รูปแบบการดื่มหนักของกลุ่มผู้ใหญ่ตอนต้นในสถานบันเทิงกลางคืนย่านเศรษฐกิจและสังคมชั้นสูง กรุงเทพมหานคร

นางสาวปิ่นปินัทธ์ นาคหิรัญกนก

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาสาธารณสุขศาสตรมหาบัณฑิต

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ปีการศึกษา 2553

THE PATTERN OF BINGE DRINKING AMONG YOUNG ADULTS IN HIGH SOCIOECONOMIC NIGHTCLUBS, BANGKOK

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A Thesis Submitted in Partial Fulfillment of the Requirements
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ปิ่นปินัทธ์ นาคหิรัญกนก: รูปแบบการดื่มหนักของกลุ่มผู้ใหญ่ตอนต้นในสถานบันเทิงกลางคืนย่านเศรษฐกิจและสังคมชั้นสูง กรุงเทพมหานคร (The pattern of binge drinking among young adults in high socioeconomic nightclubs, Bangkok) อาจารย์ที่ปรึกษาวิทยานิพนธ์: อ.ดร.จิตรดา อารีย์สันติชัย, 97 หน้า

วัตถุประสงค์ของการศึกษามุ่งเน้นศึกษารูปแบบการดื่มหนักในกลุ่มผู้ใหญ่ตอนต้น ที่มีอายุระหว่าง 20-34 ปี ในสถานบันเทิงกลางคืนในพื้นที่ย่านเศรษฐกิจและสังคมชั้นสูงในกรุงเทพมหานคร จากการคัดเลือกกลุ่มตัวอย่างถามโดยใช้แบบคัดกรองภาวะของผู้ที่ดื่มหนัก หรือ AUDIT คะแนนระหว่าง 8-19 มีผู้ตอบแบบสอบถามจำนวน 348 คนผ่านเกณฑ์คัดเลือก และพบว่าเพศชายมีคะแนนมากกว่าเพศหญิง การศึกษาครั้งนี้พบว่าผู้ที่ดื่มหนักส่วนใหญ่มีฐานะปานกลางไปจนถึงในระดับค่อนข้างดี และส่วนใหญ่จบการศึกษาปริญญาตรี รายได้ต่อเดือนสูงกว่ามีแนวโน้มในการใช้จ่ายในการดื่มแอลกอฮอล์สูงกว่า และดื่มหนักในปริมาณมากกว่า เมื่อพิจารณาเพศชายเสียค่าใช้จ่ายแอลกอฮอล์ และดื่มในปริมาณที่สูงกว่าผู้หญิง ใน 30 วันที่ผ่านมาเพศชายดื่มเบียร์มากที่สุดคิดเป็นร้อยละ 68.8 ในขณะที่เพศหญิงดื่มไวน์มากที่สุดคิดเป็นร้อยละ 64.6 ในประเด็นการขายเครื่องดื่มแอลกอฮอล์ในสถานบันเทิงกลางคืนร้อยละ 94.3 และที่ตั้งร้อยละ 95.1 ส่งผลโดยตรงต่อการเที่ยวสถานบันเทิง นอกจากนี้ยังพบว่าเพื่อนร้อยละ 95.1 มีอิทธิพลทำให้กลุ่มตัวอย่างดื่มหนักมากขึ้น

กลุ่มตัวอย่างบางส่วนเคยประสบผลกระทบอันเนื่องมาจากการดื่มแอลกอฮอล์ เช่น ไม่สามารถดำเนินชีวิตปกติได้เพราะได้ดื่มแอลกอฮอล์เมื่อคืน เกิดอุบัติเหตุ และมีเพศสัมพันธ์โดยไม่ได้ป้องกัน การดื่มแอลกอฮอล์ในปริมาณที่มากขึ้น มีโอกาสที่จะเกิดผลกระทบที่กล่าวมาข้างต้นสูงขึ้น การใช้สารเสพติดในเพศชายมีมากกว่าในเพศหญิง ชนิดของสารเสพติดที่พบมากในสถานบันเทิงได้แก่ โคเคนร้อยละ 38.5 อิริมินไฟฟ์ร้อยละ 28.4 และยาอีร้อยละ 25.3 กลุ่มตัวอย่างรายงานว่าใช้สารเสพติดร่วมกับการดื่มเครื่องดื่มแอลกอฮอล์ คือใช้โคเคนร่วมกับการดื่มแอลกอฮอล์สูงที่สุดคิดเป็นร้อยละ 33.3 รองลงมาคือยาอีร้อยละ 25.9 และอิริมินไฟฟ์ร้อยละ 24.4 การศึกษาครั้งนี้พบว่าการดื่มหนักในสถานบันเทิงมีจำนวนสูงมาก และส่งผลกระทบต่อสุขภาพ ดังนั้นจากฐานข้อมูลดังกล่าวควรได้รับการวางแผน เฝ้าระวัง หรือหาแนวทางการป้องกันและแก้ไขในเชิงมาตราการต่างๆต่อไป

สาขาวิชา สาธารณสุขศาสตร์ ลายมือชื่อนิสิต.....

ปีการศึกษา 2553 ลายมือชื่อ อ.ที่ปรึกษาวิทยานิพนธ์.....

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KEYWORDS: YOUNG ADULTS/ NIGHTCLUBS/ BINGE DRINKING

PYNPINAT NAKHIRUNKANOK: THE PATTERN OF BINGE DRINKING AMONG YOUNG ADULTS IN HIGH SOCIOECONOMIC NIGHTCLUBS, BANGKOK. THESIS ADVISOR: CHITLADA AREESANTICHAI, PH.D., 97 pp.

This study investigated the pattern of binge drinking among young adults in high socioeconomic area. Total 348 respondents were passed the screening test of AUDIT within 8-19 score of binge level. Males were more likely to have harmful drinking than females as males were more likely to drink more than females, as males were more likely to drink than females. People who binge drinking around high socioeconomic area has moderate to wealthy status and finished at least Bachelor degree. The respondents who earned high income were more likely to drink more volume of alcohol, and tended to spend more on their binge drinking; especially males were found to spend higher than females.

Beer (68.8%) was the type that males consumed the most in past 30 days, while wine (64.6%) was the most in females. Selling alcohol (94.3%) and location (95.1%) showed the majority that encouraged the respondents to nightclubs. Influenced by friend (95.1%) were also the major elements in development of binge drinking problems.

Many of the respondents experienced alcohol-related consequences such as unable to continue regular routine (81.9%), accidents (42.8%), and unprotected sex (42.5%). The chance created these consequences had increased by the higher volume of alcohol consumption. There was the high number of illicit drug used, as males have ever consumed more drugs comparing to females. The number of respondents who consumed Cocaine (38.5%), Erimin5 (28.4%), and Ecstasy (25.3%) were popular in nightclubs. Some of the respondents admitted that they paired drugs with alcohol, as Cocaine (33.3%) was the highest, following with Ecstasy (25.9%), and Erimin5 (24.4%) respectively. The study found that binge drinking in high socioeconomic nightclubs was considerably high, and affected to health consequences. The related organization should be surveillance, and plan for the future prevention and intervention.

Field of Study: Public Health Student's Signature.....

Academic Year: 2010 Advisor's Signature.....

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LIST OF ABBREVIATIONS

ALAC	Alcohol Advisory Council of New Zealand
AUDIT	Alcohol Use Disorders Identification Test
BAC	Blood-alcohol Concentration
CAS	Center of Alcohol Studies
CDC	The federal Centers for Disease Control
DALYs	Disability Adjusted Life Years
NIAAA	National Institute on Alcohol Abuse and Alcoholism
RTD	Ready to Drink
SAMHSA	Substance Abuse and Mental Health Services Administration
SES	Socioeconomic Status
TLFB	Time Line Follow Back
WHO	World Health Organization

CHAPTER I

INTRODUCTION

1.1 Background & Rationale

The report of World Health Organization (WHO) Global Status on Alcohol 2004, reported an overview of country profile of adult per capita consumption (in litres of pure alcohol), which Thailand was at rank of 44 arranged from the highest to the lowest of recorded consumption in the total of 8.47 litres. Thailand was appeared in spirits category at rank number 6 in the total of 7.13. WHO has been found that 31% of Thai adult citizen was drinkers. The Thai citizen classified as binge drinkers, was 16.6 % in male and 2.1 percent in female (WHO, 2004).

Excessive drinking as known as binge drinking is the definition of drinking beverages that contain alcohol which becoming intoxicated by heavy consumption as four or five drinks within a two-hour period or single occasion (Naimi, et al, 2003; Wechler and Nelson, 2001; Wechsler, et al, 1998).

The Thai National Household Survey of alcohol consumption in 2007, found that Thai citizen aged 12-65 years old, 6.7% could be classified as hazardous drinkers or binge drinkers, 0.9 % was classified as harmful drinkers and 0.6 % was classified as alcohol dependent (Assanangkornchai, et al. 2007). Thai National Alcohol Consumption report by Center of Alcohol Studies or CAS, 2009 stated that 13.7 % of Thai adolescents ages 15 years old and above had monthly alcohol consumption behavior, and 6.5 % had daily alcohol consumption behavior.

The prevalence of binge drinking was high in both global and Thailand. The problems by binge drinking create long-term directly consequences at devastated level association with alcohol-related problems classified into individuals such as work-related problems; social consequences such as committing crime against other person

or properties, put themselves to danger of becoming victim, engaging with unprotected sex; and health-related consequences either acute or chronic.

According to WHO, alcohol becomes the fifth leading risk factor for death and disability around the world. WHO reported that there are more than 60 types of disease and injuries cause by alcohol consumption, for example, about 20-30 % worldwide of esophageal cancer, liver cancer, cirrhosis of liver, homicide, suicide, epilepsy, and car accidents. The World Health report in 2002, stated that alcohol causes 1.8 million deaths and 58.3 million of disability Adjusted Life Years (DALYS) worldwide.

Binge drinking can cause substantial risk to individual that actually intoxicated to physical and mental after repeating episodes of drinking which may result a person to become alcohol dependence. Binge drinking can cause illness that could build up to disability and early death after long-term drinking at high level. It is created social-related consequences via drunkenness and other biochemical effects, in addition to several chronic diseases, resulting in loss of many years of life due to death (WHO, 2004).

Health problems in Thailand due to the increased of alcohol consumption and frequency on binge drinking has increased liver disease mortality, motor vehicle accident morbidity and mortality (Thamarangsi, 2005). According to Thai Working Group on Burden of Disease in 2006, Alcohol in Thailand has been notified as emerging problems and estimated to be the third of the most significant health risk factor occurring by alcohol consumption, at 5.3 percent of overall disability adjusted life years (DALYs), which Thai male was put at rank 3rd at 8.2% of DALYs and Thai female was put at rank 11th at 1.0 % of DALYs (Thamarangsi, 2006).

The study in 2009 of drinking patterns and their outcomes of Thai citizen was categorized the types of drinkers into 1) alcohol-dependent subjects, 2) hazardous or harmful drinkers, and 3) abstainers or light drinkers. The study was reported the result of drinking alone was more common in the alcohol-dependent group at 67 %, harmful or hazardous drinkers was typically drunk with friends at 58%, and infrequent drinkers drank only at social functions at 61 %. The study stated the popularity of

alcoholic beverages that spirits was number one, following by whiskey and vodka, beer and wine respectively (Lakapichonchat, 2009).

During the past decade, Thai citizen tended to consume more alcoholic beverages every year due to aggressive marketing. Currently, bar and nightclub has created the fast growing in market segment using promotion such as happy hours, selling package, increasing of ready-to-drink (RTD) beverage, or offering unlimited alcohol on payment of the entrance fee. These encouraged people into binge drinking (Institute of Alcohol Studies, 2010). Many attractive set-up parties collaborative with alcohol campaign due to integration of marketing are held many times during each month throughout the year, which increasing the number of excessive drinkers every year. Therefore nightclubs were considered as the places of engaging people that should be concerned as high-risk setting of the binge drinking development.

Among all the provinces in Thailand, Bangkok was the highest prevalence of current drinking and binge drinking (Assanangkornchai, 2007). Nightclubs in Bangkok were considered as the places that most encourage people into binge drinking levels, making drinking more attractive and easily get caught up into a social scene or peer influences (Pattharaporn, 2009).

Binge drinking was epidemic among young adults who are defined as ages 18-34 (The federal Centers for Disease Control, CDC). Young adults ages 20-34 are clarified in states of human development (Erikson, 1950; Ramathibodi Mental Health). This research will be assessed in nightclubs in Thailand that the legally age in order to access must be 20 years and above.

Very few studies of the pattern of binge drinking among young adults in nightclubs have been done so far. The research of pattern of binge drinking that assessed in nightclubs in Thailand was still lacking. Thus, the researcher aimed to study the pattern of binge drinking among young adults, setting in nightclubs around high socioeconomic area.

1.2 Research Questions

What is the pattern of binge drinking among young adults in high socioeconomic nightclubs?

1.3 Objectives

To study the pattern of binge drinking among young adults in high socioeconomic nightclubs.

1.4 Conceptual Framework

Figure 1.1 described the conceptual framework of dependent and independent variables of this study.

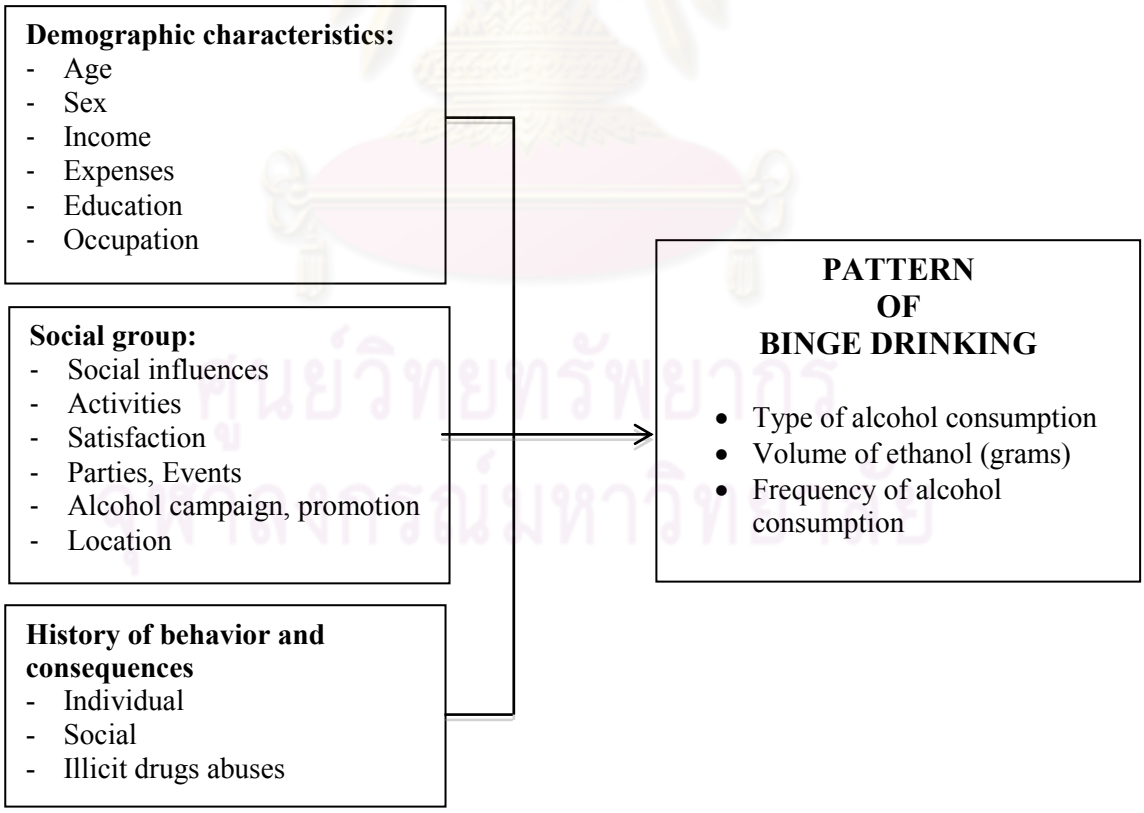

Figure 1.1: Conceptual framework

1.5 Operational Definitions

Alcohol consumption: The consumption of alcohol beverages that consist of frequency, volume, and type of alcohol consumption.

Standard drinks: The volume of 1 standard drink equal to 10 grams of pure alcohol (absolute ethanol).

Binge drinking: Drinking beverages that contain alcohol of 5 or more standard drinks in male and 4 or more standard drinks in female in single occasion.

Young adult: Male and female who are defined as ages 20-34.

Socioeconomic status: An economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position relative to others, based on income, education, and occupation.

Pattern of alcohol consumption: Pattern of drinking alcohol in lifetime that mainly consists of type of alcohol beverage, time, volume of drinks, and frequency.

Nightclub: An entertainment venue consisting of Dj, string band, dance floor, music, which operates at night until late.

CHAPTER II

LITERATURE REVIEW

The literature reviews in relation to the pattern of binge drinking nightclubs around Bangkok, includes 9 main materials:

2.1 Definition of binge drinking

2.1.1 Quantity of standard drinks in order to define binge

2.1.2 Standard drink measurement

2.2 Measurement Tools

2.1 Measurement of blood-alcohol concentration (BAC)

2.2 Alcohol use disorders identification test (AUDIT)

2.3 Time line follow back (TLFB)

2.3 Pattern of alcohol drinking

2.3.1 Type of alcohol beverage

2.3.2 Number of Drinks (per single occasion)

2.3.3 Frequency of Drinking

2.4 Theory Related to drinking behavior

2.5 The situation Binge drinking (global and Thailand)

2.6 Reviews of Binge Drinking in Bars and Nightclubs

2.7 Risk Factors of Binge Drinking

2.7.1 Demographics

2.7.2 Social Influences

2.8 The occurrence of binge alcohol-related problems

2.8.1 Health consequences

2.8.2 Individual consequences

2.8.3 Social consequences

2.9 Related researches

2.1 Definition of binge drinking

Definition in term of binge was still argued. There was no internationally agreed definition of binge drinking but most of the sources agreed that binge drinking means dangerous practice of consuming large quantities of alcoholic beverages over short period of time or single session, which involved with social, psychological and physiological harm (International Center for Alcohol Policies, 2004; Gmel, et al, 2003; Perkins, 2002). Many criticism of the binge drinking term might mis-present because a conceptualization did not include weight, sex, or time period (DeJong, 2003).

