

**MEDIA EXPOSURE AND IMPACT ON CIGARETTE
SMOKING BEHAVIOR AMONG JUNIOR HIGH SCHOOL
STUDENTS UNDER BANGKOK METROPOLITAN
ADMINISTRATION, THAILAND**

RENUKA TUPWECH

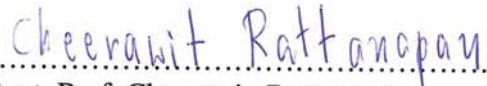
**A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
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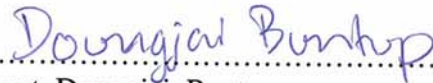
.....
Miss Renuka Tupwech
Candidate



.....
Asst. Prof. Cheerawit Rattanapan,
Ph.D. (Bio-Technology)
Major advisor



.....
Assoc. Prof. Jiraporn Chompikul,
Ph.D.(Bio-Statistics)
Co-advisor



.....
Lect. Doungjai Buntup,
Ph.D.(Neuroscience)
Co-advisor



.....
Prof. Patcharee Lertrit,
M.D., Ph.D. (Biochemistry)
Dean
Faculty of Graduate Studies
Mahidol University



.....
Lect. Prapapan Chucharoen,
Ph.D. (Neuroscience),
Program Director
Master of Arts Program in
Addiction Studies
ASEAN Institute for Health Development
Mahidol University

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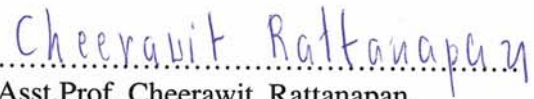
was submitted to the Faculty of Graduate Studies, Mahidol University
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on
February 27, 2017



Miss Renuka Tupwech
Candidate



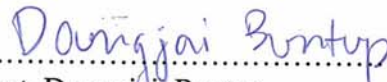
Lect. Siriwan Pitayarangsarit,
Ph.D. (Public Health and Policy)
Chair



Asst. Prof. Cheerawit Rattanapan,
Ph.D. (Bio-Technology)
Member



Assoc. Prof. Jiraporn Chompikul,
Ph.D. (Bio-Statistics)
Member



Lect. Doungjai Buntup,
Ph.D. (Neuroscience)
Member



Prof. Patcharee Lertrit,
M.D., Ph.D. (Biochemistry)
Dean
Faculty of Graduate Studies
Mahidol University



Prof. Supa Pengpid,
M.Sc., Dr. PH. (Public Health), MBA
Director
ASEAN Institute for Health Development
Mahidol University

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Renuka Tupwech

**MEDIA EXPOSURE AND IMPACT ON CIGARETTE SMOKING BEHAVIOR
AMONG JUNIOR HIGH SCHOOL STUDENTS UNDER BANGKOK
METROPOLITAN ADMINISTRATION, THAILAND**

RENUKA TUPWECH 5537357 ADAD/M

M.A.(ADDICTION STUDIES)

THESIS ADVISORY COMMITTEE: CHEERAWIT RATTANAPAN, Ph.D. (BIOTECHNOLOGY), DOUNGJAI BUNTUP, Ph.D. (NEUROSCIENCE), JIRAPORN CHOMPIKUL, Ph.D. (BIOSTATISTICS),

ABSTRACT

This research aimed to study the media exposure and the impacts on the smoking behavior of the lower secondary school students under the jurisdiction of Bangkok Metropolitan Administration, Thailand. The sample groups consisted of 500 lower secondary school students selected by the simple random sampling. The questionnaires were used for collecting data. The descriptive statistics consisting of frequency distribution, percentage, and mean were used for data analysis. Chi-square which was the analytical statistic was used for analysis of data relationship. The multiple logistic regression was analyzed for finding the forecast variables.

The research results were as follows: 50.8% of the sample groups were male. 69.4% of the sample groups were 12-14 years old. 39.0% of the sample groups smoked. 17.4% of the sample groups currently smoke. 46.9% of male students and 30.9% of female students smoked. 46.2% of the sample groups smoked because they wanted to try smoking. 33.3% of the sample groups smoked because they wanted to relieve stress. 55.9% of the sample groups smoked when they were under stress. Most of students had never tried other drugs. 68.5% of the sample groups used the positive media at a moderate level by most considerably receiving the information on the internet. 62.2% of the sample groups used the negative media at a low level by most considerably receiving the information via the retail outlets. After analyzing the relationship between the variables, the researcher found that the variables impacting on the smoking behavior were gender, grade point average, persons with whom the students lived, spending time to stay with family on weekdays and the weekend, motives, attitudes, perception, positive media exposure, negative media exposure, and the ability to remember the information of the negative media. After analyzing the information on the variables correlating with the smoking behavior by using the multiple logistic regression to control the confounding variables, the researcher found that three variables correlating with the smoking behavior were motives (OR = 2.08, 95% CI =1.26-3.45), attitudes (OR=1.75, 95% CI =1.04-2.93), and perception (OR=2.54, 95% CI =1.57-4.12). The research results indicated that the variables on motives, attitudes, and perception could most considerably forecast the smoking behaviors. Related organizations should reduce the smoking motives and create correct attitudes and perception of smoking by producing the modern and interesting media to prevent the students from smoking.

KEY WORDS: SMOKING BEHAVIOR/ MEDIA EXPOSURE

196 pages

การเปิดรับสื่อและผลกระทบต่อพฤติกรรมการสูบบุหรี่ของนักเรียนชั้นมัธยมศึกษาตอนต้น สังกัดกรุงเทพมหานคร ประเทศไทย
 MEDIA EXPOSURE AND IMPACT ON CIGARETTE SMOKING BEHAVIOR AMONG JUNIOR HIGH SCHOOL STUDENTS UNDER BANGKOK METROPOLITAN ADMINISTRATION, THAILAND

เรณูภา ทัพเวช 5537357 ADAD/M

ศศ.ม.(วิทยาการเสพติด)

คณะกรรมการที่ปรึกษาวิทยานิพนธ์ : ชีระวิทย์ รัตนพันธ์,ปร.ด.(เทคโนโลยีชีวภาพ),
 จิราพร ชมพิกุล, ปร.ด. (สถิติชีวภาพ) , ดวงใจ บรรทัด, ปร.ด. (ประสาทวิทยาศาสตร์)

บทคัดย่อ

การวิจัยครั้งนี้ เพื่อศึกษาการเปิดรับสื่อและผลกระทบต่อพฤติกรรมการสูบบุหรี่ของนักเรียนชั้นมัธยมศึกษาตอนต้น สังกัดกรุงเทพมหานคร ประเทศไทย ศึกษาในกลุ่มตัวอย่างนักเรียนชั้นมัธยมศึกษาตอนต้น จำนวน 500 คน โดยใช้เทคนิคการสุ่มตัวอย่างอย่างง่ายสามขั้นตอน ใช้แบบสอบถามเป็นเครื่องมือในการเก็บรวบรวมข้อมูล วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา ได้แก่ การแจกแจงความถี่ ร้อยละ ค่าเฉลี่ย และสถิติเชิงวิเคราะห์ ประกอบด้วยไคสแควร์ในการวิเคราะห์หาความสัมพันธ์ของข้อมูล และการวิเคราะห์การถดถอยโลจิสติก (Multiple logistic regression) เพื่อหาค่าตัวแปรทำนาย

ผลการวิจัยพบว่ากลุ่มตัวอย่างส่วนใหญ่เป็นเพศชาย (50.8%) ส่วนใหญ่มีอายุ 12-14 ปี (69.4%) และมีประสบการณ์ในการสูบบุหรี่ถึง 39.0% โดยปัจจุบันยังสูบบุหรี่อยู่ 17.4% ซึ่งนักเรียนชายสูบบุหรี่มากกว่านักเรียนหญิง 46.9% และ 30.9% ตามลำดับ สาเหตุในการสูบบุหรี่เพราะอยากทดลอง 46.2% และคลายเครียด 33.3% โดยโอกาสในการสูบจะสูบเมื่อเครียด 55.9% และพบว่านักเรียนส่วนใหญ่ไม่เคยทดลองเสพยาอื่นๆ ในเรื่องของการเปิดรับสื่อในทางบวกอยู่ระดับปานกลาง 68.5% โดยเปิดรับผ่านสื่ออินเทอร์เน็ตมากที่สุด และเปิดรับสื่อในทางลบอยู่ระดับต่ำ 62.2% โดยเปิดรับเนื้อหาผ่านร้านค้าปลีกมากที่สุด เมื่อวิเคราะห์หาความสัมพันธ์ระหว่างตัวแปรพบว่า ตัวแปรที่ส่งผลกระทบต่อพฤติกรรมการสูบบุหรี่ ได้แก่ เพศ คะแนนเฉลี่ยสะสม บุคคลที่นักเรียนพักอาศัยอยู่ด้วย การใช้เวลาอยู่ร่วมกับครอบครัวในวันจันทร์ถึงศุกร์และวันหยุดสุดสัปดาห์ แรงจูงใจ ทักษะคิด การรับรู้ การเปิดรับสื่อในทางบวก การเปิดรับสื่อในทางลบ และความสามารถในการจดจำเนื้อหาของสื่อในทางลบ เมื่อวิเคราะห์ข้อมูลตัวแปรที่มีความสัมพันธ์กับพฤติกรรมการสูบบุหรี่โดยใช้สมการถดถอยโลจิสติกเชิงพหุในการควบคุมตัวแปรกวน พบว่า มีเพียง 3 ตัวแปรที่มีความสัมพันธ์กับพฤติกรรมการสูบบุหรี่ ได้แก่ แรงจูงใจ (OR=2.08, 95% CI =1.26-3.45) ทักษะคิด (OR=1.75, 95% CI =1.04-2.93) และการรับรู้ (OR=2.54, 95% CI =1.57-4.12) ผลการศึกษานี้ชี้ให้เห็นว่า ตัวแปรที่สามารถทำนายพฤติกรรมการสูบบุหรี่สูงสุด ได้แก่ แรงจูงใจ ทักษะคิด และการรับรู้ ดังนั้นควรลดแรงจูงใจในการสูบบุหรี่ รวมทั้งสร้างทักษะคิด และการรับรู้ที่ถูกต้องเกี่ยวกับบุหรี่ โดยผ่านการจัดทำสื่อที่ทันสมัย น่าสนใจ ตลอดจนสอดคล้องกับความต้องการของนักเรียน เพื่อเป็นการสร้างภูมิคุ้มกันบุหรี่ให้กับนักเรียน ได้อย่างมีประสิทธิภาพ

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CHAPTER I

INTRODUCTION

1.1 Rationale and justification

Currently, widely accepted that cigarette is harmful to health of smokers and person who gained smoke, environmental degradation and smoking is also a cause of disease and as 2nd cause of premature death, including cause of more than 25 diseases, such as cancer of the any major organs, heart disease and stroke, lung disease, aneurysms, peripheral vascular disease, thrombosis (1) Moreover, cigarette has influenced to teenage health even though starting smoke. From research of Mental Health Institute, found that male teenage smoked had lower IQ than non-smoked around 7 points. Furthermore, research from indicated smoking as cause of defection memory and idea of teenage. (2) All of cigarettes will be effect to health even though less smoker but found abnormal of lung, practically is difficult to smoker will little smoking. Recently research found is only smoking 2 rolls per day since younger to adult, chance of incur lung cancer is double, (3) So, became global public health problem that everyone was realized. World Health Organization as a global public health agencies was held in report of meeting at Republic of Panama on 11 July, 2013 found that in the last 5 years ago (2012) the number of smokers has increased as much as 2,300 million. They estimates that cigarette is a cause of death of 100 million people in the 20th century and more likely to have people smoking increase if do not get control in further. The cause of death by smoking will increase to 8 million people by the year 2030. If not revise including a ban on cigarette advertising and product support will make adolescents and young people are more in the group who smoked (4). Based on the such situation around the world beginning to realize the importance and control efforts or any legislative is prevent new smokers and campaign person to quit smoking in order to reduce the problems that arise.

