



PRIMARY RESEARCH

# Health behaviors and health risk behaviors among vocational students: Case study of vocational college in Nakornratchasima province Thailand

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**Abstract.** The descriptive research aimed to identify the health behaviors and health risk behaviors among vocational students. Data were collected by using questionnaire of HBSS of Ministry of Public Health, Thailand and CDC Youth Risk Behavior Survey of 6 major risks. The subject were 275 students: case study of a vocational college in Nakornratchasima Province, Thailand, chosen by purposive random sampling. Data were analyzed by descriptive statistical,  $\chi^2$  and Odds Ratio. The results revealed that mean age 18.5. The youths are 66.2% living with both parents, 21% living with a single parent and 13% living with others. Their average monthly income was 17,000 Thai Baht. The health status included normal body mass index (BMI) mean 20.79 (19-23.2), 56.3% had vaccination. The comparison of risk behaviors by gender,  $\chi^2$  test found that male students had higher risk behaviors than females by significant difference ( $p < 0.001$ ), which were 1) Unintentional injuries 2) Smoking 3) Alcohol drinking 4) Motorcycle riding after alcohol drinking 5) Riding with motorcycle rider who had been drinking alcohol 5) Watching television, playing games and social media chat for more than 3 hours/ day. Through use of the OR between male and female were 1) OR 10.12 carried a weapon, it indicated that males had risk behaviors 10 times that of females, 2) OR 5.79 of motorcycle riding with no helmet, 3) OR 5.42 of smoking, 4) OR 5.15 of motorcycle riding after alcohol drinking. These indicated that male students had risks 5 times of females. Among OR 4.10 of riding with a motorcycle rider who had been drinking alcohol and OR 3.30 of watching television, playing games and Social media chat for more than 3 hours/ day respectively, these were male students who had risks 4 and 3 times of females respectively. The suggestions; more effective school health programs and other policy and health promotion programs are needed to reduce risk and improve health outcomes among youth or students in vocational college and other youth, especially among male students.

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**INTRODUCTION**

The young people are the future of society. Undergraduate students and Vocational students are youth or young people, who are often used interchangeably. Around 1 in 6 persons in the world is an adolescent: that is 1.2 billion youth globally in 2015 [13]. The Asian region has the largest number of young people: 754 million. That number has nearly tripled since 1950 [12]. Statistics of youth (15-24 years) in Thailand in year 2014 were more than 10.4 million that were divided in 5.1 million females and 5.3 million males [3]. Health behaviors and health-risk behaviors are leading causes of morbidity and mortality among the students or young people. The leading health related problems, are unhealthy foods, inactivity or lack of regular exercise, accident or injuries both unintentional and self-

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injury, use of tobacco, alcohol consuming, drug addiction, physical fighting, unprotected sexual behaviors, unintended pregnancies and sexually transmitted infection. Moreover, they have mental health problems including depression and suicide [15]. Harmful drinking is a major concern in many countries. It reduces self-control and increases risky behaviors. In Thailand, the youth health risk behaviors include physical, mental and social problems. Therefore, the leading causes of morbidity among youth are related to six categories of priority health risk behaviors: 1) behaviors that contribute to unintentional injuries and violence; 2) tobacco use; 3) alcohol or other drug use; 4) sexual behaviors that contribute to unintended pregnancy and sexually transmitted infections, including HIV infection; 5) unhealthy diet behaviors; and 6) physical inactivity [2]. The vocational students are the youth or young adults who have high risk behaviors. Among the 12.6% of males had been in physical fighting, 42% carried weapon, 45.9% of males had sexual relationship and 13.1 % had used condom [1]. Nakornratchasima Province is the largest Province in Northeast region of Thailand. The current population was estimated 2.7 million [8]. The risks of youth are similar. They should be monitoring priority health risk behaviors and health status that contribute to the cause of mortality, morbidity and social problems. It's therefore very interesting to examine the health behaviors and health risk behaviors based on 6 major risks.

### **The Purpose of Study**

To identify health behaviors and health risk behaviors related factors among youth or students of vocational College in Nakornratchasima Province, Thailand.