According to the World health Organization in 1994, the definitions of binge drinking in clinical trial differed from the one that used in particular. Binge drinking identified as a pattern of intoxicated drink involving loss of control over consumption and has a solitary activity lasting up to 2 or 3 days (Gmel, et al., 2003; Babor, et al, 1994).

2.1.1 Quantity of standard drinks in order to define binge

Many studies in the US, agreed of binge drinking was the definition of drinking beverages that contain alcohol which becoming intoxicated by heavy consumption as four or five standard drinks within a two-hour period or single occasion (Naimi, et al, 2003; Wechsler and Nelson, 2001; Wechsler, et al, 1998), five standard drinks or more at lease once in previous 30 days (Substance Abuse and Mental Health Services Administration, 2004), or four to five drinks or more for male and female respectively on a single session within past 2 weeks (College Alcohol Study, 2004).

However the research in 2007, stated that low threshold of drinking may be too blunt to capture problem drinking behavior (Read, et al, 2008), and the research in 2008 on examination on four standard drinks or more for female and five or more for male cutoff added that perhaps might not enough to identify or create risks (Jackson, 2008). The Office of National Statistics, United Kingdom, the study of binge drinking in relation to social class and education in the UK, found that binge drinking was

defined as 10 standard drinks or more for male and 7 standard drinks or more for female for single occasion which was incredibility high (Institute of Alcohol Studies, 2010).

In South-East Asia region, the binge drinking was normally identified as four or five standard drinks per single occasion, therefore, the researcher agree to use this number of standard drinks to be the setting in order to clarify binge drinking.

2.1.2 Standard drink measurement

In term of Standard amount of alcohol drinks in order to define binge, was expresses in grams of pure alcohol (absolute ethanol), which was agreed broadly for the accuracy consumption amount. The standard drinks, in most countries, mainly based on beer, wine and distilled spirits. Measurement pure alcohol of 1 ml equals to 0.79g, which approximately 8-14g was equally to one standard drink (International Center for Alcohol Policies, 1998; Dawson, 2003). Different countries have slightly different standard drinks.

Table 2.1 described about the measurement of the standard alcohol units in grams of ethanol in different country.

Table 2.1: Standard alcohol units (in grams of ethanol) in different country

Standard Drink per Unit (grams)	Country
8	UK
9.9	Netherlands
10	Australia, France, Hungary, Ireland, NZ, Poland, Spain
11	Finland
12	Denmark, Italy, South Africa
13.6	Canada
14	Portugal, US

In term of *Standard drinking* according of National Institute on Alcohol Abuse and Alcoholism (NIAAA), United State, was any drinks that contains 14g of pure alcohol or 0.6 ounces.

Table 2.2 described the standard drink each type of beverage according to NIAAA.

Table 2.2: Standard drink equivalences for each beverage according to NIAAA

Type of Beverages	Volume	% Alcohol	Approx. No. Of Standard drinks in:
Can of Beer	12 oz.	~5% Alc.	12 oz. = 1 16 oz. = 1.3 22 oz. = 2 40 oz. = 3.3
Glass of Malt Liquor	8-9 oz.	~7% Alc.	12 oz. = 1.5 16 oz. = 2 22 oz. = 2.5 40 oz. = 4.5
Glass of table Wine	5 oz.	~12% Alc.	750 mL (25 oz.) = 5
Spirits	1.5 oz.	~40% Alc.	1 mixed drink = 1 or more* 1 pint (16 oz.) = 11 1 fifth (25 oz.) = 17 1.75 L (59 oz.) = 39

*Drink depends on type of spirits and recipe.

In New Zealand, Alcohol Advisory Council of New Zealand (ALAC) and Australian Government at Department of Health and Ageing, identified the measurement of standard was different than those refer above, as it was stated that one standard drink equals approximately to 10g of pure alcohol, which slightly different.

Table 2.3 described the volume, percent of alcohol, and the standard drink each type of beverages according to ALAC

Table 2.3: Standard drink equivalences for each beverage according to ALAC

Type of Alc. Beverage	Volume	% Alcohol	No. Of Standard drinks.
Can of beer	330 ml	~4 %	1
Can of beer	440 ml	~4.2%	1.5
Bottle of beer	330 ml	~5%	1.3
Bottle of light beer	330 ml	~ 2.5%	0.7
Bottle of beer	750 ml	~4%	2.4
Bottle of white wine	750 ml	~13%	7.7
Bottle of Sparkling wine	750 ml	~12%	7.1
Bottle of red wine	750 ml	~14%	8.3
Cask of wine	3 litre	~12.5%	30
Bottle of Spirits	50 ml	~37%	1.5
Bottle of Ready-to-Drink (RTD)	275 ml	~5%	1.1
Bottle of Ready-to-Drink (RTD)	335 ml	~8%	2.1
Bottle of Spirits	375 ml	~37.5%	11
Bottle of Spirits	500 ml	~37.5%	15
Bottle of Spirits	700 ml	~40%	22
Bottle of Spirits	1000 ml	~47%	37
Bottle of Spirits	1125 ml	~45%	40

Table 2.4 described the volume, percent of alcohol, and the standard drink each type of beverage according to Australian government.

Table 2.4: Standard drink equivalences for each beverage according to Australian government

	% Alcohol	Volume	No. Of Standard drinks.
Beer			
Full strength	4.8%	285 ml glass	1.1
		375 ml can/bottle	1.4
		425 ml glass	1.6
		24x375 ml case	34
Mid strength	3.5%	285 ml glass	0.8
		375 ml can/bottle	1
		425 ml glass	1.2
		24x375 ml case	24
Low strength	2.7%	285 ml glass	0.6
		375 ml can/bottle	0.8
		425 ml glass	0.9
		24x375 ml case	19
Wine			
Red wine	13%	100 ml standard serve	1
		150 ml average restaurant	1.5
		750 ml bottle	7.7
		2 litre cask	21
		4 litre cask	41
White wine	11.5%	100 ml standard serve	0.9
		150 ml average restaurant	1.4
		750 ml bottle	6.8
		2 litre cask	18
		4 litre cask	36
Champagne	12%	150 ml average restaurant	1.4
		750 ml bottle	7.1
Port	17.5%	60 ml standard serve	0.8
		2 litre cask	28
Spirits			
High strength	40%	30 ml nip	1
		700 ml bottle	22
Full strength RTD	7%	275 ml bottle	1.1
		330 ml bottle	1.2
		660 ml bottle	2.6
Full strength pre-mix	5%	250 ml can	1
		300 ml can	1.2
		375 ml can	1.5
		440 ml can	1.7
High strength pre-mix	7-10%	250 ml can	1.4-1.9
High strength pre-mix	7%	300 ml can	1.6
		375 ml can	2.1
		440 ml can	2.4

This research has agreed to use the standard drinks tool based on Australian government measurement as the tool has varieties of type's measurement.

2.2 Measurement Tools

2.2.1 Measurement of blood-alcohol concentration (BAC)

Blood Alcohol Concentration (BAC), according to Highway Safety Research Center, was the concentration of alcohol in a person's blood, as it was measured weight in a fixed unit of volume. It was used as a measurement of the degree of alcohol-intoxicated in the person's body that depends on weight, quantity of alcohol and amount of alcohol that was absorbed and create metabolism (Alberta Alcohol and Drug Abuse Commission, the Canadian Medical association, 2000).

The effects of alcohol in order to use blood alcohol concentration to measure depended on bloodstream and absorption in small intestine, which was the part in person's body that very quickly absorb alcohol into blood and immediately spread through the body. This caused the central nervous system in the body slow down, which the blood alcohol concentration measurement was be able to detect of how much it slowed down (Intoximeters Inc., 2001; Radford University, 1996).

Table 2.5 described the measurement of BAC (g/100ml of blood or g/210 of breath) and the affects of alcohol on nervous system in the person's body.

Table 2.5: The measurement of BAC and effects of alcohol on nervous system in the person's body

BAC	Effects on the person's body
0.01-0.05	Normal behavior
0.03-0.12	Euphoria, sociability, talkative
0.08	Legally drunk (Binge level)
0.09-0.25	Emotional instability, impairment of perception, reduced visual acuity, impaired balance and drowsiness
0.18-0.30	Disorientation, mental confusion, vision problems, increased pain tolerance, muscular in coordination
0.25-0.40	Almost total loss muscular functions, markedly decreased response to stimuli, vomiting, decreased consciousness
0.35-0.50	Completely unconsciousness, absent reflexes, impairment of circulation, low body's temperature, chance of dying
0.45 +	Possibility Death

The National Institute on Alcohol Abuse and Alcoholism (NIAAA), 2004, and Centers for Disease Control and Prevention (CDC), United States, stated the correspondence to consuming five or more drinks for male and 4 or more standard drinks for female within two hours would bring blood alcohol concentration (BAC) to 0.08-gram percent or increase as consuming more drinks. The pattern drinking that brings BAC to 0.08 within two hours would be identifying binge on more than one occasion within past six month.

2.2.2 Alcohol Use Disorders Identification Test (AUDIT)

The World Health Organization from a six-country has been collaborated to develop a screening instrument for hazardous alcohol consumption named the Alcohol Use Disorders Identification Test as known as AUDIT which was a basically method for screening for excessive drinking (binge), alcohol dependence, and some specific consequences of harmful drinking (Saunders; Babor, et al, 2001). The test provides 4 levels, which consist of normal drinking, Hazardous drinking, harmful drinking, and alcohol dependence.

There were 10-item screening questionnaires with 3 questions on the amount and frequency of drinking, 3 questions on alcohol dependence, and 4 questions on problems caused by alcohol. The scores of each question range from 0 to 4 (lowest to highest). The score of 8 or more was associated with harmful of hazardous drinking, a score of 13 or more in women, and 15 or more in men, was likely to indicate alcohol dependence.

2.2.3 Time Line Follow Back (TLFB)

Time Line Followback or TLFB was a drink assessment method that obtains the estimated of daily drinking, with retrospective estimation over a specified time period. TLFB can administer by the interviewer (Sobell, 2000).

2.3 Pattern of alcohol drinking

2.3.1 Type of Alcohol Beverage

The World health Organization, reported in 2004, that alcohol beverage mainly divided into three types as beer, wine, and spirits.

Wine was produced from a fruit that is fermented, mostly grapes, but still several made from peaches, plums or apricots. Categories of wine include red wine (vin blanc), white wine (vin rouge), sparkling wine and champagne. *Beer* was produced from malted cereal such as corn, wheat or barely which combining with yeast, and made by process of fermentation. Some other types of beer were draught that were served from the keg and light beer that has lower calories and less taste. *Spirits* or distilled alcohol mostly includes whisky, rum, gin, vodka and liqueurs, which also made by fermentation. Distilled alcohol has low sugar and contains at least 35 percent alcohol by volume, depending on types of spirit (Beverage Testing Institute, 2010; WHO, 2004).

World Health Organization (WHO) of Global Status Report on alcohol, 2004, found that the recorded adult per capita consumption in South East Asia region including Thailand divided by types of alcohol, between 1961-2001 has increased respectively, with total 8.47 in litres of pure alcohol, as also recorded by Food and Agriculture Organization (FAO) of adult per capita consumption of population aged 15 years and above in Thailand, regarding to World Drink Trends, 2003.

Figure 2.1 described the recorded adult per capita consumption in South East Asia region divided by types of alcohol in 1961-2001.

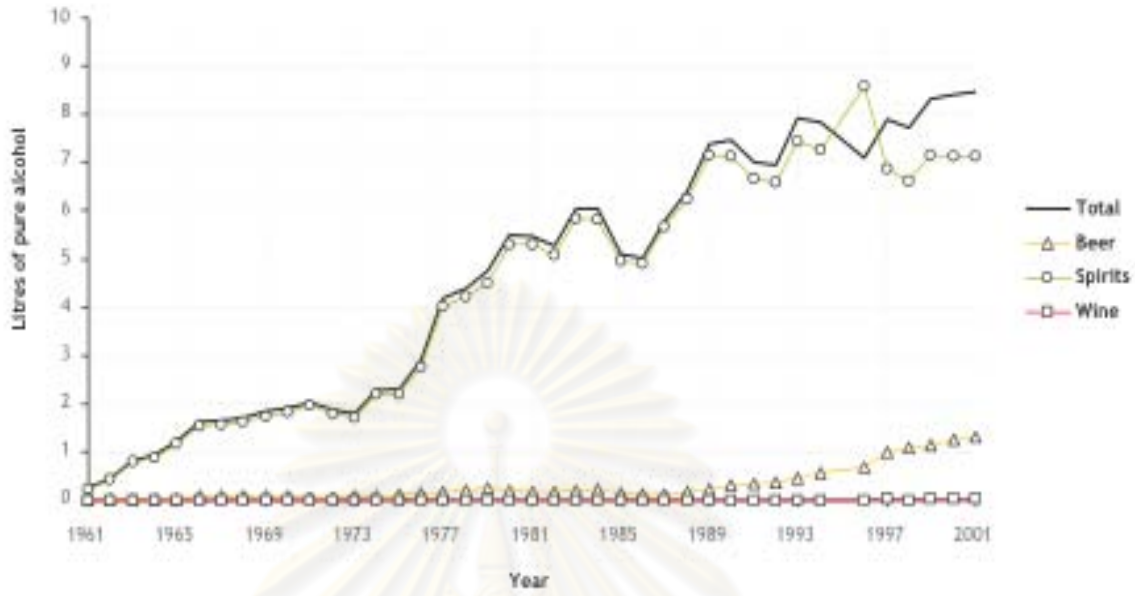

Figure 2.1: Recorded adult per capita consumption of population aged 15 years and above

The US study conducted in 2007, categorized the main beverages into Beer, wine and spirits, respectively, resulted form the survey that 74.4% of all binge drinker respondents consumed beer, 16.9% consumed spirits, and 8.8% consumed wine. Within binge drinking single session, 58.7% consumed only one type at a time, 33% consumed two types at single session, and 8.3% consumed all three at a single session (Naimi, et al, 2007).

In Thailand, according to Center of Studies (CAS), 2008, reported beer was the most popular among population aged 15 and above at 60.9%, following with Thai spirits, imported spirits and wine at 23.6%, 4.7%, 0.4%, respectively.

Alcohol type in relation to binge drinking, was most likely to be influenced by gender, time of days, social group, location, and price, stated by Report of research and consultation by MCM Research (WTAG binge-drinking research, 2004), as follows:

In terms of *Gender*, it has been shown that male and female tended to order different type. Male were more likely to consume pre-packaged spirits, while female more practically to consumed pre-mixed drinks in the bottles (RTD). With interviewing bar managers, many of them agreed that male mostly started with beer,

but female started with wine. However, the consumption of wine in male had increased, as the idea of drinking wine would make them look more sophisticated.

The research stated the most common *time for drinking* wine and beer as they were used to get start (in the evening) before the consumers moving on to different types or to different places.

Type of alcohol consumption was always influenced by *social dynamic within group*. Drinking wine usually was the choice for group of females to get started with. Similar to Male, wine often was the choice when they are in a mixed group.

The observation of the research was taken place targeting to many bars in the city center. Most of bars in the city were concerned as popular *location* for binge drinking in the big nights like weekends.

Price of alcohol beverages made significantly impact on binge behavior. By interviewing bar managers, it was common when customers ask for the cheapest prices.

2.3.2 Number of Drinks (per single occasion)

According to research of NIAAA Publication, stated the pattern of alcohol consumption depend on the number of drinking per single occasion. Some of the medical experts from US National Health Survey have stated that moderation pattern of drinking could adapt into positive lifestyle effects. On the other hand, heavy pattern of drinking would, instead, harm and generate negative lifestyle effects. Moderation pattern of drinking was defined as no more than 1 standard drink per single occasion for female and no more than 2 standard drinks per single occasion for male (Center for Disease Control and Prevention, 2006). Heavy pattern of drinking was defined as 5 or more standard drinks for male and 4 or more standard drinks for female on a single occasion (National Institute of Alcohol Abuse and Alcoholism (NIAAA, 2004).

2.3.3 Frequency of Drinking

In terms of frequency of drinking, in order to define the pattern of drinking, timeline was included. The timeline follow-back (TLFB) was mostly used for retrospective reports over time period of 7 days up to 24 months (Agrawall, et al,

2009). Binge drinking specified single session with a stated *time frame* would be estimates a pattern of binge drinking (Substance Abuse and Mental Health Services Administration, 2007).

The previous research has been specified many time frame for the optimal period that associated to binge drinking pattern as past one year (Cranford, et al, 2006), within 6 months period (Townshend and Duka, 2005; Hartley et al, 2004), past 30 days (SAMHSA, 2007), past two weeks (Wechsler et al., 1994).

2.4 Theory related to Drinking Behavior

2.4.1 Biological Theory

Many researchers have indicated that alcohol consumption was related to genetic and biological factors and were involved in the development of individual. Some kinds of brain chemistry was involved in pleasure of drinking alcohol as alcohol can temporarily increased dopamine which made individual feel pleasure (WHO, 2004). Individual's body effected to alcohol different way of physical problems, depending on volumes of body, age, and sex.

2.4.2 Social Theory

Social and environment surrounding was important elements in the development of alcohol drinking pattern problem. People behave in a certain ways as social behave.

Social Bond theory (Travis Hirschi) referred to the individual who are integrating into society, which there were 4 components as follows:

- Attachment refers to an individual's sensitivity and interest in others.
- Commitment involves time, effort and action.
- Involvement is activities spending time for illegal behavior.
- Belief: people staying in the same social setting share common moral belief and adhere values as sharing.