World Health Organization survey found that, currently, Thailand ranking 1 of the 15 countries with the highest smoking rates in the world and is 1 of 4

countries in Southeast Asia, has highest rates of smoking in students (11-18 years) (4). Thailand country have population of 11.03 million smoker. Thai people have died from diseases caused by smoking each year 42,000 - 52,000 and the state must pay the cost of maintaining 51,569 million baht per year (5). Mostly found in Southern region, but Bangkok has proportion of smokers are most of pack and loss average cost of smoking is highest 23.63 baht per person per day. Report from National Statistics Office showed that regularly smoker has age of smoking on set average 17.9 years, and all ages are reduce smoking(6). Children who start smoking just one cigarette to smoke than children who have never smoked were two-folds, indicating that smoking is easy to addict (7) Moreover, smoking bring to drug abuse and risk behaviors such as drinking liquor, unsafe sex and gambling (8,9). Thus, Thailand has control law both The Tobacco Products Control Act BE 2535 and Protection health of non-smokers Act, BE 2535. These laws attempt to control and prevent children and juvenile are smoking trial, including a wide range of agencies trying to prevent and the use of tobacco among children and youth. Both for control or limited smoking place rather found that children and young people has higher smoking rate (10). Especially, Middle teenager during 13-15 years old are fluctuate and curious to try. Sometime suffer with serious and disable self-managed they are also return to smoking (11).

Indicating that Thailand has protection and resolve problem of cigarette is not cover and correspond with cause of problem. From various studies both domestic and international found that media has key role to smoking of juvenile it is initial factor that teenage return to smoking (12). If teenager exposed media which had violence or good image of cigarette, they' re wanted to try its (12). And cigarette company has target realized in sale cigarette to children and teenage age lower than 15 years old. From any advertising in order to increase entry customer (13), especially in Bangkok is progressive on technology and modern. Children and juvenile are accessibility to any media. From survey of National Statistical Office showed that teenage of Bangkok which age during 10-14 years old is exposure varies media and recognize any information via media is easily than other province, especially, information about cigarette (14). By this cause teenage has age 10-14 years old in Bangkok is risk group will start smoking than other group, especially, if content of that media indicate to cigarette is good thing or trial (15). In the same time, if teenage is

receive violent information and image of smoking but not receive information about danger of cigarette or information of campaign prevention cigarette is correctly, or insufficient to lack shield of teenage. If they are saw media of showing smoking desire to trial and finally is used. Currently, school under Bangkok Metropolitan Administration has access to many channels of media but has problem in consume media in order to prevention cigarette. Namely, campaign media of junior high school in Bangkok insufficient or inconsistent with demand of teenage (12).

Previous study found that cigarette advertising and promotion will be increasing adolescent smoking, and adolescent who were exposure media and like it, would be smoking and promotion increasing smoking behaviors(16). Otherwise , student who exposed smoking campaign information from friend, teacher and parent to high level would be not smoking. (17,18)

By this reason, researcher is interesting to investigate about smoking among junior high school students of Bangkok Metropolitan Administration in aspect of media exposure, a type of campaign cigarette including study relationship between exposure cigarette media and behavior of student smoking. For benefits of this research and method of improvement planning strategy and produce media, as well as development method of disseminate cigarette information is correspond with demand of target group and for development media is create efficiency immune of cigarette.

1.2 Research Questions

1. How many percentage of junior high school students have behavior of smoking?
2. How is relevance of exposure cigarette media and behavior of junior high school student smoking?
3. How is relevance of motivation, attitude, perception of smoking and behavior of junior high school student smoking?

1.3 Research Objectives

- .1. To describe the percentage of smoking behavior among junior high school students under Bangkok Metropolitan Administration.

2.To examine the association between media exposure and psychological factor with smoking behavior of junior high school students under Bangkok Metropolitan Administration and prediction of the adjusted odds ratios of smoking.

1.4 Limitation of the study

The research in this study to educate young people in junior high schools in Bangkok Metropolitan administration, Bangkok, Thailand.

1.5 Conceptual frameworks

This research is define variable as conceptual regarding S-R theory (A Model of Consumer Behavior) exhibit in figure 1.1

Independent variable

Dependent variable

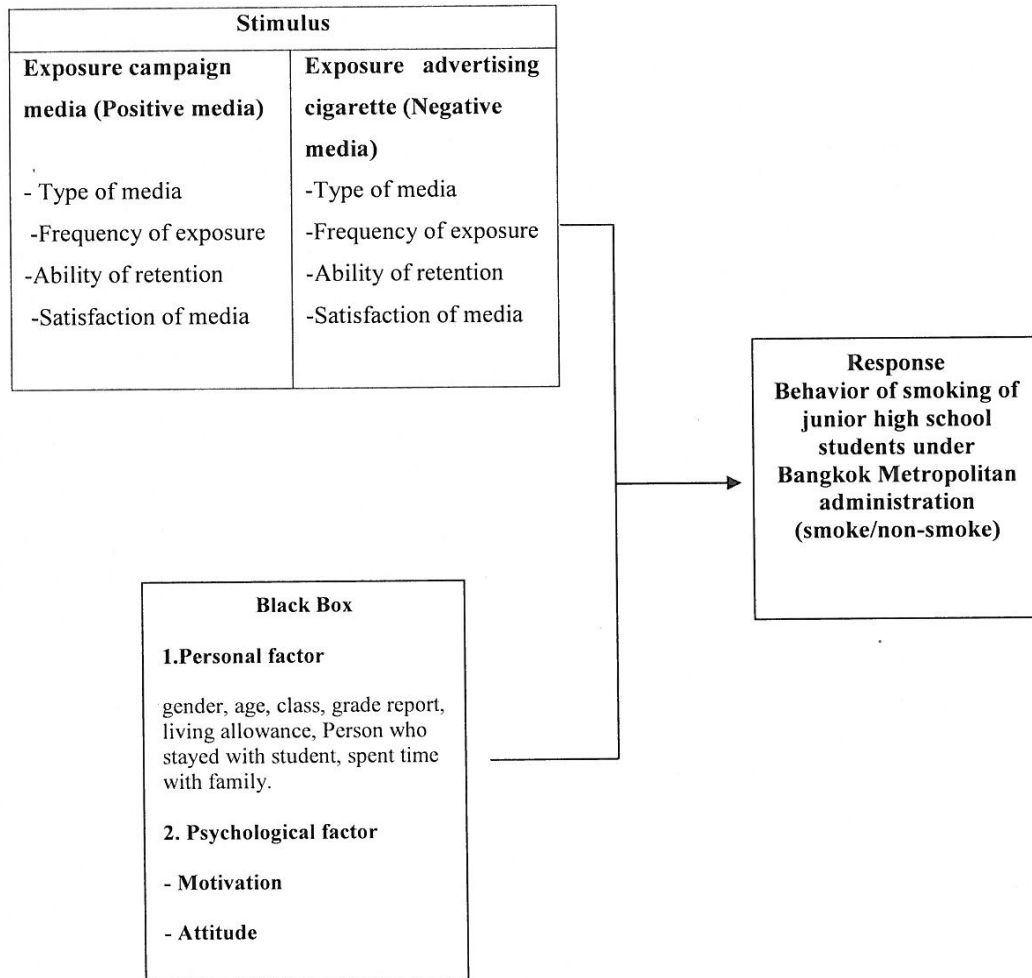


Figure 1.1 Conceptual Framework(

Source: Adapted from The study of direct and indirect alcohol beverages advertising on television among university group of Nuchanan Kingmanee)

Conceptual Framework of the above is that when students are exposed to both sides; media campaign Cigarette advertising and media through various forms, frequency of watching different. As well as to the media thereby satisfying and impressed in the media at a later time, which is a stimulant to the behavior of smoking. In addition, the media affects

the motivation to smoke including attitudes and recognition in cigarettes which could affect the behavior of students smoking in the end.

1.6 Operation definition

Cigarette refers to tobacco was produced from factory both domestic and foreign or a cigarette that is not made of tobacco factory, including cigarettes was made by hand using materials that are easy to find in locally. This does not include electronic cigarettes, Baraku or other material has nicotine is component.

1.6.1 Dependent variable:

Smoking behavior :

Behavior of smoking refers to experience to smoking , starting of student from pre-survey and smoking until present, cause of smoking, occasion of smoking. Smoker refers student that have experience to smoking consisted of current smoker ,abstinence.

Non-smoking behavior refers to student is non-smoking in the past until survey day.

1.6.2 Independent variable:

1.6.2.1 Personal character such as

1) Gender refers to different of student body was categorized as male and female.

2) Age refers to age reported in years and by birthday.

3) Class refers to class of student that is high school students from 7st grades till 9rd grades.

4) Living allowance refers to all money was gained from father and mother or parents per day, including scholarship or other special income.

5) Grade report refers to last average point or last average grade of student from 0.00-4.00.

6) Person who stayed with student refers to father or mother, other relatives such as grandfather and grandmother, sister and brother, aunt, uncle, and so on.

7) Time that students use with family refers to time that student join with family by time is hours per day.

1.6.2.2 Psychological factor

1) Motivation is factor and stimulus cause of smoking consists of

1.1 High motivation is student who have high level motivation to smoking such as

- Situation of smoking and product such as easy source and cheap price
- Close-up person such as induce smoking of family member, relatives and friend.

1.2 Low motivation is student who have low level motivation to smoking or not motivation to smoking

2) Attitude is opinion of agree or disagree, disagree with smoking consist of

2.1 Negative is student who think that smoking is good

2.2 Positive is student who think that smoking is not good.

3) Perception is perception in risk opportunity of disease from smoking consist of

3.1 Low level is student who have low perception in risk opportunity of disease from smoking

3.2 High level is student who have high perception in risk opportunity of disease from smoking

1.6.2.3 Stimulus such as: Media exposure means perception about smoking in the following areas.

1) Exposure positive cigarette media is exposure on campaign of anti-smoking consists of found media, type of media, frequencies of expose, satisfaction and ability of recall.

2) Exposure negative cigarette media is exposure of advertising on promotion, consist of found media, type of media, frequency of expose, satisfaction and ability of recall.

CHAPTER II

LITERATURE REVIEW

Research about “Media Exposure and impact on cigarette smoking behavior” among junior high school students under Bangkok Metropolitan Administration, Thailand” has conceptual theory as well as related research is guidance of research as follows.

2.1 Tobacco and Health

2.1.1 Nicotine addiction mechanism

2.1.2 Component of cigarette and health effects

2.1.3 Smoking situation

2.2 Tobacco Laws

2.3 Theoretical about studies

2.4 Psychological effect to smoking

2.5 Related research

2.1 Tobacco and Health

2.1.1 Nicotine addiction mechanism (19).

Many people still do not believe that cigarettes and nicotine can actually cause addiction. Therefore, the researchers performed the experiments with mice by leaved it in a plastic box with two buttons. One button would provide food and saline placed on the other side of the button when it was pressed, while another button would provide nicotine. It was observed that even it could get food when pressing saline button but the mouse was not interested this button, the mouse chose to press nicotine button almost every time. This behavior is evidence that can actually cause addiction.

In general, smoking is usually started by the social factors such as curiosity, imitating smoking friend, for example. After smoking the physical addiction

began. There are changes in brain as a result of nicotine. Nicotine can be absorbed into human body through many routes such as inhalation, ingestion, absorption through oral cavity or skin. But nicotine can be mostly absorbed into the body through smoke inhalation via respiratory tract. When smokers repeatedly inhale tobacco smoke into trachea and lung, nicotine is absorbed into blood stream through the capillary at bronchial wall and respiratory tract. Blood then carry nicotine to a brain region called ventral tegmental area (VTA). This process occurs rapidly and takes less than 6 seconds. At VTA, nicotine binds with specific flower-like-shaped receptor called alpha-4 beta-2 nicotinic acetylcholine receptor. This receptor has 2 binding sites for binding with nicotine. When two molecules of nicotine bond with this receptor they activate the changes in receptor structure and open the ion channel for Na^+ , K^+ and Ca^{2+} ion⁺ exchange. The ion exchange process produces the nerve impulse. The nerve impulse is transmitted to a brain region called nucleus accumbens and activates the excretion of neurotransmitter such as dopamine and endorphin. These neurotransmitters are associated with positive feeling in the person.