### **LITERATURE REVIEW**

Adolescence or youth is a period of greatly enhanced awareness of and attention to physical status and wellbeing [15]. However, health risk behaviors are leading cause of mortality and morbidity among youth. They have unhealthy diet, are overweight and have risk for chronic illnesses such as cardiovascular disease, cancer, diabetes and liver disease. Alcohol is a psychoactive substance with dependency-producing properties. It is a causal factor in more than 200 diseases and injury conditions [15]. In Thailand the study of health among youth indicated that the level of health behavior was medium. Risk factors of interest were gender, parental marital status, family relationship, and socioeconomic status [10]. The study of health behaviors and health risk behaviors of undergraduate student found that 42.4% perceived their health was good and 2.9% perceived their health was poor. The risky behaviors were not doing exercise, smoking, drinking alcohol, and not wearing helmet while riding a motorcycle [17]. The pilot survey of health behaviors and health risk behaviors among 60 undergraduate students in Bangkok, Thailand Kusoom & Kultalay [7] found that 45% of the students are smoking, 59.4% had alcohol consumption, 65 % had unhealthy diet, 72% had lack of regular exercise, 75 % did not wear helmet while riding motorcycle, 23% of male students had unprotected sex, 12.3 % had sexual intercourse after drinking alcohol, 52% played computer games and used smart cellphone for line chat and played facebook for more than 3 hours per day during 6 months.

Among the 12.6% of males had been in physical fighting, 42% carried weapon, 45.9% of males had sexual relationship and 13.1% had used condom [1]. Health issues of youth related HIV infection in year 2010-2012 (per 1,000 people) were 51.1, 53.6, 53.8 respectively, 1.5 million played games online that was related to unhealthy behaviors, 14 % had alcohol consumption and 250 thousand people were the new drinkers, 9.2% were smoking, 40% had unprotected sex [3]. The National Survey of smoking and alcohol consump-

tion of Thai People 2014 indicated that mean age 16.2 years of youths had smoking, 17.2 years had alcohol drinking and prevalence rate was 23.7% [8]. Youth risk behavior Surveillance, United State of America, Kann *et al.* [6], the report summarizes result for 104 health risk behaviors plus obesity, overweight, which indicated that many high school students are engaged in priority health risk behaviors such as 30 days before the survey, students had drunk alcohol, used marijuana, and smoked cigarettes. During 12 months before the survey, 46.8% of students had ever had sexual intercourse, 15% had sexual intercourse with four or more persons during their life. During 7 days before the survey 5.0% of students had not eaten fruits and vegetables. The conclusion of youth health behaviors was lower than good level. However, the risk behaviors were leading from smoking, alcohol dinking, unprotected sexual behaviors, unintentional injuries, unhealthy diet and lack of exercise.

### METHODOLOGY

The population of this study was case study of vocational students at a college in Nako-rnrachasima Province, Northeast region of Thailand. A purposive random sampling. The total sample size of 275 youth were 138 males and 137 females, collecting data in January 2016. The research tools were questionnaire of Health Behaviors of Youth that contained items on general characteristics of the respondents such as sex, age, economic status, living arrangement that was from Health Behavioral Surveillance System (HBSS), Ministry of Public Health, Thailand. It included 20 items and rating scale 1-4. Additionally the risk behaviors based on 6 categories from the Youth Risk Behavior Surveillance System (YRBSS) CDC (2013) which was modified to Thai youth life style that consisted of 1)Unintentional injuries and violence 2) Smoking 3)Alcohol drinking 4) Sexual behaviors 5) Unhealthy diet 6) Physical inactivity that included 12 items and nominal scale 0-1. The test of health behaviors by using  $\alpha$  Cronbach reliability= 0.83, the risky heath behaviors by using KR-20 reliability = 0.85. Data were analyzed by descriptive statistics and comparing health risk behaviors between male and female students by using  $\chi^2$  and Odd ratio. [2] Ethical considerations; The Ethics Committee of the College of Nursing and Health, SuanSunandha Rajbhat Univerisity. All participants were clearly informed of their rights. The researcher respected their dignity and personal privacy.