Some studies have been examined the relationship between Social bond and drinking. The study of people and social bond was proved to have affected on drinking patterns. The students drink heavy alcohol who gets positive feedback from friends, they will be more likely to continue the pattern (Wechsler, et al, 1995). The drinking occasion with many people were the factors of binge drinking (Shillington, 2001).

2.4.3 Other Theory

The concept of binge drinking behavior in relation to health, many studies have been used the concept by Green and Kreuter (1999) that explained based on 3 factors:

- Predisposing factors: Individual knowledge and experiences including social and economic conditions, values, beliefs and attitudes, which change the behavior of individuals.
- Reinforcing factors: Reinforcement in form of support from others or the media that can cause behavioral changes.
- Enabling factors: The factors that support or weaken the behavior.

2.5 The situation Alcohol (Binge drinking)

World Health Organization, WHO, has been put alcohol consumption as a global situation with the highest consideration as the number of alcohol consumption has increased recently (mostly in developing countries) and resulted of a life year loss either to death or disability. The pattern of binge drinking proved to have stronger relationship between changes in amount of alcohol consumption in population and changes in harmful indicators. More relevant to health and social outcomes, reported more than 60 types of disease and injury that caused by excessive alcohol consumption, which is approximately 20-30% worldwide of liver cancer, epilepsy, cirrhosis of the liver, esophageal cancer, homicide, and motor vehicle accidents, with 2.5 million deaths and 69.4 million of Disability-Adjusted Life Years (DALYs) worldwide (WHO, 2004).

The Centers for Disease control and Prevention, CDC, reported on the CBN news that 25% out of population aged 18 to 34 years were involved in binge drinking behavior. Binge drinking related problems caused more than half of 79,000 annual deaths in the US, with 6% deaths were adolescents under 21 years old (Centers for Disease Control and Prevention, 2004). It has been associated with varieties of acute heath and social outcomes for adults and increased mortality rates (Hingson, et al, 2005).

The research on binge drinking in the college in the US, rates over time between 1993 and 2001 increased from 1.2 billion to 1.5 billion, with percentage of 17 increased per person per year and between 1995 and 2001 the percentage per person per year increased up to 35% (Naimi, 2003).

Figure 2.2 described the prevalence of binge drinking in the college in the US in 1993-2001.

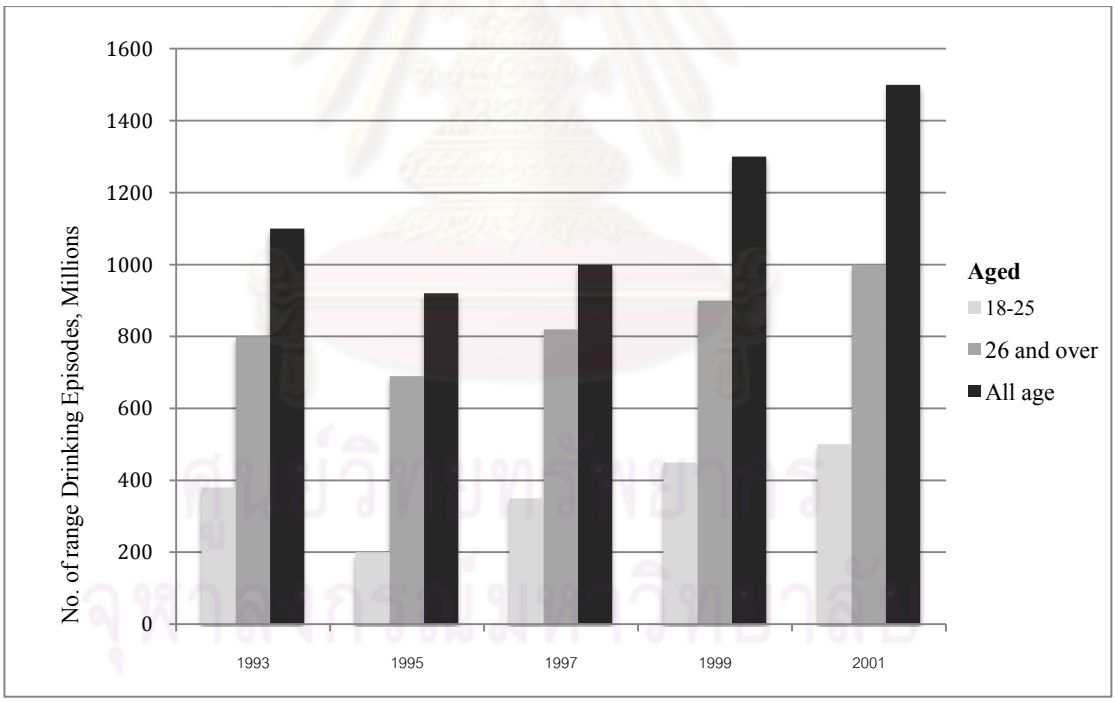

Figure 2.2: Binge drinking episodes by age in US adults, 1993-2001

The research separated the population by sex, age, race and education. 14.3%, of the total population had at least 1 binge-drinking episode in the last 30 days. During the study, 25% of aged 26-55 years were binge drinkers, however population aged 18-

25 years had greatest number of binge drinking (American Medical Association, 2003).

According to the report from the Association of Public Health Observations in the UK 2010, life expectancy in some areas is quite low due to alcohol-related problems, mostly from binge drinking. With comparing to last year 2009, the estimated number of binge drinking was increased in every district.

2.5.1 Situation of Binge drinking in Thailand

In 2008, Center of Alcohol Studies (CAS), Thailand, summarized the survey of the situation of alcohol overall country, found that 29.3% of the population aged of 15 years and above were common drinkers, 7.5% were not common drinkers but used to drink, and non-drinkers 63.2%. In 2009, 30% of the population had weekly or monthly drinking behavior, 13.6% had everyday drinking behavior, 6.5% experienced binge drinking behavior at least once a year, and 4.9% experienced alcohol-related consequences at least one problems.

The prevalence of normal drinkers separating by the province, *Bangkok* was ranked in tenth rank from the highest at 20.4% of the total Bangkok population, 3.9% were binge drinkers, and 5% experienced at least one alcohol-related consequence (CAS, 2008). The Bangkok Metropolis Survey conducted by Chulalongkorn University, reported that alcohol abuse was one of the commonest problems beside from drug abuse.

2.6 Binge drinking in bars and nightclubs

The prevalence of binge drinking, mostly, occurred at the weekends, when significant amount of people heading to city center, hot spot areas as bars and nightclubs (Centers for Disease Control and Prevention (CDC), 2008). Nightclubs and bars were being the places where males are out for drinks with friends and colleague, mostly in the evening and weekends, which binge drinking behavior practically occur in groups, buying alcohol in rounds, and drinking with faster speed (Institute of Alcohol Studies, 2010).

2.6.1 Effects of alcohol Promotions and campaigns, or set-up parties

Marketing of alcohol industry, recently, found in the look of alcohol campaigns that was organized in the set-up events and parties at the bars or nightclubs, to attract more people to come, which had created more chance of binge drinking. The relationship between alcohol marketing and alcohol consumption, was however, depended on the onset of drinking age, social, and income. Some observational studies stated that a higher exposure of alcohol marketing increases alcohol consumption (Synder, et al, 2006) and the advertisement of alcohol was associated to young adolescents having first start to consume alcohol (Sargent, et al, 2006).

2.7 Risk factors of binge drinking

2.7.1Demographic

2.7.1.1 Gender

Throughout the world, male was considered to consume more alcohol than female. It was a universal gender differences in drinking behavior (Bloomfield, et al, 2005). However, the gender gap between male and female binge drinkers has been closing recently. The study in 2009 found that female was drinking almost equally, and the rates of binge drinking have risen over the last 30 years (Grucza, 2009).

2.7.1.2 Age

Binge drinking in childhood and adolescence has become a serious problem. The prevalence of binge drinking ages 15-16 years old was higher every year, between 2004 and 2007 (Stolle 2009; Sack, 2009). The survey of NHSDA in 2002 stated the number of binge drinking among underage adolescences was almost similar as adults aged above 21 years. In 2008, it was reported that 34% of 18-20 years old, 46% of 21-25 years old, and 43% of 26-29 years old engaged in binge drinking during 30 days prior the survey (National Household Survey on Drug Abuse, 2002).

2.7.1.3 Socioeconomic status (SES)

The study in 2010 of adolescents with high socioeconomic status (parental income) was proved to have association with high rates of binge drinking (Humensky, 2010). The survey of UK health news in 2007, reported that rich people were more likely to drink more amount of alcohol than the poor and the daily excessive alcohol consumption were found in the wealthy areas in London (UK Times, 2007).

2.7.1.4 Education

The survey updated in 2009 was proved that college students consume more alcohol comparing to non-college students (Grucza, 2009; Slutske, 2005).

2.7.1.5 Transition

During developmental of transition between adolescents and adulthood could be victimized and easily lead to varieties of risk factors of binge drinking (Elizabeths, 2007). The transition period between high school and university was proved to be very risk of binge drinking (Johnston, 1997).

2.7.2 Social influences

There were varieties of social influences that make people to engage to binge drinking, as to promote social confidence, to meet new people, to socialize with friends or colleague. The social dynamic within groups was proved that it could lead to binge drinking (Shillington, 2001; Wechsler, et al, 1995).

2.8 The occurrence of binge alcohol-related problems

According to WHO, alcohol-related consequences resulted by heavy drinking was major global problem. Alcohol-related problems are defined into 3 main problems as follows:

2.8.1 Health consequences

Binge drinking was involved with short-term and long-term health risks in later life, which it affected every organ in the body. More than 60 diseases were linked to alcohol consumption (Gmel and Rehm, 2001).

Alcohol and the amount of consumption over long period of time have been related to the risk of cancer of the mouth, pharynx, hypo pharynx, esophagus and liver. It is the 2nd greatest risk for cancers (Bagnardi, et al; 2001, US Department of Health and Human Services; WHO, 2000). Heart failure and cardiovascular disorders were adversely affected by alcohol. There was evidence that long period of binge drinking can cause hypertension or high blood pressure which increasing chance of having stroke (Murray, et al, 2002). Liver cirrhosis was mainly dependent on amount of consumption over long period of time, especially long terms of binge drinking.

In term of mental health, alcohol was associated with many problems including depression, anxiety, and personality. Many studies stated that the heavy drinking of alcohol and depressive symptom commonly happen in late life. The mental health foundation in London UK reported that 65% of suicides was linked to binge drinking. Binge drinking interrupted the pattern of sleeping, which led to insomnia and anxiety (Mental Health Foundation, 2006).

2.8.2 Individual Consequences

Binge drinking was associated to many consequences that affect to individuals such as injuries cause by accident, unsafe sex, sexual assaults, association with drug and work-related problem or loss of job and income.

2.8.2.1 Loss of job & income

Binge drinking led to unemployment, which resulted in increasing of heavier alcohol drinking (Claussen, 1999). Alcohol consumption reduced the income, may increased medical expenditure, and lost income due to lost of jobs (Bonu, et al, 2004).

2.8.2.2 Unsafe sex

Binge drinking was more likely to engage with sexual activities, chance of having more than one sex partners, and less likely to use protection (Markos, 2005). Alcohol-related consequences with binge drinking among young adults between ages 18-21 was likely to face with the unwanted sexual advances or victimize of rape or sexual assaults (Abbey, 2002; Cooper, 2002).

2.8.2.3 Injuries & Death (Car accident)

Binge drinking was the third-leading behavior that creates cause of death from vehicle crashed in the US according the report of Center for Disease Control and Prevention (CDC). The research in 2008 stated that 88% from the report has shown that binge drinking was strongly associated with driving (Naimi, 2009).

2.8.2.4 Drug abuses

Binge drinking was associated with the use of much kind of drugs. There were the frequencies of binge drinking involving with marijuana, amphetamines and cocaine (Wechsler, 1995). The use of excessive alcohol involving with drug was reported highly on college students than non-college students (Malley and Johnston, 2002).

2.8.3 Social Consequences

Binge drinking was associated to many consequences that affect social and environmental such as work-related problems (lower productivity), and domestic violence.

2.8.3.1 Lower Productivity

Absence of work cause by binge alcohol consumption was potentially lower productivity. People who were drinkers and addicted to alcohol had higher rates of absence to work than other non-drinker (Gmel, 2003).

2.8.3.2 Violence

Binge drinking increased aggression and violence was more likely to be involved into a fight, compared to regular drinking. The UK survey stated that many type of incidents were influenced by alcohol including such as domestic, mugging, stranger, acquaintance, wounding, robbery and common assault (UK Crime and Justice Survey, 2003).

2.9 Related Research

Zhao, et al, 2010, researched about the effects of binge drinking and socio-economic status associated with driving has found the significant interaction effects between of binge drinking and income level. Those who have higher income are more likely to do binge and drive.

Humensky, 2010, researched about the association between socioeconomic status and alcohol use in early adulthood. The results stated that people with more socioeconomic status engaged with higher rates of binge drinking.

Sull, et al, 2010, examined combined effects of hypertension and binge drinking. The research has shown that male who having hypertension and binge drinking had increased risk of cardiovascular mortality.

Rohsenow, et al, 2010, assessed the study on the intoxication between bourbon and vodka that affected on hangover and sleep in young adults. The results of people reported that they felt worse after bourbon.

Stolle, et al, 2010, researched the epidemiology of binge drinking in childhood and adolescence, which the results stated that episodic binge alcohol consumption was associated with somatic complications, traffic accidents, violent behavior and suicide. The finding also stated that the more frequently an adolescent drinks to excess, and the younger he or she is, the greater is the risk of developing an alcohol-related disorder.

Balodis, et al, 2009, did the research binge drinking in undergraduate students associated with the perceived effects of alcohol. The research proved that intoxicated binge drinkers had feeling less intoxicated, liking the effects more, and wanting more alcohol than non-binge or light drinkers.

Naimi, et al, 2009, researched on the risk factors for driving after binge drinking. The results stated that binge drinkers who drank in bars, clubs, and restaurant drove within 2 hours of their recent binge-drinking episode.

Grucza, et al, 2009, researched about the behavior of alcohol consumption comparing between college students and non college students, which the result was proved that college students consume more alcohol comparing to non-college students.

Naimi, et al, 2008, reported that the relationship of binge drinking was strongly associated with driving.

Naimi, et al, 2007, researched on the beverage types that consumed by binge drinkers. The beverage that consumed by binge drinkers was beer exclusively as a result.

Fisher et al, 2007, assessed in young adolescents had first start to consume alcohol. The result stated that there was a relationship between advertisement of alcohol and the first time that young adolescents consume alcohol.

Elizabeths, 2007 found that during developmental of transition between adolescents and adulthood could be victimized and easily lead to varieties of risk factors of binge drinking.

Synder et al, 2006, observed about the alcohol marketing that may led to higher of alcohol consumption, which the result stated that a higher exposure of alcohol marketing increases alcohol consumption.

Markos, 2005, researched on the sexual risks that caused by binge drinking. The result stated that binge drinking was more likely to engage with sexual activities, with a chance of having more than one sex partners, and less likely to use protection.

Bonu et al, 2004, researched about binge drinking could led to unemployment, which resulted in increasing of heavier drinking Alcohol consumption can reduce the income, may increase medical expenditures, and loss of income due to loss of jobs.

Harford, et al, 2003, examined the relationship between alcohol-related aggression and drinking at parties and bars, which the result stated that the level of drinking alcohol was related to higher levels of disruptive behaviors at parties and bars.

Shillington, 2001 stated that there were varieties of social influences that made people to engage with binge drinking, as to meet new people, to socialize with friends or colleague. The social dynamic within groups was proved that it could lead to binge drinking.

Malley and Johnston, 2002, reported that the use of excessive alcohol involving with drug was found highly on college students than non-college students.

Cooper, 2002, found that alcohol-related consequences with binge drinking among young adults between ages 18-21 were likely to face with the unwanted sexual advances or victimize of rape or sexual assaults.

Gmel, 2001, found that absence of work cause by binge alcohol consumption was potentially lower productivity. People who were drinkers and addicted to alcohol had higher rates of absence to work than other non-drinker.

Wechsler, 1995, examined the association between drugs and binge drinking, resulted that it was a highly association between them, thus, There were the frequencies of binge drinking involving with marijuana, amphetamines and cocaine.

CHAPTER III

METHOD AND MATERIALS

3.1 Population

The study area was 4 Nightclubs around high socioeconomic area, in Bangkok Metropolis. The subject referred to young adult ages 20-34 years who were the nightclub's customers and were binge drinkers. The numbers of customers were estimated based on Saturday (which was the day that had the most prevalence binge drinkers during the week) in November and December 2010 to be the population (N) for this study. During the month, there were two weeks that the population was reached at peak level and another two weeks, the population is about ¾ comparing to its peak level.

Table 3.1: The number of population of each nightclub

Nightclubs	**Population (N) Customers**				
	Peak SAT	(x2)	Normal SAT	(x2)	Total/month
A	250	500	200	400	900
B	300	600	225	450	1050
C	200	400	150	300	700
D	300	600	225	450	1050
Total/month		2100		1600	3700

The numbers was based on the information that was given by the nightclub's managers. The managers stated that in each week; some parts of the customers were regular and some parts were casual customer. Inflow-outflow of customers occurs during weekends.