When you stop smoking or your body lack of nicotine for a long time such as during sleeping at night nicotinic receptors are in desensitized state (nicotine is separated from receptor but the receptor is not ready to bind with next nicotine molecules). Receptors have enough time to return to the sensitive state and ready for binding with next nicotine molecules. Therefore the numbers of receptors that available and ready for binding with nicotine are highest when you wake up. When you smoke the first cigarette of the day it will has reward effects more than other cigarettes of the same day. Therefore, the faster the smokers have to smoke their first cigarette of the day, it is a sign that nicotinic receptor is more upregulated (9). It also indicates that the nicotine dependence of that person is more severe. If the body does not receive nicotine it can cause nicotine withdrawal symptoms such as irritability, lack of concentration, high temperature, constipation, aphthous ulcer and a cough. Most of these symptoms remain at approximately 2-3 weeks after quitting smoking then the symptoms will gradually subside and eventually disappear.

2.1.2 Components of cigarette and health effects

Cigarette is the first type of teen substance abuse before turning to more severe drugs. According to World Bank, there are 82,000 – 99,000 new child smokers each day (20). Cigarettes contain more than 7,000 toxins and more than 70 carcinogenic substances. The important components are (21):

1. Nicotine is a chemical that causes cigarette addiction. Nicotine directly affects the brain within 7 seconds and the effect is last 5 – 120 minutes. Nicotine activates the secretion of acetylcholin and norepinephrine, dopamine and beta-endorphin. As enter the body, it binds with receptor then changed into cotinine which remains in blood stream for 48 hours. One stick of cigarette contains 0.1 – 2.8 mg of nicotine and cigarette butt does not reduce the amount of nicotine.

2. Tar consists of many chemicals. It is a sticky brown substance that causes staining on fingers and teeth and associates with various cancers. 50 percent of tar will coats into the lung causing irritation which is a cause of chronic coughing and sputum. For those who smoke a whole pack of cigarette per day, the lung expose to about 30 mg per stick or 110 g per year. Cigarettes in Thailand contain between 12-24 mg tar per stick. British law requires that tar in cigarette must be less than 0.9 mg per stick.

3. Carbon monoxide is a toxic gas that undermines the oxygen-carrying ability of red blood cell making it bind with less oxygen than usual. The consequences are hypoxemia, dizzy, slow decision making and fatigue which is the major cause of heart disease. The oxygen-carrying ability is decreased by 15% in smoker.

4. Hydrogen cyanide is a toxic gas that damages the upper pharynx epithelium. This causes chronic coughing and sputum. Inhalation of over 300 ppm hydrogen cyanide can causes death within 3 minutes and it is explosive at concentration over 56,000 ppm. At room temperature, hydrogen cyanide is a colorless or light blue volatile acid.

5. Nitrogen dioxide is a toxic gas that damages lower pharynx epithelium and alveoli. This makes the alveoli inflate and several small alveoli break and fuse into the large one which decrease the number of alveoli and less flexibility

between inhalation and exhalation and causes emphysema. In addition, in asthma patients, especially children patients are more sensitive to nitrogen dioxide than normal which causes relapse and the pulmonary function test result is significantly worsened.

6. Ammonia is a colorless gas with intense smell and tissue irritation effect which resulting in sore eye, sore nose, irritating trachea and skin. Ammonia added to cigarette can significantly boost nicotine effect called “free-basting” similar to the chemical reactions in cocaine production. Nicotine is in both acid and base forms. When ammonia is added to cigarette it changes nicotine to base form which is easily vaporize into gas in cigarette smoke.

7. Radioactive substances: Cigarette smoke contains polonium-210 that has α -ray which is the leading cause of lung cancer. Cigarette smoke also a great carrier of radioactive substances which make the surrounding nonsmokers inhale air with this pollutants as well.

8. Cadmium is a chemical used in electronic polymer industrial and it is also used in dry cell for flashlight. Cadmium affects the liver, kidneys and brain. One stick of cigarette contains 1-2 μg of cadmium and 10% of cadmium is inhaled while smoking. Cadmium can cause lung and prostate cancers. Tobacco leaves contain different cadmium content. Cadmium is accumulated in smoker's body about 0.5 – 1.2 mg per year.

9. Arsenic has a chemical structure similar to phosphorus. At nontoxic level, arsenic can stimulate the brain and it was commonly used as ingredients in various products in 18th century. At present, arsenic is used as ingredient in herbicide products. At toxic level, arsenic affects gastrointestinal tract. Arsenic poisoning symptoms include nausea, vomiting and severe diarrhea.

10. Formaldehyde is known as embalming chemical. Those who smoke 20-25 cigarettes will expose to 0.8 – 1 mg formaldehyde a day and it is also a carcinogen. The studies show that it is associated with nasopharyngeal carcinoma and may causes severe allergies.

11. Lead is used in battery industry or smeltery. It is a carcinogen that affects many systems in human body. For nervous system, lead can cause hearing loss and low IQ. The effect on circulatory system is high blood pressure

and affects kidney. And more importantly, it affects the reproductive system in adults by lead to infertility in men because it causes sperm disorders, less sperm count and sexual dysfunction.

12. Acetone is an important compound in nail polish remover and also found in cigarette. Inhaling acetone causes irritation. It also affects liver cells causing many liver cells die. In general, acute toxicity reports of acetone are sporadically found. In cases of death they were due to ingestion of quite large amount of acetone.

Table 2.1 Analysis nicotin and tar in Thai cigarette of each brand

Cigarette brand	Milligran of nicotin in 1 roll	Milligram of tar in smoke of cigarette 1 roll
Prachan	0.6	24
Ruangthip	0.8	24
Kledthong	1.0	26
Saifon	1.8	28
Royal III filter tip	1.6	28
Klongthip	1.6	28
Samit 14 filter tip	1.5	29
Samit (Normal)	1.6	31
Krungthong 85 (Filter tip)	1.8	29
Krungthong (Normal)	1.8	30

Source: Somkiet Wattanasirichaikul, Health academic text, control consumption of tobacco for personnel and health vocational student. Bangkok: Health vocational network for free cigarette of Thai society, 2007.

Effects and dangers of cigarette (19).

Smoking is one of the primary causes of preventable illness and death of people around the world. As the study of Danaei G. et al. who studied risk factors of preventable death in America and found that the top three factors of death are

including smoking and high blood pressure (2). In addition, it was found that smoking is associated with many diseases, especially lung cancer, coronary artery disease and emphysema which are three leading causes of death of population. Comparing at regional level shows that in most developed countries such as America and Europe the smoking rate in these countries decrease and the mortality rate decrease as accordingly. While Asian countries still have high smoking rates in both men and women and are likely to increase. If these countries still ignore this problem and do not take any action, it can be predicted that in the next 10 years the mortality rate of population in these countries will increase dramatically which are the results of effects and dangers of smoking.

According to Ministry of Public Health (22), smoking is a cause of many serious diseases including:

1. Cancer smokers have high possibility of cancers in organs than non-smokers such as oral cavity, nasal cavity, larynx, trachea, lung, oesophagus, stomach, pancreas, liver, kidney, bladder, colon, anus, breast, cervix, ovary, prostate gland. Smokers are 4 times likely to have stomach ulcer more than non-smokers. Those who are hard smokers and also drink alcohol have 3 times higher risk of esophageal cancer than those who smoke only. The reasons that smoking can cause cancers in many organs are partly due to carcinogens in cigarette smoke which directly contact with organs. 90% of lung cancers are caused by smoking. 30% of non-smokers lung cancer patients are the results of secondhand smoke. The studies found that risk of lung cancer in smokers are 50% higher than in non-smokers. On average, the risk of death in male smokers is 2 times higher than non-smokers.

2. Respiratory diseases Cigarette smoke causes significant irritation to the respiratory system and results in pulmonary dysfunction when cigarette smoke continuously accumulate in lung. The diseases caused by cigarette smoke are including chronic obstructive pulmonary disease, emphysema, chronic bronchitis, tend to have cold and bronchitis easily and other respiratory diseases. Regular smokers tend to have cold frequently and recover more slowly than normal people.

Cigarette and pulmonary emphysema Lung is composed of many small alveoli. In general, adults have 100 yard square or one football field of alveoli surface area for oxygen exchange. These alveoli are responsible for exchange oxygen and

carbon dioxide which called dialysis. Smokers have 10 times higher risk of pulmonary emphysema than non-smokers. Emphysema is a progressive disease that lung tissues are gradually damaged from exposing to cigarette smoke. Nitrogen dioxide in cigarette smoke inflames lung tissue and gradually tears alveoli. The alveoli will fuse into the larger one that causes emphysema. As a result, the surface area of lung tissue for oxygen exchange is decreased, the patients have to breathe faster to provide enough oxygen. In the last stage of emphysema, the patients will suffer a lot because they are exhausted so they cannot do anything. They will become bedridden patients and need oxygen tank all the time.

3. Cardiovascular disease and myocarditis Studies in the US found that smokers have 2-4 times higher risk of ischemic heart disease than non-smokers. The risk of heart disease in smoker who suffer from high blood pressure or high blood cholesterol increases 8 times. The risk of heart failure from acute myocardial infarction in smoker is 10 times higher than non-smoker. On average, smoking cause vascular dementia and atherothrombotic 10-15 years faster than non-smoker. The World Health Organisation indicate that 25 percent of people who die from coronary artery disease as a result of smoking is the result of smoking. Women smokers who taking contraceptive pills have 40 times higher risk of coronary heart disease than normal women and have higher risk of coronary artery disease and vascular diseases than normal women. Cigarette smoke is a major cause of heart attack. 80% of people who suffer from heart attack before 50 years old are the results of smoking. The frequencies of heart attack are 80% in 30 – 49 years old smokers and 60% in 50 – 59 years old smokers.

Stroke is caused by the deterioration of cerebrovascular. The pathogenesis is similar to cardiovascular and other organs. Patients may be paralyzed from ischemia or weaken remembrance. Smoking increases the risk of cerebral haemorrhage 2 times.

In addition, diseases caused by smoking include valvular heart disease, high blood pressure, ischemic heart disease, heart disease caused by lung disease, other heart diseases, aortic aneurysm, atherosclerosis, other vascular diseases and sexual dysfunction, for example.

Otherwise, increased risk of Miscarriage, premature birth and low birth weight infant. For children, environmental tobacco smoke in children increased risk of

respiratory infection such as bronchiolitis, middle ear infection, meningococcal infection, asthma attacks sudden infant death syndrome.

2.1.3 Smoking situation

1) Global smoking situation

Cigarette is widely used around the world. The population of smokers worldwide is about 1,100 million or about 1/3 of world population (23). Smoking is a major cause of death, illness and poverty. There are about 6 million people die from smoking each year. More than 5 million people die from their own smoking behaviors and more than 600,000 people die from secondhand smoke. People die from smoking in every 6 seconds. About 80% or more than 100 smokers are in moderate- to low-income countries. Smoking decreases family income and increase healthcare cost and also affect economic development. Moreover, smoking is the cause of death of 100 million people in 20th century and will increase continuously if not being controlled and death from smoking may be increase to 1,000 million people in 21th century (2). The top 5 countries with highest smokers are including:

Table 2.2 Countries are top 5 of smoking

No.	Country	Total Cigarettes Consumed	Per capita Consumption
1	China	2.64 trillion	1,711
2	Russian Federation	390.0 billion	2,786
3	United States	315.7 billion	1,028
4	Indonesia	260.8 billion	1,085
5	Japan	233.9 billion	1,841

Sources: Eriksen M, Macky J, Ross H. The Tobacco Atlas. Fourth Ed. Atlanta, GA: American Cancer Society; New York, NY: World Lung Foundation; 2012.

