DRINKING RISK LEVEL AND ALCOHOL CONSUMPTION SITUATION AMONG SENIOR HIGH SCHOOL STUDENTS IN A RURAL AREA OF THAILAND

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ABSTRACT: A cross-sectional survey was conducted to assess the risk level of drinking by using the Alcohol Use Disorder Identification Test (AUDIT) as well as to explore the drinking situation among senior high school students in Phayao province, Thailand. Four high schools were randomly selected where 1,151 grade 10-11 (Mathayomsuksa 4 -5) students voluntarily participated in the survey. Data was collected by using an anonymous self-administered questionnaire. Data were analyzed by using descriptive statistic such as percentage, mean, and standard deviation. Chi-square was used to test the difference of alcohol consumption between boys and girls. The results shows that 64.9% consumed alcohol during their lifetime, 58.8% consumed last year and 35.0 % consumed in the last month. Among those who ever consumed in the previous year, most of them (65.8%) were low risk drinkers, followed by hazardous drinkers, suspected dependence and harmful drinkers with 23.1%, 5.7 % and 5.4 % respectively. The average daily intake among those who consumed in the previous month was 9.43 grams of ethanol. The most preferred beverage was beer (69.0%), followed by Spirit (49.2%), and White Spirit (37.1%). Moreover, 29.6% of them consumed Local Beverage (Lao Namkhao 10% alcohol), which can be easily prepared in the northern region of Thailand. There was significantly difference of alcohol consumption between boys and girls (*p-value*<.001). Moreover, boys were significantly higher risk of alcohol consumption among boys than girls according to AUDIT (*p-value*<.001). Among those who ever drank in their lifetime, two main causes leading drinking were social drinking (43.4%) and peer influence (29.8%). Over a quarter of them (27.9%) reported there was no specific alcohol content in their curriculum, but generally focuses on addictive substances. Conclusions, according to AUDIT majority of students were low risk drinkers and a quarter of them were high risk drinkers. Meanwhile, there was no specific alcohol content in school curriculum. Therefore, research suggests that development of alcohol prevention program for enhancing alcohol knowledge and establishing healthier alcohol use behavior among senior high school students is required.

Keywords: alcohol consumption, Risk level, AUDIT, senior high school students

INTRODUCTION

Alcohol consumption among high school students is recognized as a public health issue [1-3]. High school drinking is associated with numerous serious health risks. Consequences may include immediate and tragic events, such as drunken driving fatalities [4], as well as long-term negative effects, such as alterations of the developing brain [5] and development of alcohol abuse and dependence. There is a high prevalence of alcohol consumption among senior high school students. Over 55% of senior high school students reported having been drunk at least once in their lifetime [6, 7]. Over three-quarters of senior high school students in U.S.A. reported having consumed alcohol in their lifetime [2]. In addition, over 90% of 15-16 year students in northern Europe had drunk alcohol at some point of their lives [8]. Similarly, the Centre for Alcohol Studies in Thailand [9] reported that there was 70% increase in the number of regular drinkers among young people aged between 15 and 19 years from 1996 (4.7%) to 2007 (8.0%). Among 74 provinces surveyed in 2007, Phayao province was ranked sixth [10]. The prevalence of alcohol consumption among adolescents aged 15-19 years was pegged at 23.8%. However, there is little evidence on the alcohol consumption situation, including drinking risk levels, among senior high students in the province. Therefore, it is important to assess the drinking risk level and alcohol

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Table 1 The demographic characteristics of senior high school students.

Demographic characteristics	Grade	
	Grade 10 (n = 582)	Grade 11 (n=569)
Sex (n (%))		
Boys	230 (19.9%)	186 (16.2%)
Girls	312 (27.1%)	339 (29.5%)
Missing	40 (3.5%)	44 (3.8%)
Age (Mean ± SD)	15.49 ± 0.56	16.44 ± 0.55
Grade Point (Mean ± SD)	2.95 ± 0.62	2.71 ± 0.57
Family income (US dollars) (Mean ± SD)	248.28 ± 336.31	225.31 ± 232.48
Age first drink (Mean ± SD)	13.64 ± 1.51	14.37 ± 1.36

Table 2 Comparing of alcohol consumption between boys and girls during life time, last year and last month consumption.

Variables	Alcohol consumption						χ^2
	Ever use		Never use		Total		
	n	(%)	n	(%)	n	(%)	
Life time use							
Boys	303	(28.4)	113	(10.6)	416	(39.0)	19.76**
Girls	386	(36.2)	265	(24.8)	651	(61.0)	
Last year use							
Boys	261	(25.6)	130	(12.7)	391	(38.3)	17.34**
Girls	336	(32.9)	294	(28.8)	630	(61.7)	
Last month use							
Boys	188	(18.4)	203	(19.9)	391	(38.3)	46.24**
Girls	170	(16.7)	460	(45.1)	630	(61.7)	

** Significant at *p-value* < .001

drinking situation among senior high school students in Phayao province in order to understand the situation for establishing healthier alcohol use behavior among senior high school students.