3.2 Eligibility Criteria

Inclusion criteria, as follow:

- Young adults ages 20-34 years
- Young adults who are binge drinkers
- Young adults who screened by AUDIT test with score of 8 – 19
- Male and female

Exclusion criteria, as follow:

- Young adults who are non-binge, light drinkers and alcohol-dependence
- Young adults with disease or diagnosis in relation to alcohol
- Person who refuse to do questionnaire

3.3 Sample Size

The sample size of this research was calculated by using *Krejcie & Morgan* method, as follow:

$$n = \frac{x^2 Np(1-p)}{e^2(N-1) + x^2 p(1-p)}$$

$$n = \frac{(3.841)(3700)(0.5)(1-0.5)}{(0.05)^2(3700-1) + 3.841(0.5)(1-0.5)} = 348.06 \sim 348$$

Note that:

n = Sample Size

N = Population

e = Margin of error

p = Population proportion (0.50)

x^2 = Chi-square for the specified confidence level at 1 degree of freedom at confidence Interval of 95% (x^2 = 3.841)

The sample of each nightclub was calculated by using *Proportionate* method, as follow: $n_h = \frac{nN_h}{N}$

Note that:
- n = Sample size
- N = Whole Population
- N_h = Population in each nightclub
- n_h = Sample of each nightclub

Table 3.2: The number of sample in each nightclub

Nightclubs	Sample Size
A	$n_h = \frac{348(900)}{3700} = 84.64 \sim 85$
B	$n_h = \frac{348(1050)}{3700} = 98.76 \sim 99$
C	$n_h = \frac{348(700)}{3700} = 65.83 \sim 66$
D	$n_h = \frac{348(1050)}{3700} = 98.76 \sim 98$

The sample size in this study had total 348 respondents who were nightclub's customers. The research assessed into 4 different nightclubs around high socioeconomic area, which the number of sample size was divided regarding to the amount of customers in each nightclub.

3.4 Methodology

The eligible respondents in this study were selected by doing sampling, which was first screened by AUDIT in order to meet the inclusion criteria. The respondents age needed to be within 20-34 years, and needed to earn score 8-19 of AUDIT to enroll in this study, since 8-16 was considered as low binge (hazardous) and 16-19 was considered as high binge (harmful). After the respondents had proved their eligible, the respondents were enrolled into 2 parts of self-administered fill-in questionnaire part and interview questionnaire part.

3.5 Procedure

1) The nightclubs were selected as they have the high prevalence of the customers on the weekdays and highest prevalence of the weekends. High socioeconomic area was considered as the area that most of the customers have ability to pay.
2) The location mapping was made to clarify the target nightclubs.
3) The questionnaire was developed, and was sent for approval by 3 specialists.
4) Ethical consideration was considered and was approved, in order to do data collection.
5) The questionnaire was pre-tested by 30 young adults (who meet criteria) in nightclubs.
6) The researcher collected the data from respondents. The respondents were 1st screened by basic screening test and AUDIT test to meet the inclusion criteria.
7) The researcher followed with the questionnaire and interview.

3.6 Research Design

The study design was cross-sectional study.

3.7 Measurement Tools

Measurement tools were consisted with 3 parts:

1st part: AUDIT screening test

2nd part: Self-administered fill-in questionnaire with closed-end

3rd part: Interview Questionnaire

Tool	
Questionnaire	Developed by the researcher and base on the literature review, following as demographic, social groups, pattern of consumption.
AUDIT	Alcohol Use Disorders Identification Test questionnaire for screening binge drinkers. AUDIT test (WHO) was consisted of 10 questions and each question have 4 score. 0-7 score was clarified as non-binge, 8-16 was clarified as hazardous drinking (low binge), 16-19 was clarified as harmful drinking (high binge) and counseling was needed, and 20-40 was considered as alcohol dependence.
Standard Drink	The standard drink measurement tool was given to identify the standard amount of alcohol consumption.
TLFB	Alcohol timeline followback was interviewed based on retrospective.

Figure 3.1 described the details of the measurement tools for the respondents who were nightclub's customers.

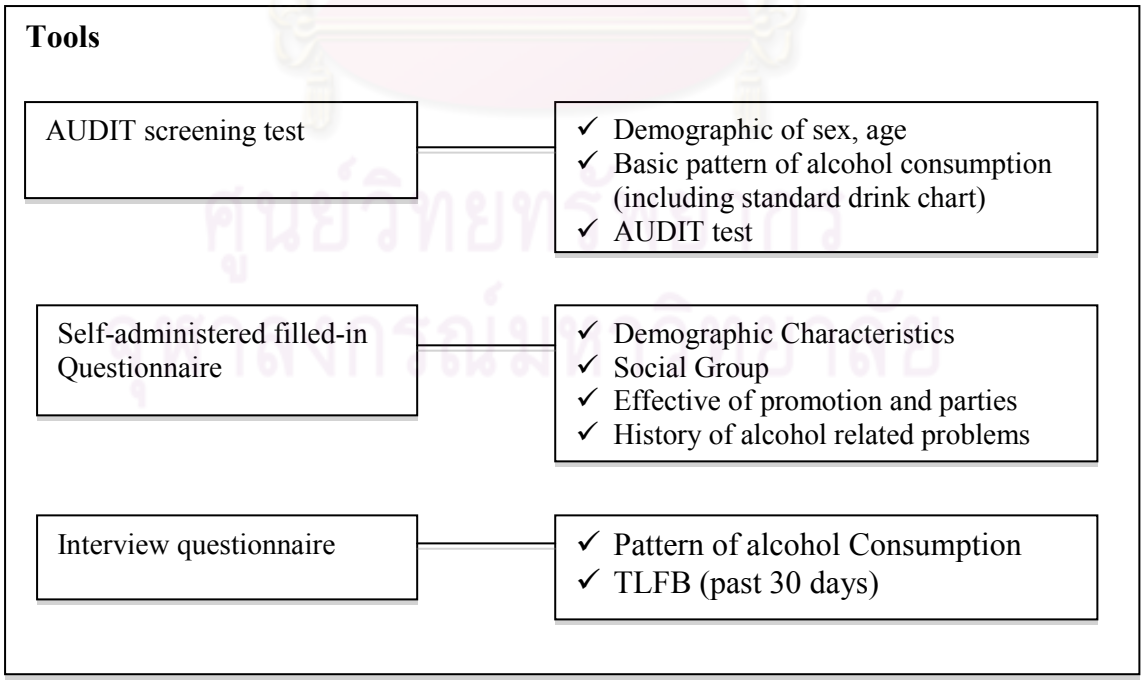

Figure 3.1: The details of the measurement tools

3.8 Data Collection

- The data collection was done in evening period started from 7pm until midnight.
- The researcher randomly selected the customers who were first arrived the nightclubs and hadn't started drinking alcohol to be the respondents, so that they had conscious and were able to answer questions correctly.
- The respondents were asked to read and understand Participant Information Sheet and were asked to sign Informed Consent Form before doing any questionnaire.
- The customers' age over 34 years will be excluded in the study.
- The customers did 1st part of AUDIT screening test.
- The respondents who had AUDIT score below 8 were asked to stop the questionnaire.
- The respondents who passed AUDIT test 8-19 score were considered eligible and were asked to continue the 2nd part and 3rd part. After finished the procedure of questionnaire, since the respondents was considered as drinking at binge level, the respondents received handbook about information of substance abuse that released by Thai Health organization. (Since there was some part of questionnaire asked about history of illicit drugs used, the respondents were also benefit from the handbook since it was also contained details about illicit drugs).
- The respondents who had AUDIT score above 19 are considered as alcohol independence was asked to stop the questionnaire. The researcher gave basic advice, seeing doctor and do physical check up. The respondents also received handbook released by Thai Health organization.

3.9 Validity and Reliability

The structure of the questionnaires was proved by the 3-5 specialists within related field in order to gain content validity. After that, the questionnaires were pre-tested by at least 30 young adults (who meet criteria) in nightclubs.

3.10 Outcome

The main outcome of this research was the conformation of the pattern of the binge drinking among young adults in high socioeconomic nightclubs including influenced factors, volume, frequencies, and type of alcohol beverage, which were related to demographics characteristics and the social groups.

3.11 Data Analysis

The quantitative was encoded and processed for statistical analysis using SPSS program for Windows to calculate and interpret as follows:

- Descriptive analysis of frequency, percentage, mean, and standard deviation was calculated to analyze data regarding demographic, social reasons, and pattern of drinking.
- Chi-square test was use to determine the statistical significance of the association between variables of dependent (pattern of binge drinking) and independent (demographic and social group).

3.12 Ethical Consideration

The ethical consideration was involved when collecting data in the field. Before the process of investigation, the research proposal was reviewed and approval by IRB (Institutional Review Board) to meet International Standard. The researcher followed the procedure of Ethics Review Committee for Research, Chulalongkorn University, in order to pass the consideration.

3.13 Expected Benefits & Application

The researcher expected the finding would be an information base for the future intervention and prevention for alcohol and other alcohol-related abuses in order to have the future benefits for the related organization, for example, Thai health promotion foundation etc. The related organization should have further concern and have stronger policy on alcohol consumption for nightclubs, regarding to prevent the consequences that may occur by alcohol consumption in nightclubs.

3.14 Limitation

There was certain limitation to be considered in this research:

- The research assesses the pattern of binge drinking among young adults only in one specific area, which cannot be generalized to nightclubs in the other areas.
- The population characteristic was perhaps different than the other areas, in terms of income, monthly expense, and life style of the customers in high socioeconomic may differ to the other areas.

CHAPTER IV

FINDING AND ANALYSIS

The study was conducted among young adults age 20 to 34 years in 4 different nightclubs around high socioeconomic area, Bangkok during December 2010 to April 2011. Total 348 respondents enrolled in this study.

This chapter contained the descriptive portion of variables and the results showing the association between volume of alcohol consumption and variables. The study mainly consisted of 1) Demographics characteristics, 2) Social groups, 3) History of behavior and consequences in both individual and social of the respondents and 4) Pattern of binge drinking of the respondents.

4.1 Demographic characteristics

In demographic characteristics part consisted of age, genders, monthly income, education, occupation, monthly expenses on alcohol, and monthly expenses on binge drinking,.

Table 4.1 described the demographic characteristics in numbers and percentage of males and females.

Table 4.1: Demographic characteristics

Variables (N=348)	Male (N=173)		Female (N=175)	
	N	%	N	%
	173	49.7	175	50.3
Age (Years)				
20-24	49	28.3	39	22.3
25-29	99	57.2	124	70.9
30-34	25	14.5	12	6.9
Mean	26.43		25.98	
Monthly income				
< 15000	38	22.0	50	28.6
15000-29999	87	50.3	98	56.0
30000-44999	32	18.5	17	9.7
≥ 45000	16	9.2	10	5.7
Mean	23143.7		21988.6	
Education				
Studying Bachelor	28	16.2	49	28.0
Studying Master	6	3.5	9	5.1
Finished Pre-college	7	4.0	6	3.4
Finished Bachelor	117	67.6	103	58.9
Finished Master	15	8.7	8	4.6
Occupation				
Student	32	18.5	50	28.6
Own business	14	8.1	8	4.6
Family business	21	12.1	24	13.7
Official Employed	4	2.3	5	2.9
State enterprise	10	5.8	7	4.0
Private company	39	22.5	63	36.0
Freelance	25	14.5	3	1.7
Unemployed	28	16.2	15	8.6
Monthly expense for alcohol				
<2500	50	28.9	81	46.3
2500-4999	68	39.3	80	45.7
5000-7499	35	20.2	10	5.7
≥7500	20	11.6	4	2.3
Mean	3456.9		2897.14	
Monthly expense for binge drinking				
<2000	32	18.5	56	32.0
2000-3999	79	45.7	101	57.7
4000-5999	53	30.6	15	8.6
≥6000	9	5.2	3	1.7
Mean	2577.6		2222.9	

Total 348 respondents who had AUDIT score of 8 to 19 were enrolled, the total number of males and females were almost similar as 173 (49.7%) and 175 (50.3%) respectively. The age of respondents was 20 to 34 years with the minimum age of 20 years and the maximum age of 32 years.

The highest number of males and females appeared in the rank of age 25-29 years, which the number of females was higher. Instead, the number of males was twice as much higher than females in the rank of age 30-34 years.

The income per month with range of 15000 to 30000 baht has the highest number of respondents of 87 males (50.3%) and 98 females (56.0%). The income above 30000 baht or more in males were higher than females. The minimum income that respondents received per month was 8000 baht and the maximum was 50000 baht.

More than half of the males (67.6%) and females (58.9%) graduated at least bachelor degree, few them graduated master degree. About one-fourth of males (16.2%) and females (28.0%) are now attending bachelor degree, also few numbers attending master.

High number in females (36.0%) work in private company and high number of males (30.7%) were freelance and unemployed. Unemployment in males was twice as much higher than females.

Monthly expense spending on alcohol below 2500 to 5000 baht, females were slightly higher than males, while the monthly expense above 7500 bath, males (11.6%) was 5 times higher than females (2.3%). The respondents spent minimum expenses for alcohol consumption of 1000 baht and maximum of 10000 baht.

The differences expense spending on binge drinking of males and females were similar to the expense on alcohol, which females monthly expenses were less than males. The number of males that expenses above 4000 baht was 3 times higher than females. The minimum amount of expenses that the respondents spent for their binge drinking per month was 1000 baht and the maximum was 6000 baht.

4.2 Social groups

In social groups part was described in term of 1) activities that brought people to nightclubs such and selling alcohol, music, dancing, and parties, 2) satisfaction that encourage people to nightclubs, 3) Influences either by social, personal, or environmental, 4) special events, parties, and 5) alcohol campaign promotion.

Table 4.2 described the numbers and percentage of male and female respondents in each nightclub that the researcher assessed for the study.

Table 4.2: The number of respondents in each nightclub

Nightclubs	Male (N=173)		Female (N=175)		Total (N=348)	
	N	%	N	%	N	%
A (n= 85)	39	22.5	46	26.3	85	24.4
B (n= 98)	45	26.0	53	30.3	98	28.2
C (n=99)	51	29.5	48	27.4	99	28.4
D (n=66)	38	22.0	28	16.0	66	19.0

In total 348 respondents, the number of respondent in each nightclub was estimated by the proportion regarding to the amount of the customers based on the days that nightclubs have the most customers throughout the month.

Table 4.3 describes the activities and satisfaction that encouraged respondents to nightclubs in numbers and percentage of males and females.

Table 4.3: Activities and satisfaction that encouraged respondents to nightclubs

	Male (N=173)		Female (N=175)	
	N	%	N	%
Activities				
Selling alcohol	169	97.7	159	90.9
Dancing	64	37.0	61	34.9
DJ	43	24.9	53	30.3
Live band	33	19.1	36	20.6
Parties	32	18.5	30	17.1
Satisfaction				
Good DJs	52	30.1	67	38.3
Good Live band	107	61.8	96	54.9
Good Service	57	32.9	53	30.3
Parties	55	31.8	56	32.0
Location	168	97.1	163	93.1
Promotion	33	19.1	24	13.7

The main activities that encouraged males (97.7%) and females (90.9%) to nightclubs were selling alcohol. The other activities was secondary reason that the respondent both males and females was encouraged to nightclubs, with almost similar number in both genders.

The main satisfaction that encouraged males (97.1%) and females (93.1%) to high socioeconomic nightclubs was the location. Good live band was rank as the secondary that encouraged males (61.8%) and females (54.9%) to nightclubs in this area. Good DJs, and service, and special events was third encouragement for the respondents, having almost similar number in both genders. Alcohol promotion was the least priority.

Table 4.4 described the influences, special parties, and alcohol promotion that encouraged respondents to binge drinking in numbers and percentage.

Table 4.4: Influences, special parties, and alcohol promotion that encouraged respondents to binge

	Male (N=173)		Female (N=175)	
	N	%	N	%
Influences				
Friends	167	96.5	174	99.4
Socializes	62	35.8	58	33.1
Celebration e.g. birthday, wedding	67	38.7	66	37.7
Feeling down	48	27.7	35	20.0
No reason	3	1.7	-	-
Festive season/holiday e.g. New year, Songkran	115	66.5	119	68.0
Parties and events	71	41.0	78	44.6
Alcohol Promotion	29	16.8	17	9.7

Main reason of binge both males (96.5%) and females (99.4%) were friends. The secondary reason of binge both males (66.5%) and females (68.0%) were holiday and festive season such as New Year and Songkran festival. Socializing and celebration both males and females were only one third. Males were more likely to binge with no reason and when their feel down than females.

More than one-third of males (41.0%) and females (44.6%) were special events and party arrangement that affected their binge drinking, while few numbers of males (16.8%) and females (9.7%) were alcohol campaign and promotion that affected their binge drinking.

4.3 History of alcohol-related consequences and drug illicit uses

In this part described the history of the respondents' behavior, consequences and drug illicit uses, as binge drinking associates to many consequences that effect to 1) individuals such as lost of income, injuries, accident unsafe sex, and drug abuse, 2) social such as lower productivity and violence.

4.3.1 Behavior and consequences

The history of alcohol-related consequences of the respondents was detailed into 1) symptoms and behavior, 2) physical consequences, 3) abuses, 4) hazardous drinking, and 5) sexual consequences.

Table 4.5 described the numbers and percentage of alcohol-related consequences in both males and females.

Table 4.5: The history of alcohol-related consequences

	Male (N=173)		Female (N=175)	
	N	%	N	%
Symptoms and behavior i.e. unable to control drinking after having larger amount or larger time or preoccupied by alcohol	71	40.9	64	36.7
Physical consequences i.e. blackout, itchy or stomach disorders after few drinks	41	23.7	43	24.3
Abuses i.e. trouble or fight with others	53	30.3	60	34.0
Personal consequences i.e. lack of ability to do regular routine and responsibility, or economic troubles	117	67.5	168	96.2
Hazardous drinking i.e. accidents or troubles with law	76	43.9	73	41.5
Sexual consequences				
Having sex with friends after drinking	-	-	-	-
Having sex with strangers after drinking				
Several times	8	4.6	7	4.0
Often	28	16.2	13	7.4
Unprotected sex after drinking				
Several times	76	43.9	72	41.1
Often	22	12.7	46	26.3

Symptoms that occurred to the person such as unable to control drinking after having larger amount or larger time or preoccupied by alcohol, almost half of males (40.9%) and females (36.7%) were admitted that it was happened to them several times in their life.

Physical consequences that ever happened to the respondents such as lost memory resulted by having alcohol last night, itchy or stomach disorders after few drinks, the percentage of males (23.7%) and females (24.3%) were very similar.

Abuses such as fight with others or having troubles with friends, family, and partners, about one-third of males (30.3%) and females (34.0%) admitted that they were in those situations several time.