According to the survey of the World Health Organization, Thailand is 1 of 15 countries with highest smoking rate in the world and also 1 of 4 Southeast Asian countries with highest smoking rate in students (11 – 18 years old). The value of cigarette Thai youth smoked each day is 20.3 million Baht (3)

2) Smoking situation and prevalence in Thailand

According to the smoker population survey of the National Statistical Office from 1976 to 2011 (1) by collecting data between March – May 2011 from the population aged 11 years and older and only data from population aged 15 years and older for comparison with other countries. It was found that among 53.9 million of people aged 15 and older there are 11.5 smoker or accounting for 21.4%. Among these smokers, 9.9 million people are regular smokers (18.4%) and 1.6 million people are occasional smoker (2.9%). Smoking rate in men is 20 times higher than women which are 41.7% and 2.1%, respectively. The numbers of smokers who live outside the municipal area is 1.4 times higher than smokers who live inside the municipal area which are 23.5% and 17.3%, respectively.

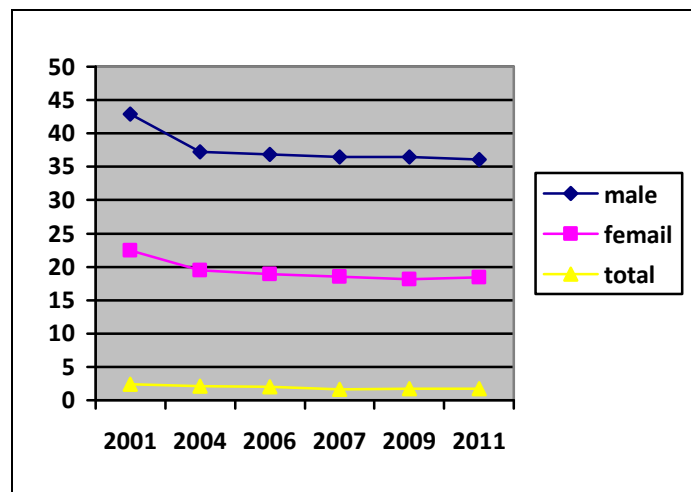


Figure 2.1 Comparative rate of population smoking up to 15 years old are regularly smoking Categorized as gender of 2001-2011

Source: National Statistical Office (2007)

According to the Action On Smoke And Health Foundation 2001 (24), there are 5.1 million smokers who use ready-made cigarette (cigarette in a pack), 4.7 million people use roll-your-own cigarette, 3.1 million people use both ready-made cigarette and roll-your-own cigarette and 100,000 people use other types of cigarette (such as pipe, cigar, Baraku). People who live in Bangkok, Central and Northern Thailand use ready-made cigarette the other regions which are 90.6%, 65.0% and

55.3%, respectively. It also found that the proportion of all tobacco type is used by working age group (25 – 59 years old) (over 72.0%), youth (15 – 24 years old) use both ready-made cigarette and roll-your-own cigarette the most while elderly (60 years old and older) use roll-your-own cigarette the most (17.8%) as shown in figure.

Table 2.3 Population up to 15 years old are regularly smoking, categorized as gender and age, 2011

Sex and age group (year)	Types of Tobacco		
	Cigarettes pack	Self made Cigarettes	All type
Total	5,554.3 (100.0)	5,235.0 (100.0)	889.1 (100.0)
Male	5,364.6 (96.6)	4,938.9 (94.3)	874.7 (98.4)
Female	189.7 (3.4)	296.1 (5.7)	14.4 (1.6)
Age group			
15-24	1,055 (19.0)	527.5 (10.1)	195.5 (22.0)
25-59	4,205.8 (75.7)	3,775.1 (72.1)	648.2 (72.9)
Upper 60	293.5 (5.3)	932.4 (17.8)	45.4 (5.1)

Source: National Statistical Office ,2007

3) Smoking behavior

Age and reasons for starting smoking For regular smokers, they start to smoke at 18.4 years old on average. Men start smoking faster than women. Men start to smoke at 18.2 years old and women start to smoke at 21.7 years old. Compared to 2001 it was found that men and women start smoking faster (1).

The reasons Thai people start smoking are:

1. Imitate their friends: Because their friends smoke and claim to socialize with friends (25).
2. Family environment: Their family members smoke such as parents, uncles, aunts so they want to imitate their family members (27).
3. Curiosity (27).
4. Misvalue: They consider smoking as a sign of manfulness (26)
5. The influences of advertising media including movies, television and newspaper (26).
6. Misconceptions such as believe that smoking results in clear brain, clear mind and not sleepy, for example.

4) Causes of smoking among teenagers

Cause of teenage smoking (28), analyzed the issue of smoking may be single or multiple factors in one person. The factors result in that person which summarizes factors such as.

4.1 Group structure, especially teenagers often imitate their friends' smoking behavior to be accepted as a part of the group.

4.2 Teenagers are curious to try, especially cigarette is one thing teenager want to try and experience. If their first try make them to be more accepted from friends they will have higher smoking behavior. If they feel that cigarette taste good they are more likely to continue smoking.

4.3 Imitating people in society: Parents, teachers, actors/ actresses and doctors are role models for teenagers and teenagers will imitate the smoking behaviors of these people.

4.4 Smoking is a social activity that results in the incorporation of a group of people in society. Sometimes smoking is a good reception as well as drinking.

4.5 Smoking is considered as a culture in community such as for Southern Thailand in the past host would put gift and cigarette for guest on a plate. When guest visited, they would smoke the cigarette to welcome and express their friendship.

4.6 To avoid being blamed or reproached. Teenagers will start smoking to show that they are already adults. Those who do not smoke will be scolded or reproached that they do not look like adults. It represents the wrong attitude that to be an adult you have to smoke.

4.7 Smoking is an adaptive mechanism. Most people smoke to relieve stress. They will smoke when they are suffering, have problems or feel uncomfortable with the hope that smoking can relieve their stresses.

4.8. People can trade cigarettes openly and legally. Cigarette is affordable and available and there is an advertising campaign to encourage people to buy and smoke cigarette via various media such as newspaper, magazine, radio and television. These media motivate teenagers to buy and try smoking.

Summarized that, cause of smoking in teenage have caused from themselves, social, environment and heredity.

2.2 Tobacco laws

Table 2.4 Domestic and international laws related to tobacco are as follows

Domestic law related to tobacco (29)	
Laws	Contents
1. Tobacco Products Control Act B.E. 2535 (1992)	<p>This Act defined that “Tobacco product” means the tobacco under the law on tobacco and any other product composed of tobacco leaves or nicotianatabacum plant to be used either by smoking, sucking, sniffing, munching, eating, blowing or spraying into the mouth or nose or by other means in order to obtain the same result. It was also defined that “Package” means a pack, carton or other packages used to wrap or contain the tobacco products. “Advertising” means an act undertaken by any means to allow the public to see, hear or know the statement for commercial interest.</p> <p>Section 4 No person shall be allowed to dispose of, sell, exchange or give the tobacco products to a person whom is known to the former that the buyer or receiver does not attain eighteen full years of age.</p> <p>No person shall be allowed to sell the tobacco products by vending machines.</p> <p>No person shall be allow to do any of the following acts:</p>

Table 2.4 Domestic and international laws related to tobacco are as follows (cont.)

Domestic law related to tobacco (29)	
Laws	Contents
	<p>(1) To sell goods or render services with the distribution, addition, gift of tobacco products or exchange with the tobacco products as the case may be,</p> <p>(2) To sell the tobacco products with the distribution, addition, gift of or exchange with other goods or services,</p> <p>(3) To give or offer the right to attend the games, shows, services or any other benefit as a consideration to the buyer of tobacco products or a person bringing the package of tobacco products for exchange or redemption therefore.</p> <p>No person shall be allowed to distribute the tobacco products as a sample of the tobacco products so as to proliferate such tobacco products or to persuade the public to consume such tobacco products except for a customary gift.</p> <p>No person shall be allowed to advertise the tobacco products or exposing the name or mark of the tobacco products in the printed matters, via radio broadcast, radio, television or any other advertiseable thing or to use the name or mark of the tobacco products in the shows, games, services or any other activity the objective of which is to let the public to understand that the name or mark belongs to the tobacco products.</p>

Table 2.4 Domestic and international laws related to tobacco are as follows (cont.)

Domestic law related to tobacco (29)	
Laws	Contents
	<p>However, This Act does not apply to the live broadcast from abroad via radio or television and the advertisement of the tobacco products in the printed matters printed outside the Kingdom without the objective to dispose of specifically in the Kingdom.</p> <p>Summary of Tobacco Products Control Act B.E. 2535</p> <ol style="list-style-type: none"> 1. No person shall be allowed to dispose of, sell, exchange or give the tobacco products to a person whom is known to the former that the buyer or receiver does not attain eighteen full years of age. Any person violating this rule shall be subject to an imprisonment not exceeding one month or a fine not exceeding two thousand baht or both. 2. No person shall be allowed to sell the tobacco products by vending machines. Any person violating this rule shall be subject to a fine not exceeding twenty thousand baht. 3. No person shall be allowed to sell goods or render services with the distribution, addition, gift of tobacco products or exchange with the tobacco product. No person shall be allowed to sell the tobacco products with the distribution, addition, gift of or exchange with other goods or services or giving. No person shall be

Table 2.4 Domestic and international laws related to tobacco are as follows (cont.)

Domestic law related to tobacco (29)	
Laws	Contents
	<p>allowed to give or offer the right to attend the games, shows, services or any other benefit as a consideration to the buyer of tobacco products or a person bringing the package of tobacco products for exchange or redemption. Any person violating these rules shall be subject to a fine not exceeding twenty thousand baht.</p> <p>4. No person shall be allowed to distribute the tobacco products as a sample of the tobacco products so as to proliferate such tobacco products or to persuade the public to consume such tobacco products except for a customary gift. Any person violating these rules shall be subject to a fine not exceeding twenty thousand baht.</p> <p>5. No person shall be allowed to advertise the tobacco products or exposing the name or mark of the tobacco products in the printed matters, via radio broadcast, radio, television or any other advertiseable thing or to use the name or mark of the tobacco products in the shows, games, services or any other activity (excepting the live broadcast from abroad via radio or television and the advertisement of the tobacco products in the printed matters printed outside the Kingdom). Any person violating this rule shall be subject to a fine not exceeding two hundred thousand baht</p>

Table 2.4 Domestic and international laws related to tobacco are as follows (cont.)

Domestic law related to tobacco (29)	
Laws	Contents
	<p>7. No person shall be allowed to manufacture, import for sale or general distribution or advertise any other goods having such an appearance as to be understood as an imitation of tobacco products such as chewing gum in cigarette package, cigarette-shaped earrings, hat with cigarette brand logo, pants or shirts and car sunscreen with cigarette brand logo print, for example. Any person violating this rule shall be subject to a fine not exceeding twenty thousand baht.</p> <p>8. The manufacturer or importer of the tobacco products shall have a duty to inform the Ministry of Public Health of the particulars of composition of the tobacco products in accordance with the criteria, procedures and conditions prescribed in the Ministerial Rules. Any manufacture or importer violating this rule shall be subject to an imprisonment not exceeding six months or a fine not exceeding one hundred thousand baht or both.</p> <p>9. The manufacture or importer of the tobacco products must exhibit the labels on the packages of tobacco products according to the criteria of the Ministry of Public Health. Any manufacture or importer violating this rule shall be subject to a fine not exceeding one hundred thousand baht.</p>

Table 2.4 Domestic and international laws related to tobacco are as follows (cont.)

Domestic law related to tobacco (29)	
Laws	Contents
	<p>10. The manufacture not exhibiting the labels on the packages of tobacco products as provided for in Section 12 shall be subject to a fine not exceeding twenty thousand baht.</p> <p>11. The tobacco products to be sold shall have the composition in accordance with the standards prescribed in the Ministerial Rules. The manufacturer or importer of the tobacco products shall have a duty to inform the Ministry of Public Health of the particulars of composition of the tobacco products in accordance with the criteria, procedures and conditions prescribed in the Ministerial Rules.</p> <p>12. In case where the composition of any product does not comply with the standards prescribed in paragraph one, the Minister shall have the power to order the prohibition of sale or import of such tobacco product. The authority shall have the power to enter any place or any vehicle in order to search in case where there is reasonable ground to suspect that the offenses hereunder have been committed;</p>

Table 2.4 Domestic and international laws related to tobacco are as follows (cont.)