OBJECTIVE

To assess the risk level of drinking by using the Alcohol Use Disorder Identification Test (AUDIT) and explore the alcohol consumption situation among senior high school students in Phayao province, Thailand.

METHODOLOGY

Research design and sample

This is a cross-sectional survey among four high schools in Phayao, a province in the northern part of Thailand. One thousand and one hundred fifty one (1,151) students from grade 10-11 (Mathayomsuksa 4–5) voluntarily participated in the study. Data were conducted by using an anonymous self-administered-questionnaire from 1-30 August 2011. The three-part questionnaire included questions on the demographic characteristics, alcohol consumption and the Alcohol Use Disorders Identification Test (AUDIT). Data was analyzed by using descriptive statistics to describe the demographic data and pattern of drinking. Chi-Square was used to compare the difference of drinking between boys and girls.

RESULTS

Overall, 64.9 % of senior high school students consumed alcohol in their lifetime, 58.8% ever drank last year and 35.0% ever drank last month. Among those who drank in last month, their average daily intake was 9.43 gram of ethanol. Moreover, over a quarter of them (27.9%) reported there was no specific alcohol content in their curriculum, but generally focuses on addictive substances.

Table 1 shows that there was higher number of girls than boys in both grade 10 and grade 11 with 27.1 % of grade 10 and 29.5% of grade 11. The age average of grade 10-students was 15.49 years; meanwhile, grade 11 was 16.44 years. The grade point of grade 10-students was higher than grade 11 with 2.95 and 2.11 respectively. The family income average per month of grade 10-students was 248.28 US dollars, which is higher than grade 11 with 225.31 US dollars. The average age of first drinking among grade 10 was lower than grade 11 with 13.64 years, and 14.37 years respectively.

Table 2, there was significantly difference of alcohol consumption between boys and girls. Girls had higher number of alcohol consumption than boys in two categories: life time use and last year use; meanwhile boys had higher number than girl

during last month use (*p-value* <.001).

Table 3 shows that boys were significantly higher risk of alcohol consumption among boys than girls according to AUDIT (*p-value* <.001).

Table 4, among those who ever drank in a previous year, most of them (65.8%) were low risk drinkers, followed by hazardous drinkers, suspected dependence and harmful drinkers with 23.1%, 5.7 % and 5.4 % respectively. Boys had higher risk than girls in three categories: hazardous drinkers, harmful drinkers and suspected dependence with 11.8%, 3.9% and 4.9% respectively.

The most beverages preference was beer (69.0%), followed by Spirit (49.2%), White Spirit (37.1%), Local Beverage (Lao Namkhao 10% alcohol) (29.6%) and RTD (29.0 %) respectively. Boys had high number of consumption than girl in all beverages type (Table 5).

Table 6 shows that among those who ever drank in their lifetime, causes leading drinking were social drinking (43.4%), peer influence (29.8%), try (18.1%), sadness (3.1), happiness (2.6%), parent influence (2.3%) and others (0.7%) respectively.

Table 7 shows that senior students indentified person who they preferred to get help for reducing drinking were themselves (48.3%), parents (23.8%), peers (13.3%), teachers (8.6%), health professionals (4.2%) and others (1.8%) respectively.

Table 3 Comparing of alcohol consumption between boys and girls according to the Alcohol Use Disorder Identification Test (AUDIT).

AUDIT	Boys (n=280)		Girls (n=373)		Total (n=653)		χ^2
	n	(%)	n	(%)	n	(%)	
Abstainers (0 score)	17	(2.6)	25	(3.8)	42	(6.4)	49.76**
Low-risk drinkers (1-7 scores)	137	(21.0)	265	(40.6)	402	(61.6)	
High-risk drinkers (8-15 scores)	96	(14.7)	78	(11.9)	174	(26.6)	
Dependence (16-40 scores)	30	(4.6)	5	(0.8)	35	(5.4)	

** Significant at *p-value* < .001

Table 4 Drinking risk levels according to AUDIT among those who ever drank in the previous year.

Drinking risk level	Boys (n=263)		Girls (n=348)		Total (n=611)	
	n	(%)	n	(%)	n	(%)
Low risk drinkers (1-7 scores)	137	(22.4)	265	(43.4)	402	(65.8)
Hazardous drinkers (8-15 scores)	72	(11.8)	69	(11.3)	141	(23.1)
Harmful drinkers (16-19 scores)	24	(3.9)	9	(1.5)	33	(5.4)
Suspected dependence (20-40 scores)	30	(4.9)	5	(0.8)	35	(5.7)

Table 5 The first to fifth rank of beverage preference consumed in the previous month among senior high school students.