Personal consequences such as lack of ability to do regular routine and responsibility, or economic troubles because spending too much on alcohol, About two-third of males (67.5%) were admitted these personal consequences affected them

several times, while almost of females (96.2%) was affected by these personal consequences several time in their life.

Hazardous drinking causing accidents and trouble with law, similar number of males (43.9%) and females (41.5%) were experienced several times.

None of males and females admitted that they ever had sex with their friends after drinking. Males (16.2%) admitted that they ever had sex with stranger often were twice as much higher than females (7.4%), while females (26.3%) admitted that they often ever had unprotected sex after drinking often was twice as much higher that males (12.7%).

4.3.2 Illicit drug uses

An Illicit drugs used in nightclubs past 30 days in this study was categorized by Marijuana, Cocaine, Ice, Erimin5 and Ecstasy.

Table 4.6 described the numbers and percentage of illicit drug uses in nightclubs in past 30 days in both males and females.

Table 4.6: Illicit drug uses in nightclubs in past 30 days

	Male (N=173)		Female (N=175)	
	N	**%**	**N**	**%**
Marijuana				
Didn't use in nightclubs	11	6.4	5	2.9
Used before nightclubs	4	2.3	-	-
Used in nightclubs	-	-	-	-
Used after nightclubs	-	-	-	-
Cocaine				
Didn't use in nightclubs	-	-	-	-
Used before nightclubs	60	34.7	47	26.9
Used in nightclubs	74	42.8	60	34.4
Used after nightclubs	71	41.0	57	32.6
Erimin5				
Didn't use in nightclubs	3	1.7	6	3.4
Used before nightclubs	-	-	-	-
Used in nightclubs	62	35.8	37	21.1
Used after nightclubs	11	6.4	7	4.0
Ecstasy				
Didn't use in nightclubs	6	3.5	8	4.6
Used before nightclubs	10	5.8	2	1.1
Used in nightclubs	51	29.5	37	21.1
Used after nightclubs	2	1.2	1	0.6

The study found that the number of the respondents ever used drugs in nightclubs in past 30 days was high. The results showed the consumption of illicit drugs in males were higher than females.

Few numbers of the respondents used Marijuana in past 30 days and most of them didn't use it during nightclubs.

Males (42.8%) used Cocaine in nightclubs was slightly higher than females (34.4%). Higher percentage of males (41.0%) used Cocaine after nightclubs than females (32.6%).

None of the respondents used Erimin5 before getting into nightclubs in past 30 days, but males (35.8%) and females (21.1%) were admitted that they mostly used it while they were in the nightclubs.

Very few numbers of females used Ecstasy before nightclubs (1.1%) and after nightclubs (0.6%), instead, higher number of males (5.8%) used it before getting into nightclubs. Most of the respondent both males (29.5%) and females (21.1%) used it in nightclubs.

An Illicit drugs used with alcohol beverage in lifetime in this study was categorized by Energy drink, Marijuana, Cocaine, Erimin5 and Ecstasy.

Table 4.7 described the numbers and percentage of consumption of illicit drugs used with alcohol beverage in lifetime in both males and females.

Table 4.7: The consumption of illicit drugs uses with alcohol beverage in lifetime

	Male (N=173)		Female (N=173)	
	N	%	N	%
Energy drink (redbull)				
Never used with alcohol	50	28.9	41	23.4
Used after alcohol	4	2.3	2	1.1
Used before alcohol	-	-	-	-
Used with alcohol	111	64.2	119	68.0
Marijuana				
Never used with alcohol	24	13.9	18	10.3
Used after alcohol	28	16.2	8	4.6
Used before alcohol	10	5.8	-	-
Used with alcohol	18	10.4	1	0.6
Cocaine				
Never used with alcohol	-	-	-	-
Used after alcohol	85	49.1	38	21.7
Used before alcohol	75	43.4	35	20.0
Used with alcohol	78	45.1	38	21.7
Erimin 5				
Never used with alcohol	-	-	-	-
Used after alcohol	10	5.8	5	2.9
Used before alcohol	12	6.9	5	2.9
Used with alcohol	63	36.4	22	12.6
Ecstasy				
Never used with alcohol	-	-	-	-
Used after alcohol	31	17.9	15	8.6
Used before alcohol	19	11.0	11	6.3
Used with alcohol	65	37.6	25	14.3

The study found that the numbers of the respondents who ever used drugs with alcohol beverage in life time was high. Many of the respondents admitted that they ever used drug with alcohol beverage. Males consumed illicit drugs with alcohol beverage were higher than females.

Similar number of males (64.2%) and females (68.0%) said that they ever used energy drink with alcohol but none of them used it before drink alcohol.

Higher Marijuana was used in males than females but only few numbers was used with alcohol. Males (16.2%) ever used Marijuana after alcohol was much higher than females (4.6%).

Almost half of males used Cocaine, Ecstasy, and Erimin5 in nightclubs, while only one-fourth of females used these drugs in nightclubs.

Used Cocaine with alcohol in males (45.1%) was twice as much higher than females (21.7%). Used Cocaine before and after consumed alcohol in males was also twice as much higher than females.

Used of Erimin5 with alcohol in males (36.4%) was very much higher than females (12.6%), along with the number of usage before and after alcohol.

Used of Ecstasy with alcohol in males (37.6%) was also very much higher than females (14.3%). Used Ecstasy with alcohol was the highest and used Ecstasy after alcohol was the second highest.

4.4 Pattern of binge drinking

The pattern of binge drinking was consisted of types of alcohol, frequencies, the volume of alcohol consumption, and AUDIT score of the respondents.

4.4.1 Types of alcohol consumption

Types of alcohol beverage that used in this study were divided into 6 categories as beer, whisky, vodka, wine, cocktail, and ready-to-drink.

Table 4.8 describes the types of alcohol beverages that the male and female respondents ever drunk in past 12 days and past 30 days.

Table 4.8: Types of alcohol beverages that the respondents ever drunk in past 12 months and past 30 days

	Male (N=173)		Female (N=175)		Total (N=348)	
	N	%	N	%	N	%
Past 12 months						
Beer	163	94.2	152	86.9	315	90.5
Whisky	108	62.4	94	53.7	202	58.0
Vodka	156	90.2	164	93.7	320	91.6
Wine	124	71.7	133	76.0	257	73.9
Cocktail	83	48.0	103	58.9	186	53.4
RTD	55	31.8	73	41.7	128	36.8
Past 30 days						
Beer	119	68.8	61	34.9	180	51.7
Whisky	97	56.1	70	40.0	167	48.0
Vodka	76	43.9	101	57.7	177	50.9
Wine	81	46.8	113	64.6	194	55.7
Cocktail	41	23.7	68	38.9	109	31.3
RTD	8	4.6	16	9.1	24	6.9

All of the respondents used to drink every kind of alcohol that specified as beer, whisky, vodka, wine, cocktail and ready-to-drink (RTD) in their lifetime.

Males (94.2%) made a consumption of beer the most in past 12 months and remained highest (68.8%) in past 30 days. Although females made a consumption of beer almost equals to males in past 12 months but there were only half (34.9%) compared to males in past 30 days.

Males consumed whisky (62.4%) in past 12 months and the number that consumed slightly lower in past 30 days, which was (56.1%). Females consumed whisky was slightly lower than males either in past 12 months (53.7%) or past 30 days (40.0%).

Males (90.2%) consumed vodka was the second highest consumption from beer in past 12 months, while females (93.7%) were the highest consumption. Vodka in females (57.7%) was the second highest in past 30 days, while males (43.9%) came at the fourth.

The consumption of wine in females (76.0%) was slightly higher than males (71.1%) in past 12 months. Wine in females (64.6%) was the highest in past 30 days. Cocktail and ready-to-drink in females was higher than males either in past 12 months or past 30 days.

4.4.2 Frequencies

The frequencies of days that the respondents ever binged in past 12 months were concluded into 6 ranks as once a month as 12 days per year, twice a month as 24 days per years, 3 times a month as 36 days per year, once a week, 6 times a month, and twice a week as 48 days, 72 days, and 96 days respectively.

Table 4.9 described the frequencies of days that the male and female respondents had ever binged in past 12 months.

Table 4.9: Frequencies of numbers of days that the respondents ever binged in past 12 months

	Male (N=173)		Female (N=175)		Total (N=348)	
	N	%	N	%	N	%
Once a month (12 days)	39	22.1	44	25.1	83	23.6
Twice a month (24 days)	52	30.2	58	33.1	110	31.7
3 times a month(36 days)	35	20.3	37	21.3	72	20.7
Once a week (48 days)	18	10.5	22	12.6	40	11.5
6 times a month (72 days)	13	7.6	2	1.1	15	4.3
Twice a week (96 days)	16	9.3	12	6.9	28	8.1

The number of all ranks between males and females were closed to each other. 12 days to 36 days ranking were slightly higher in females, while 48 days to 96 days ranking were higher in males.

Table 4.10 described the frequencies of days that the male and female respondents had consumed in past 30 days.

Table 4.10: Frequencies of days that respondents consumed alcohol in past 30 days

No. days	Male (N=173)		Female (N=175)		Total (N=348)	
	N	%	N	%	N	%
<3	27	15.6	47	26.9	74	21.3
4-6	68	39.3	68	38.9	136	39.1
7-9	54	31.2	53	30.3	107	30.7
10-12	14	8.1	6	3.4	20	5.7
13-15	10	5.8	1	0.6	11	3.2
Mean	6.41		5.49			

The frequencies of days that respondents consumed alcohol in past 30 days had maximum days of 15 and minimum days of 2. The numbers of males (39.3%) and females (38.9%) who consumed alcohol 4-6 days were similar, along with males (31.2%) and females (30.3%) who consumed alcohol 7-9 days in past month was also almost similar.

The number of females (26.9%) consumed alcohol less than 3 days was almost twice as much higher than males (15.6%), while the number of males (13.9%) consumed alcohol more 10 days was 3 times higher than females (4.0%).

4.4.3 Volume

In term of alcohol consumption in order to define binge level of the respondents, was expressed in grams of pure alcohol (absolute ethanol). The volume was calculated in 30 days.

Table 4.11 described the summaries of the volume of alcohol consumption (absolute ethanol) in past 30 days.

Table 4.11: Volume of alcohol consumption in past 30 days

Volume of alcohol consumption	$\bar{x}$	SD	SE	Min	Max
	347.787	174.218	9.339	142	720

The minimum volume was 142 grams of absolute ethanol and the maximum was 720 grams of absolute ethanol. The mean and standard deviation were 347.8 and 174.2 respectively.

The volume of alcohol consumption in past 30 days was separated into 2 ranges by mean ($\bar{x}$ =347.8) as volume of alcohol below mean level ($<\bar{x}$) and volume of alcohol equal or above mean level ($\geq\bar{x}$).

Table 4.12 described the volume of alcohol consumption defined as below mean level ($<\bar{x}$) and equal or above mean level ($\geq\bar{x}$).

Table 4.12: Volume of alcohol consumption defined as below mean ($<\bar{x}$) and equal or above mean ($\geq\bar{x}$)

Volume of alcohol consumption	Male (N=173)		Female (N=175)		Total (N=348)	
	N	%	N	%	N	%
< 347.8	100	57.8	107	61.1	207	59.5
≥ 347.8	73	42.2	68	38.9	141	40.5

The total number of males who had the total volume equal or above mean level ($\geq\bar{x}$) in past 30 days was slightly higher than females but the number was slightly lower than females at lower mean level ($<\bar{x}$).

4.4.4 AUDIT

Alcohol Use Disorders Identification Test (AUDIT) questionnaires was used in order to screen alcohol consumption level of the respondents. The respondents who had score of 8-19 were considered as binge drinking level. Total 348 respondents, which were 173 males (49.7%) and 175 females (50.3%), were passed.

AUDIT score was divided into 2 ranks by AUDIT level itself as low binge (hazardous drinking) of 8-15 score and high binge (harmful drinking) as 16-19 score.

Table 4.13 described the score of Alcohol Use Disorders Identification Test of the respondents between low binge and high binge.

Table 4.13: AUDIT score of the respondents

	Male (N=173)		Female (N=175)		Total (N=348)	
	N	%	N	%	N	%
8-15	77	44.5	118	67.4	195	56.0
16-19	96	55.5	57	32.6	153	44.0

The score of 8-15, females (67.4%) were very much higher than males (44.5%), while the number of males (55.5%) was higher than females (32.6%) in the score of 16-19. Males were more likely to have harmful drinking than females, while most of females were at hazardous drinking level.

4.5 The association between genders and the volume of alcohol consumption

Table 4.14 described the association between genders and the volume of alcohol consumption in past 30 days (ethanol).

Table 4.14: Association between genders and the volume of alcohol consumption

Volume of alcohol consumption	Male (N=173)		Female (N=175)		*p-value*
	N	%	N	%	
< 347.8	100	57.8	107	61.1	0.526
≥ 347.8	73	42.2	68	38.9	

The volume of alcohol consumption wasn't significantly difference to genders. Males weren't having any difference from females in term of volume of alcohol consumption.

4.6 The association between genders and AUDIT score

Table 4.15 described the association between genders and Alcohol Use Disorders Identification Test score.

Table 4.15: Association between genders and AUDIT score

	Male (N=173)		Female (N=175)		*p-value*
	N	%	N	%	
8-15	77	44.5	118	67.4	<0.001
16-19	96	55.5	57	32.6	

There was a highly significant difference (p-value = <0.001) between AUDIT score and gender of the respondents, which were cleared that males and females were different in term of AUDIT score.

4.7 The volume of alcohol consumption past 30 days in term of demographic characteristics

The volume of alcohol consumption in past 30 days was calculated into volume of absolute ethanol and separated into 2 ranges as volume of alcohol below mean level ($<\bar{x}$) and volume of alcohol equal or above mean level ($\geq\bar{x}$).

Table 4.16 described the volume of alcohol consumption past 30 days in term of demographic characteristics.

Table 4.16: Volume of alcohol consumption in past 30 days in term of demographic characteristics

Variables (N=348)	Male (N=173)		Female (N=175)	
	Volume of Alcohol		Volume of Alcohol	
	< $\bar{x}$ (N=100)	≥ $\bar{x}$ (N=73)	< $\bar{x}$ (N=107)	≥ $\bar{x}$ (N=68)
Age (Years)				
20-24	31(31.0)	18(24.7)	26(24.3)	13(19.1)
25-29	55(55.0)	44(60.3)	79(73.8)	45(66.2)
30-34	14(14.0)	11(15.1)	2(1.9)	10(14.7)
Income (per month)				
< 15000	27(27.0)	11(15.1)	37(34.6)	13(19.1)
15000-29999	49(49.0)	38(52.1)	58(54.2)	40(58.8)
30000-44999	15(15.0)	17(23.3)	9(8.4)	8(11.8)
≥ 45000	9(9.0)	7(9.6)	3(2.8)	7(10.3)
Education				
Studying Bachelor	20(20.0)	8(10.9)	39(36.4)	10(14.7)
Studying Master	6(6.0)	-	9(8.4)	-
Finished Pre-college	3(3.0)	4(5.5)	2(1.9)	4(5.9)
Finished Bachelor	62(62.0)	55(75.3)	53(49.5)	50(73.5)
Finished Master	9(9.0)	6(8.2)	4(3.7)	4(5.8)
Occupation				
Student	23(23.0)	9(12.3)	39(36.4)	11(16.1)
Own business	9(9.0)	5(6.8)	-	8(11.8)
Family business	14(14.0)	7(9.6)	12(11.2)	12(17.6)
Official Employed	2(2.0)	2(2.7)	1(0.9)	4(5.9)
State enterprise	5(5.0)	5(6.8)	4(3.7)	3(4.4)
Private company	17(17.0)	22(30.1)	41(38.3)	22(32.4)
Freelance	9(9.0)	16(21.9)	1(0.9)	2(2.9)
Unemployed	21(21.0)	7(9.6)	9(8.4)	6(8.8)
Monthly expenses for alcohol				
<2500	33(33.0)	17(23.3)	52(48.6)	29(42.6)
2500-4999	42(42.0)	26(35.6)	53(49.5)	27(39.7)
5000-7499	20(20.0)	15(20.5)	2(1.9)	8(11.8)
≥7500	5(5.0)	15(20.5)	-	4(5.9)
Monthly expenses for binge				
<2000	60(60.0)	23(31.5)	73(40.2)	40(58.8)
2000-3999	13(13.0)	15(20.5)	30(28.0)	14(20.6)
4000-5999	23(23.0)	30(41.1)	4(3.7)	11(16.2)
≥6000	4(4.0)	5(6.8)	-	3(4.4)

The volume of alcohol consumption at above mean, with age at 25 to 29 years had the highest number in both males (60.3%) and females (66.2%). Few numbers of males (15.1%) and females (14.7%) at age 30 to 34 years had the volume of alcohol consumption at above mean level.

At above mean level of the volume of alcohol consumption, monthly income from 15000 to 30000 baht had the high respondents in both males (52.1%) and females (58.8%). Males (32.9%) who earn more than 30000 baht had more volume of alcohol consumption at above mean level than females (22.1%). The percentage of the volume of alcohol consumption at above mean level in both genders was higher than the volume below mean level. The respondents who earn higher income tended to made higher volume of alcohol consumption in past 30 days.

The respondents who finished Bachelor degree had the volume of alcohol consumption at above mean level higher than at below mean level. The respondents who finished bachelor, was more likely to drink more alcohol than those who had other education level.

Males who work in private company with the volume of alcohol consumption at above mean level (30.1%) was higher than at below mean level (17.0%), while females was the opposite. Males who work as freelance had the volume of alcohol consumption at above mean level (21.9%) much higher than at below mean level (9.0%).

According to monthly expense on alcohol above 5000 baht, the volume of alcohol consumption at above mean level was slightly higher than the volume at below mean level. Both males and females who spent money for alcohol more than 5000 baht tended to consume more volume of alcohol at above mean level.