Domestic law related to tobacco (29)	
Laws	Contents
<p>2. Non-smokers’ Health Protection Act B.E. 2535 (1992) (Manoon Sripetsai)</p>	<p>1. To arrange any part or all of the public places as the smoking and nonsmoking areas. 2. To arrange the smoking area to have such condition, nature and standard as designated by the Minister. 3. to arrange for the signs in the smoking or non-smoking areas in accordance with the criteria and procedures designated by the Minister. 4. No person shall be allowed to smoke in a non- smoking areas.</p>
<p>3. Notification of the Ministry of Public Health (No. 17), Ministry of Public Health</p>	<p>To provide non-smokers’ health protection 2 types of non-smoking areas shall be designated: 1. The places that shall be all designated as a non-smoking area such as bus, taxicab, school bus, bus stop, any vehicle, lift, phone booth, toilet, theater, library, conference room, pharmacy, building for spar or Thai massage businesses, indoor stadium, stadium, playground, nursery, school, religious place, clinic. The non-smoking areas, especially air-conditioned places are such as: museum, department store, exhibition hall, beauty clinic, internet center. 2. The place that shall be designated as non-smoking area excepting private rooms of workers and areas designated as “smoking area” such as official place, state enterprise, air-conditioned private office, all passenger terminal, gas station, university, vocational training center, tutor, art school, concert, sports, hospital, bank, financial institution, etc.</p>

Table 2.4 Domestic and international laws related to tobacco are as follows (cont.)

International laws related to tobacco (28)	
Laws	Contents
1. Framework Convention on Tobacco Control (FCTC)	WHO require that Each Party shall undertake a comprehensive ban of all tobacco advertising, promotion and sponsorship of activities of tobacco companies. Each unit packet and package of tobacco products and any outside packaging and labeling of such products shall carry health warnings describing the harmful effects of tobacco use, and may include other appropriate messages. Tobacco product packaging and labeling shall not promote a tobacco product by any means that are false, misleading, deceptive or likely to create an erroneous impression about its characteristics, health effects, hazards or emissions, including any term, descriptor, trademark, figurative or any other sign that directly or indirectly creates the false impression that a particular tobacco product is less harmful than other tobacco products. These may include terms such as “low tar”, “light”, “ultra-light”, or “mild”. This agreement also include the articles focusing on eliminating all forms of illicit trade in tobacco products including smuggling, prohibition of selling tobacco products to minors, implementation of tax policies and price policies on tobacco products and protection from exposure to tobacco smoke which called “secondhand smoke”

2.3 Theoretical about studies

2.3.1. The concepts and theories are used to create a conceptual framework

2.3.2 Other relevant theories such as media exposure, ideas about advertising, ideas about the media campaign as follows.

2.3.1 Theory concepts used to build the framework is popular in description as follows:

1. SR Theory (A Model of Consumer Behavior) (30)

Economic theory believes that consumers demand a wide range of products and services. However, due to the limitation of resources of each consumer, they have different consumptions sequences. Consumers will consider the maximum benefits they get from durable goods consumption, most of which have long lifetime and are expensive. Consumers need to consider the benefits or satisfaction they will get before deciding to buy when compared to other products they need to buy on a regular basis.

Consumer behavior means the actions of any person that directly related to the acquisition and use of products and services. This also includes the precede decision making process which partly contributes to such actions. Consumer Behavior Model or S-R Theory is the study of the purchase stimuli. It begins with stimuli (S-Stimulus) of demands. Stimuli pass into buyer's emotional (Buyer's Black Box) which is like a black box that first results in demand then turns into customer's responses (R-Response).

Consumer behavior details

Consumer behavior models is the study of the purchase stimuli. It begins with stimuli (S-Stimulus) of demands. Stimuli pass into buyer's emotion (Buyer's Black Box) which is like a black box of manufacturer or buyer that cannot be predicted. The black box of buyer is influenced by characteristics of buyer and the responses and decisions of buyers as shown in figure 2.2.

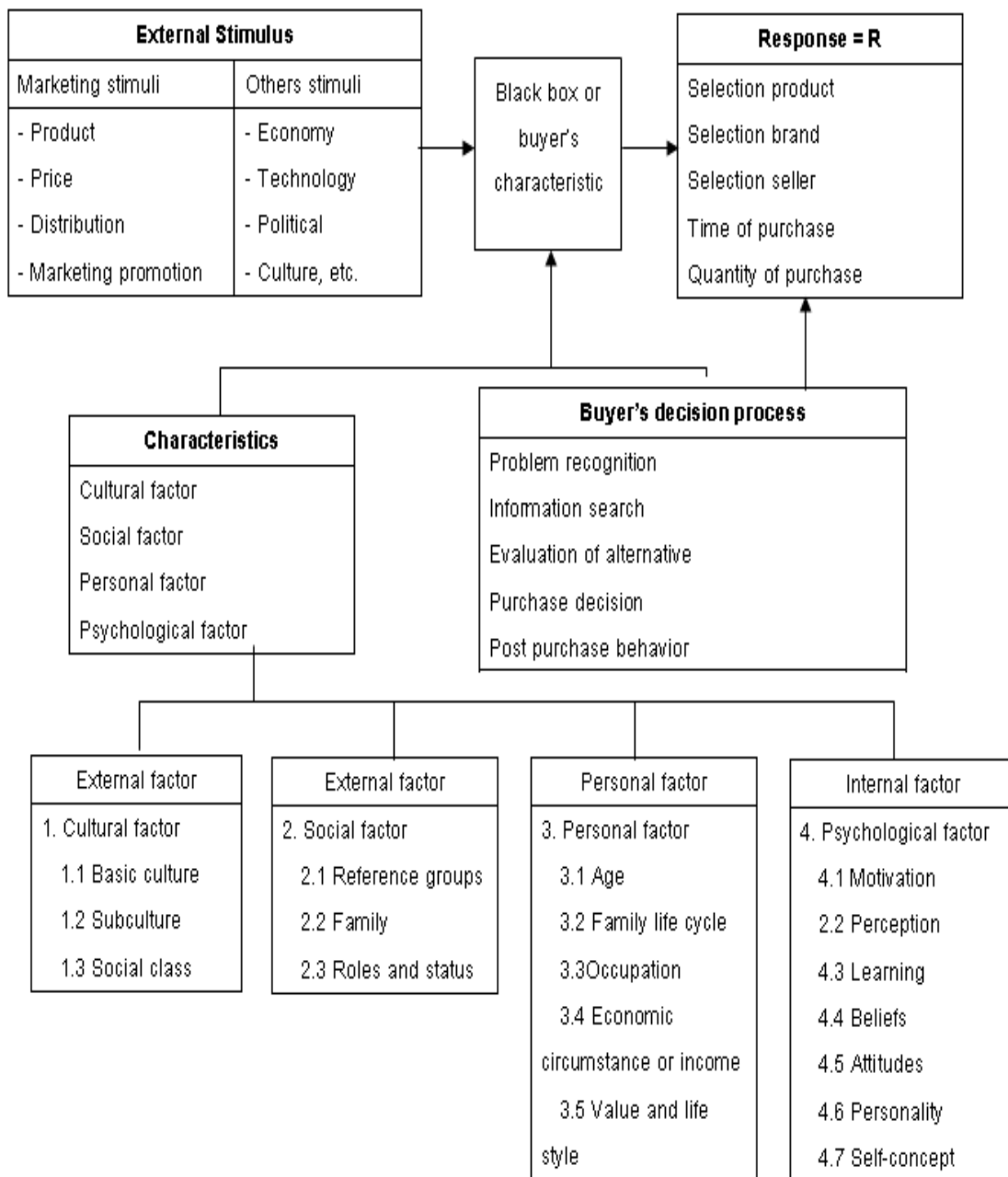


Figure 2.2 Consumer behavior models

Source: (Siriwan Serirat and Amornsak Boonrueng, 2003: 128)

1. S-Stimulus can be both internal and external stimulus which are the motivation of consumption. External stimulus consists of 2 parts:

1.1 Marketing stimulus stimulates purchasing demand relating to marketing mix which consists of

(1) Product is anything that that can be offered to a market to get consumer's attention and ownership. Use or consumption is to satisfy the needs and desires of humans. Products can be classified as tangible or intangible. The components of a product include goods and services, brand name, quality, packaging and technology.

(2) Price is the value of goods or services expressed in units of some form of currency. Pricing methods are included:

- lower than the market price
- higher than the market price
- equal to normal market price

(3) Place is an activity to bring product to target market. This component does not refer just place but consider how to distribute product through intermediaries and how the product movement is. The components of distribution include:

- Distribution channel
- Distribution

(4) Promotion is a communication between supplier and target market related to product. The objective is to inform or persuade the attitudes and buying behavior. Promotion can be done with four different ways. These are called promotional mix or communication mix which consists of:

- Advertising
- Personal selling
- Sales promotion
- Public relations or publicity

1.2 Other stimuli stimulate consumer's demand related to economic condition. These stimuli are within the organization and uncontrollable by the manufacturer. These stimuli are such as consumer's income, for example.

2. Black box (Buyer's Black Box) It is like a black box that is unknowable to the manufacturer or seller.

2.1 Consumer characteristics The factors of the effects of consumer characteristics are:

- (1) cultural factors
- (2) social factors
- (3) personal factors
- (4) Psychological characteristics

Marketers need to study the purchasing decision criteria which is a result of cultural factors, social factors and psychological characteristics. These factors influence the marketers because they are useful for the consideration of buyer's interest. This is in order to improve the product, pricing decision, distribution channel and promotion.

2.2 Consumption decision making process of consumers Consumers have different purchasing decisions depending on the type of product, the circumstances while making purchasing decisions and purchasing decision-making methods of consumers in each time. Purchasing is a process consisted of many different activities. However, when it comes to purchasing, most people think of the purchasing decision which is only a part of purchasing.

The steps in consumer decision-making process include:

- (1) Needs recognition
- (2) Pre-purchase behaviors
- (3) Purchasing decision
- (4) Using behavior
- (5) Post-purchase feelings

3. Consumer response Consumers have to decide on:

- 3.1 Product choice
- 3.2 Price choice
- 3.3 Place choice
- 3.4 Promotion choice
- 3.5 Income choice (31)

2. Buying Decision theories The buyer decision is internal factors and external factors as follows.

Internal Factor is the risk of a decision of the consumer and decision of consumer

External and internal factors, the nature of the buyers are influenced by cultural factors and social factor (External factors), personal factors and psychological factors (Internal factors) are as follows.

1. Cultural factors such as

1.1 Culture

1.2 Subculture

1.3 Social classes

2. Social factors are the factors involving with the daily life of consumer which consist of the reference group, family, role and status of buyer.

3. Personal factors Buying decision is influenced by the personal characteristics such as age, life cycle stages, family life, occupation, economic opportunity, education, lifestyle, personality.

4. Psychological factors are internal factors influencing buying and using behavior which consists of

Motivation means a desire to perform an action or operation to achieve the goal. It is the first internal factor affecting consumer behavior.

Perception is the organization, identification, and interpretation of sensory information in order to create the meaningful image through various senses such as sound, vision, smell, taste, touch and feeling which are based on the idea, feeling and environment of the consumer.

Learning is what changes the behaviors as a result of both direct and indirect experiences. Learning happens when a person is exposed to the stimuli and response to such stimuli.

Belief is the idea the people held which may be due to their former experiences. It contributes to the imagery of product in consumer mind. If consumers are made to believe that the product is of good quality and more cost effective than the competing product, it is a good imagery inside the consumer mind.

This affects buying decision of consumer and creates the opportunity to sell more products.

Attitude is an evaluation of satisfaction of individual on something which influences the expression of that person (33).

The most popular theory is used to create a conceptual framework. Researcher is selected SR theory with theory of consumer decision in the creation of a conceptual framework. The theory is consistent with the hypothesis. Research purpose is not study all variables of theory. But will be select proper variable and researcher found that are associated with smoking behavior by division.

(1) Stimulus includes exposure to positive and negative.

