohol dependence in early and later adulthood¹⁸

Smoking was associated with alcohol dependence. This finding was similar with a study in Hong Kong observed that smoking was significantly associated with alcohol dependence¹⁹. The possible reason was that those who smoked were also drank alcohol. A study reported that female teenagers who smoked during the past 1 month had 4.01 times higher risk of alcohol dependence than non-smokers¹². Moreover, a study among working age group in Phanom District Surat Thani province, found that smokers were 2.9 times more likely to drink alcoholic beverages²⁰.

Concerning the influence of advertisement, vocational students who used to hear or see advertisement on alcohol beverage from radio and television were 1.48 times higher odds of alcohol dependence than those who never exposed to advertisement on alcohol beverage from radio and television. This finding was supported by a study found that alcohol consumption behaviors was affected by exposure to television advertising campaign²¹. It could be due to frequent stimulation from media and lacking maturity, low thinking and analyzing abilities among adolescents facing with media²². Furthermore, poor conformed of schools with no alcohol advertisement and no alcohol consumption measures had influence on alcohol dependence. It could explain that strictly implemented the no alcohol advertisement and

no alcohol consumption measures would help reduced access to alcohol of vocational students.

Conclusion

Almost half of the vocational students had AUD, and more than ten percent suffering alcohol dependence. More exposed to peer, advertisement, risk behaviors such as smoking, poor law enforcement as well as good personal attitude were associated with alcohol dependence among vocational students in the Northeast of Thailand.

Acknowledgement

The authors would like to express our sincere appreciation to all vocational students for their times and information. Special thanks to the Faculty of Public Health, Khon Kaen University, Khon Kaen University, Thailand for the supports.

Ethical Clearance- Taken from the Ethics Committee of Khon Kaen University, based on the Declaration of Helsinki and Good Clinical Practice Guidelines (ICH GCP) No. HE602027.

Source of Funding- Self-funding.

Conflict of Interest- Without.

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