Males who spent more than 4000 baht for their binge drinking per month had the volume of alcohol consumption at above mean level higher than at below mean level. Males who spent more money on binge drinking were more likely to have higher volume of alcohol consumption.

4.8 The volume of alcohol consumption past 30 days in term of social groups

Social groups such as activities, satisfaction, and influences effected to the volume of alcohol consumption in past 30 days.

Table 4.17 described the volume of alcohol consumption past 30 days in term of activities and satisfaction that encouraged respondents to High socioeconomic nightclubs.

Table 4.17: Volume of alcohol consumption past 30 days in terms of (1) activities, (2) satisfaction that encouraged respondents to High socioeconomic nightclubs

	Male (N=173)		Female (N=175)	
	Volume of Alcohol		Volume of Alcohol	
	< $\bar{x}$ (N=100)	≥ $\bar{x}$ (N=73)	< $\bar{x}$ (N=107)	≥ $\bar{x}$ (N=68)
Activities				
selling alcohol	98(98.0)	71(97.3)	95(88.8)	64(94.1)
Dancing	35(35.0)	29(39.7)	33(30.8)	28(41.2)
DJ	21(21.0)	22(30.1)	33(30.8)	20(29.4)
live band	23(23.0)	10(13.7)	23(21.5)	13(19.1)
Parties	19(19.0)	13(17.8)	19(17.8)	11(16.2)
Satisfaction				
Good DJs	31(31.0)	21(28.8)	41(38.3)	26(38.2)
Good Live band	58(58.0)	49(67.1)	60(56.1)	36(52.9)
Good Service	29(29.0)	28(38.4)	29(27.1)	24(35.3)
Parties	32(32.0)	23(31.5)	35(32.7)	21(30.9)
Location	93(93.0)	73(100.0)	103(96.3)	60(88.2)
Promotion	12(12.0)	21(28.8)	15(14.0)	9(13.2)

Selling alcohol as encouragement of going to high socioeconomic nightclubs was the highest. The volume of alcohol consumption of males either below mean level or above mean level were very much similar, while the volume of females at above mean level was slightly higher than at below mean level. Dancing was the second highest, with the volume of alcohol consumption at above mean level was higher than at below mean level in both genders. Party arrangement was the least activities that males and females had chosen.

The main satisfaction that brought the respondents to high socioeconomic nightclubs was the location. All of males (100%) who had volume of alcohol consumption at above mean had chosen location, and so did almost females (96.3%) had volume of alcohol consumption at above mean level. Alcohol campaign and promotion was the least satisfaction in both males and females either below mean level or above mean level.

Table 4.18 described the volume of alcohol consumption past 30 days in term of influences, special parties, and alcohol promotion that encouraged respondents to binge drinking.

Table 4.18: Volume of alcohol consumption past 30 days in terms of (1) influences, (2) special parties, (3) alcohol promotion that encouraged respondents to binge drinking

	Male (N=173)		Female (N=175)	
	Volume of Alcohol		Volume of Alcohol	
	< $\bar{x}$ (N=100)	≥ $\bar{x}$ (N=73)	< $\bar{x}$ (N=107)	≥ $\bar{x}$ (N=68)
Influences				
Friends	97(97.0)	70(95.9)	106(99.0)	68(100.0)
Socializes	34(34.0)	28(38.4)	32(29.9)	26(38.2)
Celebration e.g. birthday, wedding	36(36.0)	31(42.5)	42(39.3)	24(35.3)
Feeling down	32(32.0)	16(21.9)	20(18.7)	15(22.1)
No reason	-	3(4.1)	-	-
Festive season/holiday e.g. new year, Songkran	68(68.0)	47(64.4)	81(75.7)	38(55.9)
Parties and Events	39(39.0)	32(43.8)	37(34.6)	41(60.3)
Alcohol Promotion	14(14.0)	15(20.5)	9(8.4)	8(11.8)

The volume of alcohol consumption of males and females either below mean level or above mean level were the highest influence in terms of friends that were the main reason encouraged the respondents to binge drinking. Festive season such as New Year and Songkran festival was the second highest influence in either the volume of alcohol consumption at below mean level or above mean level. Binge drinking with no reason occurred only in males with the volume of alcohol consumption above mean level.

Parties in males had the volume of alcohol consumption at above mean level (43.8%) higher than at below mean level (39.0%), and so did females had the volume at above mean level (60.3%) almost twice as much higher than the volume at below mean level (34.6%).

Males with the volume of alcohol consumption at above mean level (20.5%) was higher than at below mean level (14.0%), in term of alcohol promotion, and so did females had the volume at above mean level (11.8%) higher than the volume below mean level (8.4%).

The respondents affected by parties and alcohol promotion tended to have more volume of alcohol consumption.

4.9 The volume of alcohol consumption past 30 days in term of history of alcohol-related consequences, and illicit drug uses

The volume of alcohol consumption past 30 days affected the respondent either individual of social consequences.

Table 4.19 described the volume of alcohol consumption past 30 days in term of history of the respondents' consequences in their life time.

Table 4.19: Volume of alcohol consumption past 30 days in term of history of alcohol-related consequences in life time

		Male (N=173)		Female (N=175)	
		Volume of Alcohol		Volume of Alcohol	
		< $\bar{x}$ (N=100)	≥ $\bar{x}$ (N=73)	< $\bar{x}$ (N=107)	≥ $\bar{x}$ (N=68)
Symptoms and behavior i.e. unable to control drinking after having larger amount or larger time or preoccupied by alcohol		30(30.0)	41(56.2)	35(32.7)	29(42.7)
Physical consequences i.e. lost memory resulted by having alcohol last night, itchy or stomach disorders after few drinks		20(20.0)	21(28.8)	30(28.0)	13(19.1)
Abuses i.e. trouble or fight with others		32(32.0)	21(28.8)	34(31.7)	26(38.2)
Personal consequences i.e. lack of ability to do regular routine and responsibility, or economic issues		50(50.0)	67(91.8)	105(98.1)	63(92.6)
Hazardous drinking i.e. accidents or troubles with law		23(23.0)	53(72.6)	13(12.1)	60(88.2)
Sexual consequences					
Having sex with strangers after drinking	Several time	6(6.0)	2(2.7)	2(1.9)	5(7.4)
	Often	13(13.0)	15(20.5)	4(3.7)	9(13.2)
Unprotected sex after drinking	Several times	50(50.0)	26(35.6)	30(28.0)	42(61.8)
	Often	-	3(4.1)	25(23.3)	21(30.9)

Higher percentage of males (56.2%) at volume of alcohol consumption above mean level had ever unable controlled their drinking level or ever preoccupied by alcohol than females (42.7%). Males were more likely to have those symptoms when they consumed more volume of alcohol.

The percentage of males (28.8%) had ever experienced black out and stomach disorder that caused by alcohol at the volume of alcohol consumption at above mean level was similar as females (28.0%) had ever experienced black out and stomach disorder caused by alcohol even though the volume at below mean level. Females experienced these effects easier than males at the lower volume of alcohol consumption.

The volume of alcohol consumption in term of abuses such as having troubles with others, the volume at below mean level in males and females can cause abuses as well as the volume at above mean level.

Males (91.8%) at volume above mean was higher than males (50.0%) at volume below mean level in terms of experienced personal consequences, while females at either volume above mean level or below mean level was almost similar. More volume of alcohol caused less ability to do regular routine and had less responsibility. Females affected the personal consequences easier even though consumed low volume of alcohol.

In terms of accidents, such as small injuries or car accident, males (72.6%) and females (88.2%) who had volume of alcohol consumption above mean level experienced more accidents than those who had the volume at lower mean level.

Males (20.5%) with the volume of alcohol consumption at above mean level used to have sex with strangers often was higher than those males (13.0%) with the volume below mean level. Females (13.2%) at the volume above mean level also used to have sex with strangers often was higher than those females (3.7%) with a volume below mean level. Males and females who made more alcohol consumption had more chance to have sex with strangers.

Females (61.8%) at volume of alcohol consumption at above mean level had sex without protection several times in their life was higher than males (35.6%). Females (30.9%) with the volume at above mean level used to have sex without any protection quite often was higher than those females (23.3%) with the volume below mean level. Females who made more alcohol consumption had more risks of having sex without protection.

Table 4.20 described the volume of alcohol consumption in past 30 days related to the consumption of drugs in nightclubs in past 30 days

Table 4.20: Volume of alcohol consumption in past 30 days related to illicit drugs used in nightclubs in past 30 days

	Male (N=173)		Female (N=175)	
	Volume of alcohol		Volume of alcohol	
	< x̄ (N=100)	≥ x̄ (N=73)	< x̄ (N=107)	≥ x̄ (N=68)
Marijuana				
Didn't use in nightclubs	8(8.0)	3(4.1)	3(2.8)	2(2.9)
Used before nightclubs	3(3.0)	1(1.4)	-	-
Used in nightclubs	-	-	-	-
Used after nightclubs	-	-	-	-
Cocaine				
Didn't use in nightclubs	-	-	-	-
Used before nightclubs	36(36.0)	24(32.9)	25(23.4)	22(32.4)
Used in nightclubs	42(42.0)	32(43.8)	35(32.7)	25(36.8)
Used after nightclubs	40(40.0)	31(42.5)	33(30.8)	24(35.3)
Erimin 5				
Didn't use in nightclubs	2(2.0)	1(1.4)	3(2.8)	3(4.4)
Used before nightclubs	-	-	-	-
Used in nightclubs	35(35.0)	27(37.0)	23(21.5)	14(20.6)
Used after nightclubs	4(4.0)	7(9.6)	7(6.5)	-
Ecstasy				
Didn't use in nightclubs	3(3.0)	3(4.1)	4(3.7)	4(5.9)
Used before nightclubs	4(4.0)	1(1.4)	2(1.9)	-
Used in nightclubs	33(33.0)	21(28.8)	20(18.7)	17(25.0)
Used after nightclubs	2(2.0)	-	-	1(1.5)

Most of the respondents didn't use Marijuana in nightclubs. Cocaine, Erimin5, and Ecstasy were the most popular among the respondent used while they were at nightclubs. Males consumed illicit drugs in nightclubs was higher than females.

Males who used Cocaine in nightclubs at volume of alcohol consumption either below (42.0%) or above (43.8%) mean level was slightly higher than females at volume either below (32.7%) or above (26.8%) mean level. Males and females used Cocaine before and after nightclubs at volume either below or above mean level were slightly lower than used Cocaine in nightclubs. The respondents took Cocaine before getting in to nightclubs, also used during nightclubs, and continue used Cocaine after getting out of nightclubs. The respondents used Cocaine with a long period of time during in one night. Erimin5 and Ecstasy was high only when used during in nightclubs.

Table 4.21 described the volume of alcohol consumption in past 30 days related to using drugs with alcohol in lifetime.

Table 4.21: The volume of alcohol consumption past 30 days related to the experienced of drugs used with alcohol in lifetime

	Male (N=173)		Female (N=175)	
	Volume of Alcohol		Volume of Alcohol	
	< x̄ (N=100)	≥ x̄ (N=73)	< x̄ (N=107)	≥ x̄ (N=68)
Energy drink (redbull)				
Never used with alcohol	30(30.0)	20(27.4)	31(28.9)	10(14.7)
Used after alcohol	3(3.0)	1(1.4)	21(16.5)	1(1.5)
Used before alcohol	-	-	-	-
Used with alcohol	41(41.0)	70(95.9)	53(52.3)	66(97.0)
Marijuana				
Never used with alcohol	20(20.0)	24(32.9)	11(10.3)	7(10.3)
Used after alcohol	15(15.0)	13(17.8)	6(5.6)	2(2.9)
Used before alcohol	3(3.0)	7(9.6)	-	-
Used with alcohol	8(8.0)	10(13.7)	1(0.9)	-
Cocaine				
Never used with alcohol	-	-	-	-
Used after alcohol	55(55.0)	30(41.1)	29(27.1)	9(13.2)
Used before alcohol	53(53.0)	22(30.1)	25(23.4)	15(14.0)
Used with alcohol	68(68.0)	10(13.7)	26(24.3)	12(17.6)
Erimin5				
Never used with alcohol	-	-	-	-
Used after alcohol	5(5.0)	5(6.8)	5(4.7)	-
Used before alcohol	10(10.0)	2(2.7)	5(4.7)	-
Used with alcohol	43(43.0)	20(27.4)	17(15.9)	5(7.4)
Ecstasy				
Never used with alcohol	-	-	-	-
Used after alcohol	12(12.0)	19(26.0)	7(6.5)	6(8.8)
Used before alcohol	12(12.0)	7(9.6)	7(6.5)	4(5.9)
Used with alcohol	41(41.0)	24(32.9)	20(18.7)	5(7.4)

Males (95.9%) and females (97.0) with volume of alcohol consumption at above mean level had ever mixed energy drink with alcohol. None of them used it before alcohol and only few used it after alcohol. Males consumed illicit drugs with alcohol was higher than females. Most of respondents who admitted that ever used Marijuana didn't use it with alcohol.

Much higher percentage of males (68.0%) used Cocaine with alcohol than females (24.3%) with the volume of alcohol consumption at below mean level, and so did used before and after alcohol. Used Cocaine before, after or with alcohol at the volume below mean level was much higher than at volume above mean level. The respondents who used more Cocaine tended in drink less alcohol.

Used Erimin5 and Ecstasy with alcohol at volume of alcohol consumption below mean level was higher than at volume above mean level. The respondents who used more Erimin5 and Ecstasy also tended in drink less alcohol.

4.10 The association between demographics and volume of alcohol consumption in past 30 days

Table 4.22 described the relationship between demographics characteristics and the volume of alcohol consumption (in ethanol) in past 30 days.

Table 4.22: Relationship between demographics and volume of alcohol consumption in past 30 days

Variables	Volume of alcohol consumption				*p-value*
	< $\bar{x}$ (347.8)		≥ $\bar{x}$ (347.8)		
	N=207	(%)	N=141	(%)	
Genders					
Male	100	48.7	73	51.8	0.526
Female	107	51.7	68	48.2	
Age (Years)					
20-24	57	27.5	31	22.0	0.078
25-29	134	64.7	89	63.1	
30-34	16	7.7	21	14.9	
Monthly income					
< 15000	64	30.9	24	17.0	0.013
15000-29999	107	51.7	78	55.3	
30000-44999	24	11.6	25	17.7	
≥ 45000	12	5.8	14	9.9	
Education					
Studying Bachelor	59	28.5	18	12.8	<0.001
Studying Master	15	7.2	-	-	
Finished Pre-college	5	2.4	8	5.7	
Finished Bachelor	115	55.6	105	74.5	
Finished Master	13	6.3	10	7.1	
Occupation					
Student	62	30.0	20	14.2	0.001
Own business	9	4.3	13	9.2	
Family business	26	12.6	19	13.5	
Official Employed	3	1.4	6	4.3	
State enterprise	9	4.3	8	5.7	
Private company	58	28.0	44	31.2	
Freelance	10	4.8	18	12.8	
Unemployed	30	14.5	13	9.2	

Table 4.22 (con't): Relationship between demographics and volume of alcohol consumption in past 30 days

Variables	Volume of alcohol consumption				*p-value*
	<$\bar{x}$ (347.8)		≥ $\bar{x}$ (347.8)		
	N=207	(%)	N=141	(%)	
Monthly expense for alcohol					
<2500	85	41.1	46	32.6	<0.001
2500-4999	95	45.9	53	37.6	
5000-7499	22	10.6	23	16.3	
≥7500	5	2.4	19	13.5	
Monthly expense for binge drinking					
<2000	133	64.3	63	44.7	<0.001
2000-3999	43	20.8	29	20.6	
4000-5999	27	13.0	41	29.1	
≥6000	4	1.9	8	5.7	

Age and genders were not associated with the volume of alcohol consumption. Monthly income was associated with the volume of alcohol consumption in past 30 days (p-value=0.013). Many of those who drank at the volume of alcohol consumption below mean level tended to have less income than those who drank at volume above mean level.

Monthly expense (p-value<0.001) for alcohol and monthly expense (p-value<0.001) for binge drinking were have highly associated with the volume of alcohol consumption in past 30 days. The respondents who spent less money drank less alcohol at volume below mean level.

There were association between education and the volume of alcohol consumption (p-value<0.001). The respondents who have higher education showed significantly drank more alcohol than those who have lower education.

The occupation of the respondents was also related to the volume of alcohol consumption in past 30 days (p-value=0.001).

4.11 The association between 1) activities, 2) satisfaction and the volume of alcohol consumption in past 30 days

Table 4.23 described the relationship between 1) activities, 2) satisfaction that encouraged respondent to come to nightclubs and the volume of alcohol consumption (in ethanol) in past 30 days.

Table 4.23: Relationship between 1) activities, 2) satisfaction that encouraged respondent to come to nightclubs and the volume of alcohol consumption in past 30 days

	Volume of alcohol consumption				*p-value*
	< $\bar{x}$ (347.787)		≥ $\bar{x}$ (347.787)		
	N=207	(%)	N=141	(%)	
Activities					
selling alcohol	193	93.2	135	95.7	0.324
Dancing	68	32.9	57	40.4	0.148
DJ	54	26.1	42	29.8	0.448
live band	46	22.2	23	16.3	0.175
Parties	38	18.4	24	17.0	0.749
Satisfaction					
Good DJs	72	34.8	47	33.3	0.780
Good Live band	118	57.0	85	60.3	0.542
Good Service	58	28.0	52	36.9	0.081
Parties	67	32.4	44	31.2	0.819
Location	198	95.7	133	94.3	0.573
Promotion	27	13.0	30	21.3	0.042

It was clearly that there were no significantly differences between activities such as selling alcohol, dancing, Dj, live band and party arrangement and the volume of alcohol consumption, and so did between those satisfactions and the volume of alcohol consumption at either below mean level or above mean level.

4.12 The association between 1) Influences, 2) special parties, and 3) alcohol promotion and the volume of alcohol consumption in past 30 days

Table 4.24 described the relationship between 1) Influences, 2) special parties, and 3) alcohol promotion that encouraged respondents to binge drinking and the volume of alcohol consumption (ethanol) in past 30 days.