(2) Black box is divided into personal factors such as gender, grade, income per day, students who live with and psychological factors such as motivation, attitude and perception. Moreover, has led to the theory of consumer choice in the creation of a conceptual framework. Since the theory of consumer choice has process of decision making, which is a component of SR theory, namely the decision to include the psychological factors that influence consumer decisions, including motivation, learning, perception, attitudes, which are linked and related.

2.3.2 Others related theories

1) Media exposure theories

Communication is one of basic needs in human life in addition to the four basic needs that essential to the survival of mankind which include food, shelter, clothing and healthcare. Although communication is not directly related to the survival of mankind as the 4 basic needs. However, to obtain those 4 basic needs the communication is certainly required as a tool. Human requires communication as a tool to achieve the purposes of any activity and to live together with others in society. Communication is the fundamental of contact of social process. The more complex the society and more member, the more importance the communication is. This is because the changes in economy, industry and society result in the complexity or confusion and may cause the misunderstanding and uncertainty to the members of society. Therefore, the communication is required as a tool to resolve such problems (30).

News is an important factor used in the decision making in human activities. The information need is increased when a person needs the information to make decisions or unsure in some matter. In addition, information makes the audience up to date and better adapt to the current situation of our world. As Charles K. Atkin suggested that those who is more exposed to information will has more knowledge, understand in the environment and more up to date that those who is less exposed to information (33).

1.1 Media exposure definitions

For the definition of media exposure, Samuel L. Becker classified the definition of media exposure by the media exposure behaviors as (34):

(1) Information seeking People will seek information when they want to be similar to the others in a particular subject or general subject.

(2) Information receptivity People will open to information in order to get the information they interested and curious. If there is the information relevant to them, they will pay special attention to read, watch or listen.

(3) Experience receptivity People will open to information because they want to do something or to relax.

Jitra Tanasarnsaenee defined media exposure as the media exposure behaviors of the audiences. The audiences have different media selection processes according to the different experiences, needs, beliefs, attitudes and feelings (35).

Seri Wongmontha defined media exposure as the exposure of information from personal media, mass media and electronic media (36).

In conclusion, media exposure refers to the behaviors of audiences in exposure to the information from mass media, personal media and electronic media. Each person chooses to receive the different information depending on experiences, needs, beliefs, attitude, for example.

Individuals expose to every information coming through but will choose to recognize only some parts that they think that beneficial to them. Therefore, all the information flowing to individuals from channels is often selected all the time. Interesting, useful and appropriate information according to the audience minds is information that results in successful communication (37).

Information selection of individual can explain the communication behavior of individual that the differences in personal or psychological conditions have effects on media exposure with the difference selection process.

1.2 Media exposure situations

Nowadays the media is more modern and is the important thing that makes our world a borderless society. This is because the modern communication technology can communicate via a variety of easy and fast channels to communicate without distance obstacle. For this reason, media has effects on lifestyle of human and on society and can bring benefits to economy, politic and education. People all over the world spend most of their time with difference electronic media such as television, radio, internet and love to chat, listen and exchange ideas with friends via media or expose to media via posters or leaflets, etc. According to ABC News Medical Units (38), it is found that in 5 months teenagers around the world spend an average of 3,518 hours to watch television, surf the internet, read news, read newspaper and listen to radio. The time they spent with these media is increased and longer, especially in children aged 8 – 18 years they spend an average of about 11 hours in media exposure such as television, radio, book, video game and internet for searching information, entertainment and news, for example (39). Teenagers use various media and it becomes a part of their lives. The media exposure of teenagers also affect to their lifestyles and behaviors. It is found that media exposure of teenagers result in the imitation of media they exposed. According to Huesmann and other who studied “early exposure to TV violence predicts aggression in adulthood” it was found that media exposure was associated with behavior (40). Teenagers who expose to violent media on TV will express the aggression when they grow up. It indicates that the aggressive words are the causes of domestic violence. These anti-social and violent behaviors lead to crime and drug abuse. Huesmann and Laramie also found that media such as television, radio, prints with the interesting content such as attractive comic, cartoon animation or music made teenager more exposure to such media and had the behaviors as the goal of such media (41).

In addition, there were many studies that studies the relationship between media exposure and drug abuse among teens and found that media exposure such as television, movies, music, internet and magazine that showed

pictures of drug abuse was the cause of drug abuse among teens as shown in such media (41). Many companies spend a lot of money each year on tobacco, alcohol or other drug advertising in order to attract people to use their products. In spite of laws to control and prohibit the advertising, however the advertising or picture of drug abuse can be still found at present. The scene of alcohol can be found in every 22 minutes, cigarette in every 57 minutes and illegal drug in every 112 minutes on television. The scenes of drug abuse are also found in music video which 35% are alcohol use, 10% are smoking and 13% are other drugs (14). Many studies found the relationship between media exposure through different channels and starting smoking, drinking alcohol and using illegal drugs. The content of tobacco advertising causes teenagers to try smoking. The study in USA found that evidence that drinking alcohol among teenagers was associated with media and information exposure (42). There are similar studies in Germany (43) that found the similar relationship between the increasing rates of watching movies with smoking scenes and smoking behavior among teenagers. Moreover, the relationships between marijuana use among teenagers and music video and between drinking alcohol and watching television (44). It can be seen that media exposure via various channels are the causes of high risk of drug abuse among teenagers.

Thailand has advancement in information technology. Thailand is one of the top user of electronic media in the world such as the number of internet users in Thailand is 19th in the world or about 25 million people, listening to radio ranked 5th in the world with an average of 13.3 hour/week and watching TV ranked the 1st in the world with an average of 22.4 hour/week and reading magazine ranked the 2nd in the world with an average of 9.4 hour/week (14). Each day Thai people especially teenagers spend the most time on various media to search for information, to keep up with the situation, for education, to do homework and reports. While radio and television media are used for entertainment. In addition, newspaper is also used for weather forecast and read the content of interest. While internet is used to search for information for a report (45). Because Thai teens expose to various media so they have the opportunities to get various information, especially cigarette, alcohol and drugs. Actors/actresses in media often use drugs such as cigarette, alcohol or marijuana in films, showing pictures of or alcohol advertising on TV, prescription

drug or cigarette on internet (15). In addition most news present the violent scenes such as children were taken hostage by amphetamine users on TV or newspaper, monks or teen actors/actresses use drug on social network. This makes Thai teens perceive and adsorb the information that inappropriate with their age. Adsorbing such information eventually lead to inappropriate behavior (45).

Bangkok is the capital of Thailand with the advancement of technology and it is easier to access to media more than other provinces. The survey of the National Statistical Office (14) shows that People in Bangkok use media on the most of their spare time. They watch TV an average of 3 hours per day, reading books for 1.2 hours per day, listen to radio and other media for 2.2 hours per day and use the internet for 2.4 hours per day which are higher than in Central, North, South and Southeast regions. Especially, teenagers aged 10 –14 years have highest media exposure. This is because they can easily access to media via more channels, especially information about drugs. Teens in Bangkok can access to such information fast and easy so these information affect their drug abuse behaviors than teens in other provinces. This is consistent with the study by Arporn Suksawat that found that media exposure was associated with drug abuse behavior. The higher media exposure and easier to access to media, the drug abuse tends to increase (12).

1.3 Selective media exposure

Joseph T. Klapper mentioned that selection of the process of selective media or information exposure is like a information filter in human perception which in consists of 4 consecutive steps as follow (46):

(1) Selective exposure is the first step in choosing the communication channels. People will choose from many information sources such as choose to buy a particular newspaper, choose a particular radio station by their interests and needs. Skills and expertise in information perception of people are different. Some people have the aptitude to listen rather than read so these people may prefer listening to radio than watching TV.

(2) Selective attention People tend to interest in information from a particular source. People often choose based on their own opinions and interests to support the existing attitudes and avoid information that inconsistent with

their existing knowledge, understanding or attitudes. This is to avoid the mental imbalance or uncomfortable feeling which called cognitive dissonance.

(3) Selective perception and interpretation When the receivers expose to information they do not always recognize all information according to the intents of the senders because people often choose to perceive and interpret differently based on their interests, attitudes, experience, beliefs, needs, expectations, motivation, physical conditions or emotional and mental states. Therefore, each person may interpret only the information the consistent with such personal characteristics. Beside some parts of information may be eliminated, information is also distorted into the desirable direction of that person.

(4) Selective retention People choose to remember the parts of information that consistent with their interests, needs, attitude, for example and tend to forget the parts they do not interest, disagree or conflict with their ideas. The content of information that people chose to remember often promote or support their existing feelings, attitudes, values or beliefs to secure, make it clearer and more difficult to change in order to use in the future. Some parts of information may be used when there are some conflicts and uncomfortable feelings.

1.4 Factors affecting information exposure

Todd Hunt and Brent D. Ruben suggested that the factors affecting the information exposure of people are (47):

(1) Need One of the most important in selection process of human is need both physical and mental needs. Both high and low level of needs determine our choice. We choose to response our needs in order to obtain the desired information, to show our tastes, for satisfaction, for example.

(2) Attitude and value Attitude is preference and predisposition on a particular things. While value is the basic principle we held. It is a feeling of what we should do or should not do in having relationship with the environment and people. Attitude and value have significant effects on the selection of mass media, information, interpretation and recognition.

(3) Goal Everyone has and can determine the goals in life both in occupation and socialization. The goals of activities we determined influence

the selection of mass media, information exposure, interpretation and recognition to meet their goals.

(4) Capability Our capabilities in a particular thing as well as languages abilities have effects on the selection of information exposure, interpretation and remembering the information content.

(5) Utility In general we pay attention and make the efforts to understand and remember information we can use.

(6) Communication style Being the receiver partly depends on our communication style which is like or do not like some media. Therefore, some people prefer listening to radio, watching TV, reading newspaper, for example.

(7) Context In this study, context refers to place, person and time in the communication situation. These affect the selection of receiver. The existence of other people has effect on the selection of media and information, interpretation and remembering information. How we are looked, how we think other people looked at us, what we believe other people expected from us and how we think other people thought what the situation we are in, are all influence our selection.

(8) Experience and habit As receiver, each person develops the information exposure habit as the result of our experience in information exposure. We develop the preference on a particular media. Therefore, we choose to use a particular media, interest in a particular topic, interpret something and remember some part of information.

2) Concepts of advertising

2.1 Definition of advertising

Advertising is to present products and services through various media such as television, radio, print, internet or billboard with the aims to make the recipients aware of the product's brand and buy their product later. There are the definitions of advertising as follows:

Sakon Phu-ngamdee (48) defined advertising as to do activities in order to induce the idea, belief and attitude in consumers that consistent with the information presented on advertising media. The success of persuasion later leads to the buying behavior of consumers. However, an important thing of persuasion is to create image of what being advertised.

Ong-ard Patawanich (49) defined advertising as a form of expense in communication without people related to the organization, product, service or idea of sponsor. From this definition it can be seen that advertising is a form of communication without people (it is a communication using media such as television, radio, newspaper, etc.). There are expenses in advertising, providing information and persuasion about product and idea.

Dyer (50) suggested that the commercial advertising is the most advertising that can be found in our society with the higher expenses for space and professional skills than other advertising in order to send information to recipients. He also suggested that the prestige, business and financial advertisements are from the large corporations or published in various media in order to show confidence or image of those corporations. People can frequently see these advertisements on TV media.

2.2 Types of advertising

There are many types of advertising media, Ong-ard Patawanich (49) has classified the advertising base on these criteria.

(1) Classification by the recipients which consist of customer focused advertising and business unit focused advertising such as industrial product advertising, intermediary focused advertising, professional group focused advertising and agricultural product advertising.

(2) Classification by geographical territories which consist of international focused advertising, national advertising, advertising in a particular region, and local advertising.

(3) Classification by media type which consist of advertising via electronic media (TV and radio), print (newspaper and magazine), field advertising (billboard, mobile advertising), direct mail, phone book, product display and other media such as theater, video tape, for example.