Beverage preference	Boys (n=263)		Girls (n=348)		Total (n=611)	
	n	(%)	n	(%)	n	(%)
Beer	141	(39.4)	106	(29.6)	247	(69.0)
Spirit	92	(25.7)	84	(23.5)	176	(49.2)
White spirit	82	(22.9)	51	(14.2)	133	(37.1)
Local beverage (Lao Namkhao)	66	(18.4)	40	(11.2)	106	(29.6)
RTD	57	(15.9)	47	(13.1)	104	(29.0)

Table 6 Causes leading to alcohol drinking among senior high school students.

Causes	Boys (n=301)		Girls (n=384)		Total (n=685)	
	n	(%)	n	(%)	n	(%)
Social drinking	124	(18.1)	173	(25.3)	297	(43.4)
Peer influence	89	(13.0)	115	(16.8)	204	(29.8)
Try	55	(8.0)	69	(10.1)	124	(18.1)
Sadness	9	(1.3)	12	(1.8)	21	(3.1)
Happiness	11	(1.6)	7	(1.0)	18	(2.6)
Parent influence	8	(1.2)	8	(1.2)	16	(2.3)
Others	5	(0.7)	0	(0)	5	(0.7)

Table 7 Person who students preferred to get help for reducing drinking

Person	Boys (n=301)		Girls (n=384)		Total (n=685)	
	n	(%)	n	(%)	n	(%)
Themselves	130	(19.0)	201	(29.3)	331	(48.3)
Parents	79	(11.5)	84	(12.3)	163	(23.8)
Peers	36	(5.3)	55	(8.0)	91	(13.3)
Teachers	29	(4.2)	30	(4.4)	59	(8.6)
Health professionals	17	(2.5)	12	(1.8)	29	(4.2)
Others	10	(1.5)	2	(0.3)	12	(1.8)

DISCUSSION

Overall 64.9 % of senior high school students consumed alcohol in their lifetime, 58.8% ever drank last year, and 35.0% ever drank last month. The average age of first drinking among grade 10 – student was lower than grade 11 with 13.64 years, and 14.37 years respectively. Among those who drank in last month, their average daily intake was 9.43 gram of ethanol. This prevalence trends among senior high school students in Phayao province is higher compared to the 2007 national estimates [11] where the alcohol consumption prevalence in this age group were 51.8 % ever drank in their lifetime, 36.2% ever drank in the past year and 27.6% ever drank in the past month [11]. It was possible that the prevalence of alcohol consumption among teenage in Phayao was high with the sixth rank of Thailand. Meanwhile, the national survey [11] were represented for whole country, where some provinces had not high prevalence of alcohol consumption. There was significantly difference of alcohol consumption between boys and girls (*p-value*<.001). Moreover, boys were significantly higher risk of alcohol consumption among boys than girls according to AUDIT (*p-value*<.001). This finding is consistent with other studies who reported alcohol consumption among boys was greater than among girls [12-15].

Among those who ever consumed during previous year, most of them (65.8%) were low risk drinkers, followed by hazardous drinkers, susp ected dependence and harmful drinkers with 23.1%, 5.7 % and 5.4 % respectively. This pattern is largely consistent with the pattern of alcohol consumption among the general population. However, the figures of suspected dependence and harmful drinkers are relatively higher compared to those among current Thai drinkers aged 12–65 years which only 6.7% were classified as hazardous drinkers, 0.9% were harmful drinkers and 0.6% were probable alcohol dependents [16]. Social drinking and peer influence were the most common reasons for drinking among the students. Moreover, acception that drinking alcohol is a social norm in Thai culture, is also strong influence for alcohol consumption, as adults offer alcohol beverage to their friends and adolescents [17-22]. The first person who senior students indentified that could help them in reducing drinking was themselves (48.3%). As Paperny [22] mentioned that teenage preferred to receive health information from a computer rather than from face-to-face interactions because they had their own pace for learning [23]. In addition, over a quarter of them (27.9%) reported there was no specific alcohol content in their curriculum. It was related with the curriculum for senior high school students in Thailand shown no specific alcohol contents, but generally focus on addictive substances [24].

It can be seen that the alcohol consumption among senior high school are rather high but the curriculum is not suit to answer the problem. Therefore, research suggests that development of alcohol prevention program, provided them with an own pace to learn such as self directed learning via computer or internet, may be a solution for establishing healthier alcohol use behavior among senior high school students.

LIMITATION

One limitation of this study was the reliance on self-reported use to assess individuals according to alcohol consumption. The literature suggests that although the accuracy of an individual's report may be difficult to determine, from a group perspective self-reports of alcohol use from clinical and nonclinical samples are accurate when people are interviewed under the conditions discussed earlier [25]. Therefore, during data collection, researchers tried to minimize the limitation by providing well explanation before students do the self-report.

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