Table 4.24: Relationship between 1) Influences, 2) special parties, and 3) alcohol promotion that encouraged respondents to binge drinking and the volume of alcohol consumption in past 30 days

	Volume of alcohol consumption				*p-value*
	< $\bar{x}$ (347.8)		≥ $\bar{x}$ (347.8)		
	N=207	(%)	N=141	(%)	
Influences					
Friends	203	98.1	138	97.9	0.593
Socializes	66	31.9	54	38.3	0.217
Celebration e.g. birthday, wedding	78	37.7	55	39.0	0.803
Feeling down	52	25.1	31	22.0	0.501
No reason	-	-	3	2.1	0.035
Festive season/holiday e.g. New Year, Songkran	149	72.0	85	60.3	0.022
Parties and events	76	36.7	73	51.8	0.005
Alcohol Promotion	23	11.1	23	16.3	0.160

There was an association between binge drinking in festive season and the volume of alcohol consumption. Many respondents drank more alcohol when it was a holiday season (p-value=0.022). Parties or special events also significantly encouraged the respondent to binge drinking (p-value=0.005), which was 51.8 % among the respondents who drank at the volume of alcohol consumption above mean level were encouraged by parties.

4.13 The association between behavior & consequences and the volume of alcohol consumption in past 30 days

Table 4.25 described the relationship between behavior & consequences and the volume of alcohol consumption (ethanol) in past 30 days.

Table 4.25: Relationship between alcohol-related consequences and the volume of alcohol consumption in past 30 days

	Volume of alcohol consumption				*p-value*
	< x̄ (347.8)		≥ x̄ (347.8)		
	N=207	(%)	N=141	(%)	
Symptoms and behavior i.e. unable to control drinking after having larger amount or larger time or preoccupied by alcohol	65	31.4	70	49.6	0.001
Physical consequences i.e. blackout, itchy or stomach disorders after few drinks	50	24.2	34	24.1	0.993
Abuses i.e. trouble or fight with others	66	31.9	47	33.3	0.777
Personal consequences i.e. lack of ability to do regular routine and responsibility, or economic troubles	155	74.9	130	92.2	<0.001
Hazardous drinking i.e. accidents or troubles with law	36	17.4	113	80.1	<0.001
Sexual consequences					
Having sex with friends after drinking	-	-	-	-	-
Having sex with strangers after drinking					
Several times	8	3.9	7	5.0	0.034
Often	17	8.2	24	17.0	
Unprotected sex after drinking					
Several times	80	38.6	68	48.2	0.025
Often	25	12.1	24	17.0	

Symptoms such cannot be able to control alcohol drinking were related to the volume of alcohol consumption (p-value=0.001). The respondents who drank higher volume of alcohol were more likely to have those symptoms.

In term of personal consequences like lack of ability to do regular routine and responsibility and hazardous drinking like accidents were associated with the volume of alcohol consumption (p-value<0.001). Higher volume of alcohol could have caused those consequences.

In terms of sexual consequences, such as having sex with strangers (p-value=0.034) and unprotected sex (p-value=0.025) after alcohol consumption were also related to the volume of alcohol consumption that the respondents had consumed in the past 30 days. Higher volume of alcohol tended to involve into sexual risks.

4.14 The association between frequencies of numbers of days that the respondents had drunk alcohol in past 30 days and the volume of alcohol consumption in past 30 days

Table 4.26 described frequencies of days those respondents consumed alcohol in past 30 days and the volume of alcohol consumption (ethanol) in past 30 days.

Table 4.26: Relationship between number of drinking days in past 30 days and the volume of alcohol consumption in past 30 days

Number of drinking days	Volume of alcohol consumption			
	< $\bar{x}$ (347.8)		≥ $\bar{x}$ (347.8)	
	N=207	(%)	N=141	(%)
<3	74	35.7	-	-
4-6	94	45.4	42	29.8
7-9	18	8.7	89	63.1
10-12	13	6.3	7	5.0
13-15	8	3.9	3	2.1

7-9 days was the highest number of days at the volume of alcohol consumption above mean level (63.1%), while 4-6 days was the highest number of days at the volume below mean level (45.4%). The higher days the respondents spent on drinking alcohol, the higher the volume of alcohol consumption that the respondents had consumed.

CHAPTER V

DISCUSSION AND CONCLUSION

5.1 Summaries

The main purpose of this study was to determine the pattern of binge drinking in relation to demographic, social group among young adults in high socioeconomic nightclubs as well as to find out the differences in pattern of binge drinking of males and females respondents.

In this study, total 348 respondents were enrolled, with 173 males (49.7%) and 175 females (50.3%). The majority of males (57.2%) and females (70.9%) age were 25 to 29 years. The respondents with age more than 29 were mostly males.

Females (56.0%) who have monthly income of 15000 to 30000 baht was slightly higher than males (50.3%), while monthly income above 30000 baht, males (48.0%) was much higher than females (15.4%).

In term of education, more than half of the males (67.6%) and females (58.9%) had already finished Bachelor degree. The number of the respondents who had education lower than Bachelor degree was very low.

Studying and working in private company were the majority occupation among the respondents. Very few of them were official employed. Males (14.5%) who chose to work as freelance were much higher than (1.7%) females.

The expense that females (45.7%) most spent monthly on alcohol was 2500 to 5000 baht, which was slightly higher than males (39.3%), while the monthly expense on alcohol above 5000 baht, males (31.8%) were very much higher than females (8.0%).

In term of monthly expense for binge drinking, about half of males and females normally spent 2000 to 4000 baht. Females mostly spent less than 4000 baht, while males mostly spent more than 4000 baht. Males (35.8%) who spent more than 4000 baht were much higher than females (10.3%).

Selling alcohol in nightclubs showed the majority that encouraged most males (97.7%) and females (90.9%) to nightclubs. Other activities such as dancing, DJ, live band and parties were minority. Most of males (97.1%) and females (93.1%) satisfied with high socioeconomic area that encouraged them to nightclubs.

The main reason that influenced most of males (96.5%) and females (99.4%) to binge drinks was their own friends. More than half of males (66.5%) and females (68.0%) chose festive season and holiday for their reason that led them to binge drinking behavior. Almost half of males (41.0%) and females (44.6%) were affected by parties in order to encourage them to binge drinking behavior.

In the past consequences that caused by alcohol consumption, most of the females (96.2%) admitted that it happened several times that they could not continue their regular routine on the next day because of they consumed alcohol last night, while more than half of males (67.5%) also admitted that.

Almost half of males (40.9%) and females (36.7%) admitted that they were unable to control their drinking level or even was preoccupied by drinking several time in their life. Sexual behavior risks without any protection several time in their life appeared with almost half in both males (43.9%) and females (41.1%). While females (26.3%) admitted that they didn't use any protection quite often after drinking was twice as much higher than males (12.7%).

Illicit drugs used in this study were Marijuana, Cocaine, Erimin5, and Ecstasy. The consumption of illicit drugs in nightclubs in past 30 days was high, which males were higher than females in every type. Almost half of males (42.8%) used Cocaine in nightclubs, while females (34.4%) were one-third. About one-third of males (35.8%) used Erimin5 and Ecstasy (29.5%) in nightclubs in past 30 days, while females were only one-forth in Erimin5 (21.1%) and Ecstasy (21.1%) respectively.

Many of the respondents admitted that they ever used illicit drug with alcohol beverage. More than half of males (64.2%) and females (68.0%) had ever mixed alcohol with the energy drink such as red bull.

Both numbers of males and females used Cocaine, before, with, and after alcohol was slightly similar. It can be concluded that many of them used Cocaine at longer period than consumed alcohol. Used Erimin5 and Ecstasy with alcohol was popular among males and it was 3 times higher than females.

The alcohol beverage that males (94.2%) drank the most in past 12 months was beer, while vodka was the type that females (93.7%) drank the most. Ready-to-drink was the types that both males and females consumed the least in the past 12 months. In the past 30 days, beer still was the alcohol beverage that males (68.8%) drank the most, while females (64.6%) drank wine the most. Beer and whisky was the most popular among males, while wine, vodka, and cocktail was the most popular among females.

The frequency of alcohol consumption' days, males were more likely to spend more days on alcohol consumption, while females were less. The volume of alcohol consumption in past 30 days was expressed in grams of absolute ethanol that divided into 2 ranges by mean ($\bar{x}$ =347.8) as the volume below mean level (59.5%) and above mean level (40.5%). Males (42.2%) were more likely to have volume above mean level than females (38.9%).

In term of AUDIT score was also divided into 2 ranges as low binge of 8-15 score was considered as hazardous drinking and high binge of 16-19 score was considered as harmful drinking. Females (67.4%) were very much higher than males (44.5%) in term hazardous drinking, while males (55.5%) were higher than females (32.6%). Males were more likely to be harmful drinkers than females.

According to the volume of alcohol consumption that was divided by mean level ($\bar{x}$ =347.8), the respondents who earn higher income had the volume above mean higher than the volume below mean level. Earning more income tended to consume more volume of alcohol, which the percentage of males were slightly higher than females.

Similar percentage of males and females who finished Bachelor degree also had the volume above mean higher than the volume below mean level, so did working in private and freelance. Males and females with Bachelor degree and working in private company were more likely to consume more volume of alcohol.

The respondents who spent monthly on alcohol more than 5000 baht and binge drinking more than 4000 baht had the volume above mean higher than the volume below mean level, which males were found spent more money than females.

Binge drinking both males and females that was affected by parties and alcohol promotion had the volume of alcohol consumption above mean higher than the volume below mean level. Parties and promotion tended to encourage people to drink more volume of alcohol. Females were affected by parties more than males, while males were affected by promotion more than females as the percentage was higher.

According to selling alcohol activity, location satisfaction, and friends influence, the percentage was very high but it was no different volumes in either lower or higher mean level.

According to consequences, the respondents were more likely to have symptoms that occurred by alcohol when they had the volume of alcohol consumption above mean higher than the volume below mean level. Males had physical and personal consequences when they had the volume higher than mean level, while females had physical and personal consequences even though they had volume lower than mean level. Females were clearly easier affected by physical consequences than males. Accidents ever happened with both males and females more when they had the volume higher than mean level. The respondents who had the volume higher than mean level also had more chance to have sex with strangers, while females had more chance of having sex without protection than males at the volume higher than mean level.

Males consumed illicit drugs higher than females. According to illicit drugs used in nightclubs, the volume of alcohol consumption in terms of Cocaine wasn't very much difference in either lower than mean level or higher than mean level. Cocaine used before and after wasn't difference from used in nightclubs. The period

of Cocaine used was longer than time spent in nightclubs during in one night. Erimin5 and Ecstasy was high only when used during in nightclubs. According to illicit drugs used with alcohol, higher percentage of Cocaine, Erimin5, and Ecstasy had the volume of alcohol consumption lower than mean level. The respondents who used more of these drugs tended to drink less alcohol lower than mean level.

5.2 Discussion

All the respondents who enrolled in this study were already screened as they were normally binge drinkers whether at hazardous drinking level or harmful drinking level. According to the volume of alcohol consumption in past 30 days, males made more volume of alcohol consumption than females. According to AUDIT within 8 to 19 score of binge level, males had higher score than female. 8 to 15 score was higher in females and 16 to 19 score was higher in males. Male respondents in many findings in this study were still higher than females. Males tended to consume alcohol heavier than females as it was a universal gender differences in drinking behavior. However the results of males and females weren't far from each other as the gender gap between male and female binge drinkers has been closing recently. Some of the results were almost equally to males. A female binge drinking behavior was almost equally to male as the rates of females have risen over the last 30 years (Bloomfield, 2005).

The majority of the respondent was young adult ages of 20 to 34 years who scored AUDIT test as binge drinking of 8-19. The age distribution in this study is similar in distribution with Ramathibodi Mental Health as young adults' ages 20-34 are clarified in states of human development (Erikson 1950; Ramathibodi Mental Health).

The finding in this study reveals that people that binge drinking around high socioeconomic area has moderate to wealthy status and good education since most of them studied at least bachelor degree. The respondents who earned high income were more likely to spend money more on alcohol and also tended to spend more on their binge drinking. The effects between binge drinking and income level of those who

have higher income are more likely to do binge (Zhao, 2010). Males were found spent higher money for alcohol than females.

Most males and female respondents have high education of undergraduate or higher while very few of them were lower in education. As it was proved that people who have higher education tended to consume more alcohol comparing to those who have lower education (Grucza, 2009; Slutske, 2005). One of the most elements which were related to respondent's education was that they mostly are working. More females work in private company and family business. Numbers of freelance and unemployed in males were found in the study and higher than females. Males who were worked as freelance tended to have had more volume of alcohol than those who work as a full time job.

It term of types of alcohol beverages that the respondents consumed in past 30 days, beer and whisky was very high in males, as according to Center of Studies that Thai population was mostly consume beer and spirits(CAS, 2008). Instead, females were more likely to consume wine, cocktail, and ready-to-drink than males. Males and females tended to consume different type. Beer was the highest in males and wine was the highest in females as a report of MCM research stated that males mostly started with beer but female started with wine (WTAG binge drinking research, 2004).

According to frequencies of days that the respondents ever binged in past 12 months, it was clearly that males had higher number of days that they ever binged than females. The frequencies of days that the respondents spent in the past 30 days, males also had higher number of days than females. It can be concluded that males who spent more days on drinking tended to have more volume of alcohol consumption.

The respondents were also more likely having friends with the same status, living with the same standard, and come to the same place, as the result in this study was friends was the main element that tended to influences the respondents both males and females to nightclubs, spending money on alcohol, and possibly ended up with binge drinking behavior. Festive season and long holiday such as New Year and Songkran was the other reason influenced the respondents to binge as occasion with

many people were the reasons that could be leading to binge drinking (Shillington, 2001).

The activities in order to encouraged respondents to nightclubs in high socioeconomic area were majority on selling alcohol. Most of the people binge drink in establishments licensed to sell alcohol as nightclubs made many drinks consumption. Location was also the major elements in development of binge drinking problems, as The respondents both males and females think that location was most satisfaction that encouraged them to nightclubs since location is well-known and placed in the city. Nightclubs in the city concerning as a popular place for binge drinking (MCM Research, 2004). Besides from location and selling alcohol, even though dancing and music resulted as minority in this study but it did have encouragement to some people that encouraged them to nightclubs. Good live band in was the other elements that also draw the respondents to nightclubs, since 3 out of 4 assessed nightclubs having live band every day. Services, Djs, and parties were moderating in encouragement.

Parties and high volume of alcohol consumption were related to each other. The effective of parties tended to make people to consume more alcohol and that may also lead to alcohol-related aggression and consequences (Harford, 2003). Alcohol campaign and promotion didn't have priority in this area.

The volume of alcohol consumption adverse outcome increased with the number of drinks consumed. According to alcohol-related consequences related to alcohol-related consequences, binge drinking among young adults, many of them experienced many consequences whether personal or social consequences. In term of short-term symptoms and physical consequences, males and females didn't have much difference between them, with similar of males and females were admitted that those symptoms were happened to them several time in their life. About one third of both males and female respondents was in the situation having troubles with others resulting by alcohol. More volume of alcohol causes less ability to do regular routine. Absence of work could cause lower productivity (Gmel, 2001). Lacking of ability to continue regular routine after drank alcohol last night with two third of males was admitted while almost of females was affected by it several time in their life. More

than one third of males and females experiences cops, car accidents and injuries (Naimi, 2008).

None of the respondents ever had sex with their own friends after drinking. There was few numbers occurred that they engaged with sexual activities with the strangers. Females were twice higher than males, admitted that they had sex without protection either with their partners or with strangers. As binge drinking was more likely leading to a chance of having more than one sex partners and less likely to use protection (Markos, 2005).

The finding of drug abuses in this study was, however, related to binge drinking (Wechsler, 1995). Besides from alcohol, main drugs like Cocaine, Ecstasy, and Erimin5 were used in nightclubs and with alcohol, as one third of respondents had been used Cocaine, Erimin5, and Ecstasy in nightclubs in past 1 month. Males have ever consumed more drugs comparing to females. Cocaine, erimin5, and ecstasy were popular in nightclubs. Some of respondents have Cocaine almost every night they went out, as almost half of males and one third of females used Cocaine before, in, and after nightclubs was almost similar. It can be assumed that many of them used cocaine long period within single nights.

Some of the respondents admitted that they paired drugs with alcohol. Males and females who drank more volume of alcohol tended to consume fewer drugs**.** Almost half of males used Cocaine with alcohol, while females were only one forth. Used Erimin5 and Ecstasy with alcohol was also popular among males and it was 3 times higher than females. Binge drinking involved with illicit drugs was considered highly on people with education, since most of the respondents were finished Bachelor and have working career (Malley and Johnston, 2002).

Binge drinking has led some of the respondent to some types of illicit drugs, even though the volume of alcohol consumption were less than one who didn't use drugs, but the volume was still at low binge level. Moreover, most of the respondents who binge drinking and consumed drugs were well-educated and living in good standard.

5.3 Recommendation

Although there was many issues occurred in nightclubs, there wasn't much previous documented study about them. Therefore, based upon the finding of this study, the related service can be strengthened.

The finding would be an information base for the future prevention and further intervention on alcohol-related problem in terms of individual and social in order to reduce the consequences that occur from alcohol consumption in nightclubs.

Thai health promotion foundation and other related organization would have the benefits from this study regarding to social concern, health concern, and illicit drugs concern.

The related organization should release the policy in order to enforce the nightclubs to have stronger policy itself to prevent heavy alcohol consumption in nightclubs. For example, security guards could be train in order to watch and prevent heavy consumption with aggression in nightclubs. Stopping selling alcohol 10-15 minutes in nightclubs policy could be used to slow down heavy consumption.

Illicit drugs abuses in nightclubs, the data in this study showed was very strong. It was clearly that binge drinking was somehow related to some types of illicit drugs. The finding could be a supportive data and benefit the Office of the Narcotics control board in order to prevent drugs use in nightclubs, strengthen the policy, and stronger laws implementation.