(4) Classification by function or purpose which consist of product advertising, commercial advertising compared to non-commercial advertising, direct response advertising compared to indirect response advertising, primary demand advertising compared to selective demand advertising, cooperative advertising and follow up advertising

2.3 Functions of advertising

Ong-ard Patawanich (49) suggested that the functions of advertising are as follows:

(1) Marketing function Advertising is one of marketing mix which includes product, price, distribution and promotion. All these four tools are used together to meet the needs and satisfy customers which can eventually increasing sales and profits.

(2) Communication function Advertising is considered a contact with particular group in order to inform the information, to induce demand or to create positive attitude in target group toward organization or product.

(3) Knowledge function Advertising is considered as educating the use of product and benefits of product. This make the better living standard and society.

(4) Economic function People recognize product through advertising which leads to product purchasing. This means advertising creates sales and profits, business operation go well, expansion of investment and results in job creation as a result of better overall economy.

(5) Social function Advertising is an important factor that help in improving the living standard which can be people in particular country or worldwide. Publicity has the effect on social and cultural development. Advertising is not just for selling product. There are many advertisements that show the business responsibilities toward society and mankind. The objectives of advertising are to create understanding, to provide information about products and services and to persuade customers to purchase their products and services.

2.4 Source of Information

Buyers can find the information from various sources such as television, ration, print or personal sources. Each media has different strengths and weaknesses as follow (51):

Television can broadcast information including pictures, sounds, movement of objects. However, the advertising information need to be frequently broadcast so the advertising costs are high to let the audience see and recognize.

Radio The advantages of radio are due to radio is a mobile media that people can carry around, the listeners can listen to information more often than other media, low production costs. However, radio cannot broadcast pictures, only the sound is broadcast so the listeners need to imagine and sometimes it cannot always draw the attention of listeners.

Newspaper is a media that readers can control their readings. The readers can read fast, slow, use detailed reading, or reading for main idea as they want. In addition, newspaper can present information and advertising in colors or can choose the size of advertisement. However, the limitations are there are fewer readers so it is not cost effective, high production cost and the competition with other media such as satellite and cable TV. This makes newspaper is not a mainstream media anymore.

Magazine The highlight of magazine is the better printing quality than other media which makes the advertisement is more attractive and appealing to readers. There are many different types of magazine for advertising according to product types and readers can choose and read according to their interests such as home decor and fashion magazines, for example. But nowadays it appears that the number of reader decreases while the advertising rate increases which reduces the advertising value as other media.

2.5 Cigarette advertising at present (52).

(1) In-store advertising.

- 86.5% of 3 store types still have cigarette ads (poster/cigarette pack arrangement, cigarette brand logo, arranging cigarette cartons as a clear line or other advertising). While 67.3% of booths/temporary buildings still have cigarette ads which is a very high level.

- Such advertisements are at eye level of children in 48.4% of all three store type and 59.6% of booths/temporary building. Cigarette companies still aims to find new children smoker.

(2) Out-of-store advertising

- It is found that 56.7% of booths/temporary buildings violate the law because there are still cigarette advertising ads (poster/cigarette pack

arrangement, cigarette brand logo, arranging cigarette cartons as a clear line or other advertising). 51.0% of these advertising are visible from the streets.

- 45.4% of all three store types violate the law in the same way and 32.9% of these advertising are visible from the streets.

(3) Selling a single stick of cigarette

Selling a single stick of cigarette is commonly found, especially in 86.5% of booths/temporary building and 50.5% of all three store types.

(4) For all three store types it is found that

- 52.4% have the cigarette showcases with logo, brand or color that that symbolizes cigarette brands. 30.8% of booths/temporary buildings have these cigarette showcases. Most of these venders indicate that the cigarette showcases is provided by dealers.

- It is also found that there is still cigarette smuggling, no revenue stamps or no health warning message on the cigarette packs sold in shops and booths/temporary buildings, especially Mild Seven brand, followed by Marlboro while Thai cigarette (Krongthip) have less problems.

(5) Advertising on the internet The survey of online cigarette selling in Thailand by Nara Thiamkhli and others have surveyed the cigarette selling on 4 websites types as follows (53):

- E-commerce refers to online shopping or direct sale websites or trading websites or trading system for goods and services on internet network such as Tarad.com, Thaionlinemarket.com, for example. There are 344 E-commerce sites which can be classified into 284 ready-made websites and 60 non-ready-made websites

- Web Portal refers to website that brings links and articles together from various sources and these information are categorized so the users can find them easier. Web Portal provides users the pathways to other related websites such as Yahoo.com, Sanook.com, for example. There are 19 Web Portals in this survey.

- Social Network refers to websites for sharing information and social interaction on the internet or websites that connect people together such as Facebook.com, Twitter.com, for example. There are 11 social networks in this survey.

- Other refers to websites that do not fall into the first three categories and there are selling and advertising cigarette or tobacco products on these websites. There are 123 other websites in this survey.

The survey of cigarette types shows that the most commonly found types is normal cigarette followed by flavored cigarette, roll-your-own cigarette and smokeless cigarette. This shows that nowadays the cigarette companies try to design new types of cigarettes by flavoring such as menthol, mint, chocolate, orange flavors, for example in order to attract current and new smokers and also claims to be an innovation to reduce and quit smoking. This makes the consumers understand that these cigarettes are harmless.

The analysis of activities on website in addition to selling cigarette shows that most of them are information giving activities and forum activities for questions & answers or sharing the experience in using product (web-board). This shows that the consumers can easily access to these websites. Some websites have the demonstrations of products, especially e-cigarette which has many views. There are also websites for discussing about using cigarettes and sharing the results from using such cigarettes which make the consumers interest and want to try those products.

The analysis of promotional characteristics of cigarette products shows that most promotions show cigarette pictures, followed by lower the price and free delivery. This indicates that cigarette companies design the cigarette pack to attract consumer. Especially women, it is found there are cigarette packs that beautifully designed for women both sizes and colors as well as showing the image that women smoker look good and stylish. There is a discount when buying a specified number of goods which makes consumer buys more cigarettes. Free delivery is also offered giving consumers the convenience and no risk of lawbreaking because every consumer can buy cigarettes online without checking ID card or legal age.

For warning messages for young people, it is found that almost all websites have no warning message for young people which accounting for 97.8%. The classification by the type of website shows that all type of website also has no warning message for young people. This indicates that selling cigarette on websites is considered as illegal work because these cigarettes have no warning message on the

package, low price and untaxed. Therefore, it had the negative impact on both public health and finance.

3) Concepts of the campaign

3.1 Definition of campaign according to the meeting minutes of the National Committee for Control of Tobacco Use on 19th September 2005 (52).

Campaign refers to activities for publicize the concepts the campaigner wanted to target group or to change the behavior of target group. Goal, objective, plan, duration, budget are need to be clearly defined and the evaluation of campaign achievement should be included.

3.2 Components of the campaign (54).

(1) Goal refers to the condition that the campaigner wants to happen after conducting the campaign or after the campaign is complete which can be divided into 2 levels as:

- Individual goal consists of 4 aspects: Stimulating problem awareness, adjusting attitude in the proper way (such as we should not hate HIV-infected people), changing behavior in a desirable direction (such as reduce and quit smoking) and creating consciousness or pride to target group (such as arranging the appropriate activities for at-risk youth)

- Structural goal In addition to individual goal, the campaign may aims at pushing forward the social structure such as The campaign to raise awareness of the community or push forward a policy that prohibit smoking in public place, for example.

(2) Target group In any subject and any level of communication, we need to know our target group in order to achieve communication objectives. Target group can be classified into 2 groups as:

- Target group that the campaigner aims a change refers to target group that directly related to the campaign topic and the campaigner want to change their behaviors in the desirable direction such as smoker, people who live in slum, for example. This target group can be divided into subgroups including age, target area, occupation or target group that needed to be clearly defined such as people at risk of diabetes, for example.

- Target group that the campaigner aims to be alliance can be divided into 3 subgroups as:

A. Used-to-be-at-risk group and willing to be alliance such as smokers who decide to quit smoking and act as volunteers in the campaign.

B. At-risk group and willing to be alliance such as student who is voluntary to be the leader of peer warning group to avoid drug abuse, for example.

C. Not-at-risk group and ready to be alliance such as not-at-risk people but have close relationship with at-risk group and ready to communicate with these groups such as kindergarten children convince their father to quit smoking.

(3) Information/topic in campaign is the important component of campaign. The organization of campaign must have an update and clear information about topics in campaign. The information can be divided into 3 groups as follows:

A. Basic information such as statistics or figures that reflect the circumstances of campaign topics both national and international information and list of people who can provide additional information, for example.

B. Information on practices of target group, desirable behavior and life skills that at-risk group should know and follow, for example.

C. Insight such as findings on the effects of risk behaviors and do not comply with health advice, for example.

(4) Communication channels In communication process in order to actually reach the target group we cannot rely on mainstream mass media such as television, radio, newspaper and magazine. However, the combination of mass media and other communication channels such as personal media, specialized media, activity media, setting the stage, for example. We should always be aware that disseminating information through mass media is good just for raising awareness and consciousness to target group. It is only a part of creating broad awareness however it cannot lead to significant behavioral changes. In addition, raising broad awareness depends on media type, presentation format, people who responsible for communication, timing and public point of view at that time.

3.3. Anti-smoking campaign of the Thai Health Promotion Foundation (ThaiHealth) (55)

The main goal of using anti-smoking advertising campaign among women of ThaiHealth is the result of anti-smoking campaign among women of the World Health Organization (4). ThaiHealth recognizes the importance of this problem and has introduced WHO concept as a model to create campaign for reducing smoking among women and also presents the effects and dangers of smoking. Therefore, ThaiHealth proposes the campaign for women by using love as a medium because it is believed that love can be used as a medium to reduce smoking among women. In campaign media her lovers will ask her to quit smoking. This campaign is called “I do love you and I don’t want you to smoke” and is presented via 5 types of mass media including:

- (1) Advertising movies presents by men asking their lovers to quit smoking because smoking causes early ageing of the facial skin.
- (2) Billboards to warn women not to smoke because we don’t want her to look older.
- (3) Advertising on bus sides to show the dangers and harms of smoking.
- (4) Newspaper (the same message as on billboard).
- (5) Internet We can upload the picture of those we want to quit smoking and add the message and graphic and send to that people as e-card or via Facebook. ThaiHealth has published anti-smoking media campaign in various format since 2005 – 2010. Each year the campaign is presented in the different presentation style. The presentation of each year depends on 3 factors including current situation, network associate and the target group and goal of WHO. In 6 years ThaiHealth has prepared the following campaign media:

In 2005, the main idea of the campaign is based on WHO. Everyone is ready to help smokers quit smoking. Most smokers have intended to quit smoking or even tried to. However, some smokers still cannot quit smoking. There is also anti-smoking media campaign for women with the campaign “Women Do Not Smoke”. The content of this campaign tells about dangers of smoking that smoking causes early ageing of the facial skin or called “Smoker Face”. There are more wrinkles and crow’s feet than it should be. Because when smoke the smokers will

squint when the smoke float into their faces as the slogan “Smoking makes women look older than they are”

In 2006, the smoke free zone law is enforced which makes many public places become smoke free zones such as office, bus terminal, official place, for example. Restriction of smoking area makes the smokers have less opportunity to smoke which reduces smoking. It also protects secondhand smokers’ health. Secondhand smokers are people who do not smoke but expose to cigarette smoke from smokers and make them expose to toxic substances not less than the smokers. The media campaign in 2006 uses the concept “Stop destroy people's life, Stop smoking in public”

In 2007, the anti-smoking campaign of ThaiHealth is a result of the smoking in public place law that is the prevention of secondhand smoke at home is necessary. Therefore, ThaiHealth publishes the media on “Smoke Free Home” because home is a place where the law cannot protect and control. The communication of campaign media thus has a role in creating awareness as well as aims at creating value in quitting smoking at home.

In 2008, value of not smoking in public places is continued as well as the law to increase smoke free zones in each year in order to limit places and opportunities for smoking and also protect non-smokers’ health. In this year the campaign aims at creating social pressure to make smokers quit smoking in public places because it is unacceptable to harm others with smoke in public places. This campaign uses the concept of not hurting others with smoke in public places.