### RESULTS AND DISCUSSION

The results revealed that mean age was 18.5 (15-22 years old). The youth are 66.2% living with both parents, 21% living with a single parent and 13%living with others. Their average monthly income was 17,000 Thai Baht. The health status included normal body mass index (BMI) mean 20.79 (19-23.2), 56.3% had vaccination. During the 90 days before the survey, the healthy behaviors overall were at moderate level, mean 2.79 (4 points totally). They had mean 2.9 of healthy diet, 2.77 exercise regularly, 3.04 personal hygiene, and 2.47

**TABLE 1 .** The prevalence rate of health risk behaviors of unintentional injuries and violence

Categories of Health risk behaviors	Male Frequency (%)	Female Frequency (%)	Total Frequency (%)
1.Motorcycle riding with no Helmet	130 (47.3)	100 (36.3)	230 (83.6)
2.Motorcycle riding after alcohol drinking	28 (10.2)	8 (2.8)	36 (13.0)
3.Riding with a motorcycle rider who had been drinking alcohol	20 (7.3)	7 (2.5)	27 (9.8)
4.Carried a weapon	18 (6.5)	2 (0.7)	20 (7.2)
5.Physical fighting 15 (5.5)	-	15 (5.5)	

stress management. The highest risk consisted of motorcycle riding with no helmet, lack of exercise, unhealthy diet respectively (Table 1).

The health risk behaviors showed that 83.6% do not wear a helmet while riding motorcycle, 13% had drunk alcohol while riding motorcycle, 9.8% rode with a motorcycle rider who had been drinking alcohol, 7.2% carried a weapon, 5.5% were involved in physical fighting, 22.9% smoking. Moreover, their risky health behaviors were 13.5% alcohol drinking, 50% unhealthy diet, 81% lack of exercise and 22.2% watching television, playing computer games, social media chat for more than 3 hours/day (Table 2). In terms of car-

**TABLE 2 .** The prevalence rate of health risk behaviors

Health risk behaviors	Male Frequency (%) n=138	Female Frequency (%) n=137	Total Frequency (%) n=275
1.Smoking	50 (18.2)	13 (4.7)	63 (22.9)
2.Alcohol drinking	30 (10.9)	7 (2.5)	37 (13.5)
3. Ever had sexual relationship	100(36.4)	47(17.1)	147 (53.5)
4. Unhealthy diet	112 (40.7)	27 (9.8)	138 (50)
5. Lack of exercise	111 (40)	112 (41)	223(81)
6.Watching television, playing games and social media chat for more than 3 hours/ day	44 (16)	17 (6.2)	61(22.2)

rying a weapon and physical fighting, it was found that most of them were male students. Among 53.45%(147 students) of them ever had sexual relationship from which unprotected were 39%. It indicated that mean age 16.8 (14-22 years) of smoking, 17.9 (15-22 years) of alcohol drinking, 15.3 (13-22 years) of sexual relationship (Table 3 and Table 4). Several studies found that the youth risk behaviors leading to traffic accidents were rare

**TABLE 3 .** The prevalence rate of health risk of sexual unprotected relationship

Risk	Protected Frequency (%)	Unprotected Frequency (%)	Total Frequency (%)
Male	60(41)	40(27)	100(68)
Female	29(19)	18(12)	47(32)
Total	89(60)	58(39)	147 (100)

**TABLE 4 .** The age of health risk behaviors of smoking and alcohol drinking

Risk	Mean Age (Min-Max)
1.Smoking	16.8 (14-22)
2.Alcohol drinking	17.9 (15-22)
3.Sexual relationship	15.3(13-22)