5.3.1 Limitation

The study was included data only in one area within one group of people, the population characteristics in this study was different than the other areas, thus the data cannot be a representative of the entire Bangkok.

The time spent for data collection in this study, however, was limited. The data collection could only proceed at night time from 7 pm to midnight and each questionnaire was spent not less than 15 minutes.

As the time for data collection was very limited and each questionnaire took long time, working alone made the collection very slow.

5.3.2 Suggestion for further study

In order to assess into nightclubs for data collection, the researcher asked the nightclub owner's permission as favor. It made the data collection went through easier.

Since the study was conducted only one area of Bangkok, therefore, the future research should be extended to other area of Bangkok in order to be the source of information to benefit the related organization.

This study was the quantitative research; in addition, the qualitative research or in-depth interview could be conducted together in order to understand people more and the data could be more strengthen.

As the future need to be proceed at night, perhaps the each questionnaire should be shorten, spending no more than 5 minutes, in order to do quantitative data.

The researcher could hire people to help to do data collection, in order to proceed faster.

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APPENDICES

APPENDIX: A

INFORMED CONSENT FORM

Code number of participant…….

I who have signed below agree to participate in this research project.

I read the information sheet about rational and objective(s) of the project, what I will be engaged with in details, risk and benefit of this project. The researcher has explained to me and I clearly understand with satisfaction.

I willing agree to participate in this project and consent the researcher to interview me by using s questionnaires for about 3o minutes.

I have the right to withdraw from this research project at any time as I wish with no need to give any reason, either my withdraw or my refusal to answer certain questions will not have any negative impact upon me.

Researcher has guaranteed that procedure(s) acted upon me would be exactly the same as indicated in the information sheet. Any of my personal information will be kept confidential. Results of the study will be reported as total picture. Any of personal information which could be able to identify me will not appear in the report.

If I am not treated as indicated in the information sheet, I can report to the Ethical Review Committee for Research Involving Human Research Subjects, Health Sciences Group, Chulalongkorn University (ECCU). Institute Building 2, 4th Floor, Soi Chulalongkorn 62, Phyathai Rd., Bangkok 10330, Thailand, Tel: 0-2218-8147 Fax: 0-2218-8147 E-mail: eccu@chula.ac.th.

I also have received a copy of information sheet and informed consent form

Sign..... Sign.....

)..... ( )..... (

Researcher Participant

APPENDIX: B

PARTICIPANT INFORMATION SHEET

Title of research project	PATTERN OF BINGE DRINKING AMONG YOUNG ADULTS IN HIGH SOCIOECONOMIC NIGHTCLUBS
Researcher's name	Pynpinat Nakhirunkanok
Position	Master of Public Health Student
Home address	39/79 Lumlokka District, Pathumthani 12130
Cell phone	081-934-9432
E-mail	pynpinat.nakhirunkanok@gmail.com

1. You are being invited to take part in a research project. Before you decide participate it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and do not hesitate to ask if anything is unclear or if you would like more information.
2. This research projects involves the interviewing participants about the pattern of binge drinking including basic information, social groups, and consequences,
3. The research assesses in high socioeconomic nightclubs, interviewing the participants who just entered into nightclubs and haven't start drinking alcohol.
4. The research will need at least 348 eligible participants of males and females ages 20-34 years who binge drinking, which will be screened by AUDIT test. The eligible participant must have 8-19 score in order to enroll in this study.
5. The process will be divided into 3 parts; part 1) the researcher will ask the participants to do the AUDIT in order to screen whether they are binge drinker or not, using about 5 minutes. If the participants have 8-19 score, they will be asked to enroll for the questionnaires and interview. Part 2) the participant will do the quick questionnaire part that the participants have to do it by themselves, time was given approx, 5 minutes. Part 3), interviewing part, the researcher will ask question in terms of the pattern of drinking behavior, using about 10 minutes.
6. All the information is kept confidential and anonymous and will not be shared. The information in the results will be reported as a total picture.
7. The participants in this study are completely voluntary. There is no compensation for completing the questions.
8. The participant has the right to deny and withdraw from the study at any time they want and without giving any reason.
9. If the researcher does not treated as indicated in the information sheet, the participant can report to the Ethical Review Committee for Research Involving Human Research Subjects, Health Sciences Group, Chulalongkorn University (ECCU). Institute Building 2, 4th Floor, Soi Chulalongkorn 62, Phyathai Rd., Bangkok 10330, Thailand, Tel: 0-2218-8147 Fax: 0-2218-8147 E-mail: eccu@chula.ac.th.

APPENDIX C

Screening Test

Code ☐☐☐

Section 1: Please ☑and fill into the blanket that you have chosen

1. Sex ☐male ☐female

2. Age ☐☐

3. Have you ever drunk alcohol? ☐Never (Please stop the test)
☐Yes (If yes, please continue no.4)

4. When was the last time you drink alcohol?
☐In past 1 month (Please continue no.5)
☐In past 3 month (Please stop the test)
☐In past 6 month (Please stop the test)
☐ In past 1 year or over (Please stop the test)

5. What type of alcohol I had drunk in past 1 month (Multiple answer is allow)
☐Beer
☐Whisky
☐Vodka
☐Wine
☐Cocktail
☐Ready-to-drink

Section 2: Please fill the number of drinks into the blank

☐Beer

1.1 1.6 1.4 1 1.4 1

No. of drinks ☐ ☐ ☐ ☐ ☐ ☐

Frequencies……..per month

For researcher only

= .....Standard drink

☐Whisky (either on the rock or drink with mixer)

1

No. of drinks ☐

Frequencies……..per month

For researcher only

= .....Standard drink

☐Vodka (either on the rock or drink with mixer)


1 **or**

No. of drinks ☐

Frequencies……..per month

For researcher only

= .....Standard drink

☐Wine

No. of drinks ☐ ☐ ☐ ☐ ☐ ☐

Frequencies……..per month

For researcher only

= .....Standard drink

☐Cocktail

No. of drinks ☐

Frequencies……..per month

For researcher only

= .....Standard drink

☐Ready-to-drink

No. of drinks ☐

Frequencies……..per month

For researcher only

= .....Standard drink

Section 3: The Alcohol Use Disorders Identification Test (AUDIT)

Please ☑ into the blanket that you have chosen

SCORE	0	1	2	3	4
	Never	**Monthly or less**	**2-4 times a month**	**3-2times a week**	**4or more times a week**
How often do you have a drink containing alcohol?					
How many drinks containing alcohol do you have on a typical day when you are drinking?	☐ 2-1 Standard drink	☐ 4-3 Standard drink	☐ 6-5 Standard drink	☐ 9-7 Standard drink	☐ 10 Standard drink
	Never	**Less than monthly**	**Monthly**	**Weekly**	**Daily or almost daily**
How often do you have 6 or more drinks on 1 occasion?					
How often during the last year have you found that you were not to stop drinking once you had started?					
How often during the last year have you failed to do what was normally expected from you because of drinking?					
How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?					
How often during the last year have you had a feeling of guilt or remorse after drinking?					
How often during the last year have you been unable to remember what happened the night before because you had been drinking?					
	Never		**Yes, but not in the last year**		**Yes, during the last year**
Have you or someone else been injured as a result of your drinking?					
Has a relative of friends or a doctor or another health worker been concerned about your drinking or suggest you cut down?					

Total score	

APPENDIX D

Self-administered fill-in questionnaire

Code ☐☐☐

Please ☑and fill into the blanket that you have chosen

Section 1: Demographics Characteristics

1. Sex ☐male ☐female

2. Age ☐☐ Year ☐☐☐☐

3. Place of birth……

4. Present Address District……. Province……

5. Martial Status
☐Single
☐Co-habitat or married
☐divorced
☐Widow

6. Education
☐Never study
☐Studying
☐College
☐Bachelor
☐Master
☐PhD

☐Ever studied, with highest education at
☐Primary School
☐Secondary School
☐Pre-college
☐Bachelor
☐Master
☐Ph.D.
Finished at age…….years

7. Occupation ☐Student ☐ Own business
☐Family business ☐Official Employed
☐State enterprise ☐Private Company
☐Freelance ☐Unemployed

8. Income……per month

9. Expenses monthly on alcohol beverages……..per month

10. Expenses monthly on binge drinking* ……..…….per month

**Binge drinking = 5 or more standard drinks for males and 4 or more standard drink for females (Please see chart of details below)*

 1	1 glass of wine with 148 ml	 1	1 bottle of regular strength of beer with 375 ml	**= 1 Standard Drink**
 1.1	1 glass of regular draft beer with 355 ml	 1	1 glass of whiskey, Vodka, gin, Scott, or Bourbon (with or without mixed)	

Section 2: Activities, Satisfaction and influences

1. How many times that you come to nightclubs? …….. per month

2. What are the activities that encourage you to nightclubs? (Multiple answer is allow)
☐Selling alcohol ☐Dancing
☐DJs ☐Live band
☐Live Show ☐Parties

3. What are the personal influences that encourage you to nightclubs? (Multiple answer is allow)
☐Good DJs ☐Good Events or parties
☐Good live band ☐Good Location
☐Good Service ☐Good alcohol campaign and promotion

4. What reasons that influences you to binge drinking? (Multiple answer is allow)

☐Friends ☐Feeling down

☐ Socializes ☐No reason

☐Celebration e.g. birthday, wedding ☐Festive season e.g. New Year, Songkran

5. Do special events or party arrangement affect your binge drinking behavior?

☐Yes

☐No

6. Do alcohol campaign or promotion affect your binge drinking behavior?

☐Yes

☐No

Section 3: History of Behavior & Consequences

	Never	**Several time**	**Often**	**every times**
Symptoms				
Increase ALC. Amount in order to have the same level				
Symptoms suffer from severe dysentery				
Cannot control drinking				
Cannot stop drinking after start drinking				
Preoccupied by alcohol				
Trying to stop many times but not succeed				
Feeling upset because other criticize your drinking behavior				
Personal consequences				
Lack of ability to do regular routine because of alcohol				
Lack of responsibility				
Money problems				
Random check at police checkpoint (driving)				
Hazardous drinking				
Troubles with the law because of drink and drive				
Accident after binge drinking (driving)				
Accident after binge drinking (other)				
Physical consequences				
Having physical problem resulted by drinking				
Itchy or stomach disorders after having couples of drinking				
Sick because of binge drinking				
Lost memory because of drinking alcohol last night				
Still drinking although it start to have bad result				

Con't	Never	Several time	Often	every times
abuses				
Troubles with couples because of drinking				
Troubles with family because of drinking				
Troubles with social and friends				
Fight with others after drinking				
Sex consequences				
Having sex with friends after drinking				
Having sex with strangers after drinking				
Unprotected sex after drinking				

Section 4: History of Illicit Drugs used

	Lifetime		Past 1 year		Past 30 days		Direction i.e. smoke, inhale	Amount	Price	Use in Nightclubs			
										No	Yes		
	Never	Yes	Never	Yes	Never	Yes					Before	In	After
Marijuana													
Ketamine													
Cocaine													
Ice													
Erimin5													
Ecstasy													

History of using drugs with alcohol in life time

	Never use this drug	Never use with alcohol	Experiences of using drugs with alcohol			
			Use drug before alcohol	Use drug after alcohol	Use drug with alcohol	Drink instead of taking drug
Energy drink						
Marijuana						
Ketamine						
Cocaine						
Ice						
Erimin5						
Ecstasy						

APPENDIX E

Interview Questionnaire

Code ☐☐☐

1. First time that you consumed alcohol……years old

2. Types of alcohol consumption

	Lifetime		**Past 12 months**		**Past 30 days**	
	No	**Yes**	**No**	**Yes**	**No**	**Yes**
Beer						
Whisky						
Vodka						
Wine						
Cocktail						
Ready-to-drink						

3. When was the last time you drink alcohol?
☐ Within 1 week (equals……days before)
☐ Within 30 days (equals……days before)
☐ More than 30 days (equals…….months before)
☐ More than 12 months

4. In past 12 months, what was the volume that you have drinking each time?
☐Drink equally each day
☐Drink differently each day

5. In past 12 months, how many days that you have been binge drinking?
Approx. ……..days

6. Have you ever been stopped drinking?
☐ No
☐ Yes, How long?.....
reason……..

TIME LINE FOLLOW BACK
ปฏิทินการดื่มย้อนหลัง

Drink Diary รายละเอียดการดื่มในแต่ละวัน:

1. Type of alcohol beverage ชนิดที่ดื่ม
2. Volume of alcohol consumption ปริมาณที่ดื่ม
3. Location ดื่มที่ไหน
4. Associated partner i.e. friends, co-workers ดื่มกับใคร
5. Time ดื่มเวลาไหน

Interview Date:

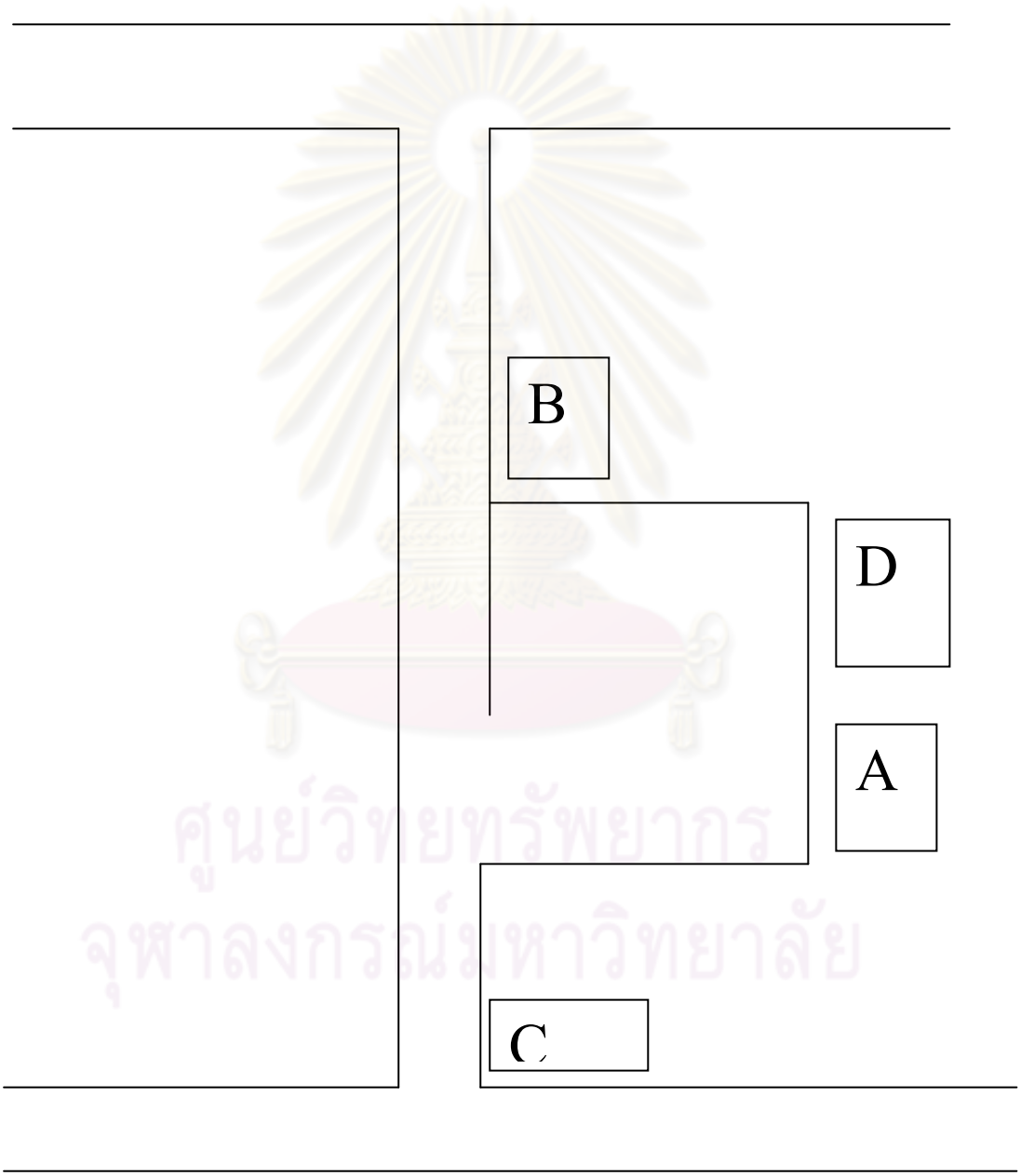
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Date:							
1.							
2.							
3.							
4.							
5.							
Date:							
1.							
2.							
3.							
4.							
5.							
Date:							
1.							
2.							
3.							
4.							
5.							
Date:							
1.							
2.							
3.							
4.							
5.							

APPENDIX F

Standard drink chart

APPENDIX G

Location map



CURRICULUM VITAE

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EDUCATION:

Fashion Design (Short course), **Raffles College of Design and Commerce**, Sydney, Australia — Feb 2009-Sept 2009

Interior Design (Short course), **Alliance Francaise**, bangkok — 2008-2009

Bachelor of Science, **Sirindhorn International Institute of Technology Int. Program, Thammasat University**, Bangkok, Thailand — 2003-2007

A-levels, **Wrekin College**, Shropshire, UK — 2001-2003

WORK EXPERIENCE:

Compact Labelling (Thailand) Ltd — 01-30 April 2006
Trainee at Marketing Department:Coordinate between clients and engineers, prepare proposals and designs for approval or modification, find and close deals, organize and ensure projects to run in timely and cost effective manner, undertake on-sitteoperation, maintain communication with project implementers and clients.

SKILL:

Computer

- **Operating System:**Windows OS & Mac:
- **Presentation and Publishing Programs**: Microsoft Power Point and Publisher, Paint, Adobe Photoshop, Adobe Illustration;
- **Applications:**Microsoft Word, Excel and Outlook, Internet and Email applications

Language

Fluent in English: Academic **IELTS** 6.5
Typing: Speed 60 wpm (English)