or never having worn seat belt or helmet while motorcycling, riding with who had consumed alcohol and driving after consuming alcohol and had sexual intercourse with never using condom, smoking, carrying weapon and had been involved in violent event [15,11, 10] . Moreover, younger people had more new smokers and drinkers (Department of Health [3], at least 1 in 10 younger adolescents use tobacco [15]. Therefore, the prevalence of health risk behaviors among young people in Thailand and Worldwide are similar. The risky behaviors among male and female used odds ratio (Table 5).The comparing of risky behaviors by gender were used  $\chi^2$ . The result found that male students had higher risk than female students with significant difference ( $p < 0.001$ ) consisted of 1) unintentional injuries 2) smoking 3) alcohol drinking 4) motorcycle riding after alcohol drinking 5) rode with motorcycle rider who had been drinking alcohol 6) watching television, playing games and social media chat for more than 3 hours/ day. Through use of the odds ratio (OR) were 1) OR 10.12 carried a weapon, it indicated that males had risk behaviors 10 times of females, 2) OR 5.79 motorcycle riding with no helmet, 3) OR 5.42 smoking 4) OR 5.15 motorcycle riding after alcohol drinking. These were indicated that male students had risks 5 times of females. Among OR 4.10 of riding with a motorcycle rider who had been drinking alcohol and OR 3.30 of watching television, playing games and Social media

chat for more than 3 hours/ day respectively, which were male students having risks 4 and 3 times of females respectively. OR 1.07 of unprotected sexual intercourse, 1.05 unhealthy diet and 0.83 lack of exercise respectively (Table 5). They discovered that risky health

**TABLE 5 .** Odds ratio of smoking, alcohol drinking, and unhealthy diet among male and female students

Health risk behaviors	OR) CI (95%)	
1.Carried weapon	10.12	2.30 to 44.54
2. Motorcycle riding with no helmet	5.79	2.57 to 13.00
3.Smoking	5.42	2.777 to 10.57
4.Motorcycle riding after alcohol drinking	5.15	2.18 to 12.20
5. Riding with motorcycle rider who had been drinking alcohol	4.10	1.79 to 9.34
6. Watching television, Playing games and Social media chat for more than 3 hours/ day	3.30	1.775 to 6.15
7.Unprotected sexual intercourse	1.07	0.527 to 2.187
8.Unhealthy diet	1.05	0.581 to 1.92
9. Lack of exercise	0.83	0.456 to 1.52

behaviors of male students were higher than female students. Those are associated with data of Department of Health [3], the sexual risk behaviors among adolescents are higher in the boys than in the girls [9]. The prevalence rate of unintentional injuries and violence, never or rarely wearing motorcycle helmet, having drunk alcohol while riding motorcycle and smoking. The behaviors of male students were higher than female students about four times. Worldwide it is estimated that men smoke nearly five times as much as women, but the ratios of female-to-male smoking prevalence rate vary dramatically across countries. The study of alcohol use among adolescents and young adults Windle [16] indicated that rate of drinking among college students and other young adults is also high. The study shows that low-middle income countries' women smoke much less than men. Data from the Global Youth Tobacco Survey show that worldwide smoking rate of boys is more than girls [5]. Health risk behaviors of alcohol drinking co-occurs with a range of other risky behaviors including tobacco use, unhealthy food, physical inactivity, and unprotected sexual intercourse [2]. Alcohol use rate is very high among college students, approximately two of five were drinkers, that also higher among male than female students [14]. However, high risk health behaviors of both male and female students were 81% of unhealthy diet, and 51% lack of exercise. It was shown that the overall had still risk highly and similarly. The National Survey of Adolescents, College Students and Other Young Adults in USA indicated that very high rate of alcohol and other drug use related problems such as poorer school performance, sexual activity, unintentional injury [4]. They engage in behaviors at risk for leading cause of morbidity and mortality. The prevalence of most health- risk behaviors varies by sex, and race/ethnicity [6].

## CONCLUSION

Health behavior status among youth of vocational students in Nakornratchasima Province was at moderate level. The health risk behaviors related to factors of six majors overall were high. The finding regarding gender differences indicated that male students had higher risk than female. More importantly, school health programs, other policies and health promotion programs are needed to reduce risk and improve health outcomes among youth in vocational colleges and others. The further study should be made with the National survey of health risk behaviors among youth in every region of Thailand. Additional, study the effects of interventions on control health risk among youth especially males and others.

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