In 2009, the anti-smoking media campaign turns to present the dangers of smoking. In addition, the campaign this year also encourages smokers that they can quit smoking by using the support of family members and intimates to motivate and encourage those who are quitting smoking. This campaign also compares the advantages and disadvantages between smoking and quitting smoking.

In 2010, ThaiHealth turns to anti-smoking campaign among women because smoking rate among women increases. During 2004 – present, the smoking rate among men decreases from 70% to 45% while smoking rate among women increases steadily from 3%. The World Health Organization has recognized the importance of the anti-smoking campaign among women. The campaign this year

focuses on love which presents a man asking his lover to quit smoking. This campaign is called “I do love you and I don’t want you to smoke”

2.4 Psychological effects of smoking

Factors associated with smoking is psychological factors include factors of motivation, attitude and perception.

2.4.1 Motivation theory

1) Definition of motives

Anita E. Woolfolk (56) defined motive as the internal condition of a person that is stimulated to continuously behave in a particular direction.

Loundon, Devid and Bitta (57) defined motive as an internal condition which is a energy that makes the body moves in a direction toward selected goal. The selected goal is usually in an environmental condition.

From these definitions it can be seen that motive is associated with two key components which are:

- (1) A mechanism stimulating body to act.
- (2) A force providing energy for body to act in a particular direction.

Motivation is a condition of being stimulated. The definitions of motivation are as follows:

Schiffman and Kanuk (58) defined motivation as a driving force in a person that stimulates that person to act.

Michael Domjan (59) defined motivation as the condition in increasing behavior, action or activity of a person to achieve the desired goals

From the descriptions and definitions, it can be concluded that motivation is a process that a person is stimulated by stimuli with the intents to act and struggle in order to achieve certain objectives. It can be seen that behavior resulting from motivation is not just a normal response to stimuli but it is the concentrated behavior with a certain direction, clear goal and this behavior is also a result of driving force or impulse called motive.

2) Motivation process There are 3 components of motivation process including (60):

2.1 Needs are the condition of lacking of something which may be physical or psychological.

2.2 Drives: When people lack something in 1 as mentioned above, it causes stressful condition. This stressful condition becomes the driving force or action-orientation toward the goal to reduce such condition.

2.3 Incentive or goal is a stimuli or lure that makes people behave as expected or desired. There are multiple levels of incentive from incentive in 4 basic needs to emotional needs as shown in figure 2.3.

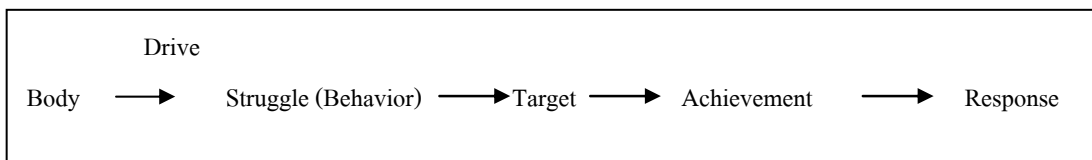


Figure 2.3 The motivation image

Source: Namngern Boonprasert

3) The characteristics of motives (61)

3.1 Motive contributes to energy to express behavior.

3.2 Motive is the stimulus that stimulate body movement.

3.3 Motive is needed to be reinforce (such as when people have motive it has to get a response which may be a reward or object)

4) Power of influence of motive (61)

4.1 Results in physical changes.

4.2 Results in emotional changes.

4.3 Induces habit.

4.4 Helps in creating feelings.

4.5 Causes expectation, craving for something and improve environment.

5) Types of motivation Psychologists have divided motivation into two types as follow (62):

5.1 Intrinsic motivation refers to the condition that a person wants to act, learn or seek something by himself/herself without other people being involved such as students interest in learning with their high mind without being forced by parents or because of any temptation. This type of motivation includes:

(1) Needs: Because everybody has internal demand which contributes to a driving force. This driving force results in behaviors in order to achieve the goals and satisfaction.

(2) Attitude : refers to the positive feeling of people towards something which encourages people to behave properly such as students love teachers and satisfy in teaching methods which make students pay more attention in learning.

(3) Special interest: Interesting in a particular matter is considered as motive to pay more attention in such matter than usual.

5.2 Extrinsic motivation refers to the condition that a person exposes to an external impulse to see the destination and leads to

(1) Goal or expectation of person: Having goal in any action encourages people to have good and proper behaviors such as trainee aims to be on placement so he try his best on working.

(2) Career: advancement The opportunity to know the career advancement path is a motive that makes workers pay more attention and improve their behaviors.

(3) Personality : An impression of personality can contribute to motive of behavior such as teachers must have the reliable academic personality, administrators and managers must have the personality of great leadership, for example.

(4) Other temptations: There are many temptations that causing the impulse for behavior such as rewards which encourages people to act or punishment which encourage people not to do the wrong thing. In addition, admiration, blaming, contest, competition or testing are all considered as the causes of behaviors.

2.4.2 Attitude theory

Attitude is the tendency in an evaluation of object or any aspect as like or dislike. The definitions of attitude are as follow:

Childs (63) defined attitude as a tendency of people towards stimulus or certain matter including effects of feeling, bias, fear, thought and other feelings toward various matters. Attitude is associated with beliefs or predisposition.

Surapong Sotanasathien (64) defined attitude as thoughts and feelings toward other people, objects or environment. Attitude is rooted in the belief that may indicate the behavior in future. Thus, attitude is a readiness to respond to stimuli and a dimension of evaluation as like or dislike a certain matter. It can be considered as an interpersonal community from the effects of receiving information which further affects the behaviors. Attitude is a boundary between knowledge and behavior.

Sucha Chan-Ame (65) defined attitude as feelings of a person toward persons people, objects or situations. These feelings can be divided as satisfy or dissatisfy, agree or disagree towards such persons, objects or situations.

Chom Poomipark (66) said that attitude refers to the way that a person feel toward something. It is the motivation or emotional feeling. Actions of people are often determined by attitude. Attitude has many different directions and dimensions such as support or oppose and high medium or low level.

Norman L. Munn (67) defined attitude as feeling and opinions of a person towards any object, person, situation, institution and offer as accept or reject which make that person always responds with the same behavior.

From the above definitions, it can be concluded that attitude is feeling and opinion of a person towards people, objects and situation whether it be agree or disagree which may affects the behaviors of that person.

1) Components of attitude

There are 3 important components of attitude as follow (68):

1.1 Cognitive component is the component related to knowledge or belief of a person towards something. If people have knowledge and believe what is good they often have the positive attitude towards it. If people have knowledge and believe what is bad they often have the negative attitude towards it.

1.2 Feeling component is the feeling of a person with emotion involved. If a person feels love or like in any person or thing, this feeling may induce the positive attitude towards such person or thing. However, if a person feels hate or angry toward any person or thing it may induce the negative attitude toward such person or thing.

1.3 Action component involves behavior of person or tendency to respond with a certain behavior. The behaviors of people derive from their knowledge and feeling toward objects, events or person.

Sources of attitude

Attitude is not an indigenous thing but it rises from learning and experiences. The important sources of attitude are (38):

(1) Specific experience, when people have the specific experience on something whether it be positive or negative way they will have the attitude in the same direction of previous experience such as Mr. A has talked to Mr. B friendly so Mr. A feel like or has the positive attitude toward Mr. B, for example.

(2) Communication from others , being contacted from others will contribute to an attitude from recognizing information from others such as children who have been taught by adults what's good and what's bad, they will have the attitude toward actions as have been taught.

(3) Models , imitation can induce attitude. For example, children obey their parents and when their parents show that they don't like something they will don't like that thing too.

(4) Institutional factors, many attitudes are caused by institutional factors such as school, temple and agencies. These institutions are the sources of and encourage the certain attitudes in people.

Attitude formation of individual is different depending on the different experiences and environments. There are 3 types of attitudes as follows (69):

(1) Positive attitude , positive attitude induces people to react in a positive way toward other people, events or objects and contributes to the cooperation in relevant activities. Positive attitude is considered as good basis for accepting new ideas or information.

(2) Negative attitude ,negative attitude is a poor attitude toward other people, events or objects. It often occurs in conjunction with dissatisfaction and leads to jumping to conclusion despite not yet completely understand such matter

(3) Passive attitude, sometimes people may have no comments to other people, events or objects at all and becomes keeping silent toward such matter.

2. Processes contributing to changes in attitude

Typically, attitude is unlikely to change but it can be changed. Kelman (33) has described 3 processes that contribute to changes in attitude of individual as follows:

2.1 Compliance, this process occurs when person accept what influence them and aims to satisfy such influential person or group of people. This type of change is not permanent and depends on the expected benefits or awards. Compliance is usually in terms of adaptation to the environment of the individual in society. It can be said that the level of changes in attitude resulting from compliance depends on amount or intensity of award and punishment.

2.2 Identification is a phenomenon that occurs when people accept the stimuli or incentives and is a result of the need to build a good or desirable relationship between themselves and person or group of people. This relationship may be in form of taking the role of others or group of people or exchanging each other roles. The level of changes in attitude of a person depends on stimuli for identification. In other words, this identification will drive more or less change in attitude depending on “attractiveness” and power of sources of attitude.

2.3 Internalization, this process occurs when people accept what dominate them because it meets their requirements and consistent with their values. The behavior changes by this process is consistent with the existing values.

Such change is directly related. If thoughts, feelings and behaviors are affected at any level they all have effects on attitude changes. In addition, the components of communication process such as characteristics of the sender, information, communication channels and receiver can affect attitude change (70).

Phillip Zimbardo (71) said that attitude change depends on knowledge. With knowledge and understanding, attitude can be changed and when it is changed it

results in behavior change. All these 3 components have to be connected. Therefore, in order to make people accept or refuse to do something, we have to change their attitude first by providing knowledge about the topic we want to change.

From these concepts, it can be observed that attitude is closely associated with behavior. If attitude is changed it will result in behavior changes. On the other hand, behavior has effects on attitude because attitude involves thoughts, feelings and needs to do or to not do something.

However, although several scholars have the same opinion that attitude and behavior are associated with each other. But in some cases, there may be other variables involved with behavior such as social norms, habit of person and expected results from that behavior (68).

In addition, there are studies that support that attitude and behavior of a person are not always in the same way. It means what people claimed to be his/her attitude may be not his/her actual behavior. This is consistent with Lapiere (72) who studied the relationship between attitude and behavior in 1934. During that time Americans still had the negative attitude toward Asian people, especially Chinese people. Thus, he performed the experiments by traveling with 2 Chinese people to 250 different cities and found that there were only 2 cities that refused Chinese people. After the trip ended Lapiere sent the questionnaires to all hotels they stayed in order to inquire about the attitude toward Chinese people whether they were pleased to welcome Chinese people or not. The results showed that 90% of respondents were not pleased to welcome Chinese people at their hotels as well as restaurants.

This indicates that although human behavior tends to corresponds to attitude. However, it is not always the case because behavior may be not consistent with attitude and may depend on other factors.

2.4.3 Perception Theory

Perception theory is a basic theory of learning. There are some definitions of perception as follows:

Chamnian Chuangchot (73) defined perception as meaningful information exposure. Perception is a translation or interpretation of information exposure into particular thing meaningful or understood. To translate or interpret it requires previous experiences, prior knowledge or perspicuity. Without prior knowledge we will not percept such stimuli but just expose to the stimuli.

Nuansiri Paurohit (74) defined perception as an interpretation process of stimuli for our senses. The interpretation depends on previous experiences and current mental status. It creates the meaning of outside world for our own.

Perception determines the communication behavior, attitude and expectation of the sender. Perception is a mental process in response to stimuli. It is the selection process of information exposure, combining information together and interpretation of information based on our understanding and feeling. We percept and interpret what we experience by using the meaning of existing experiences. If what we see is something new that we've never experienced before we make it meaningful by selecting, adding, distorting or linking to our experiences. As mentioned before, experience influences perception and meaning of a person. However, because each person is different the perception on what we see is also different. And because people have different perception there may be a failure in communication.

Perception is a process that often occurs based on the experiences which we cannot pay attention to all things around us. The perception process has 2 steps as shown in figure 2.4.

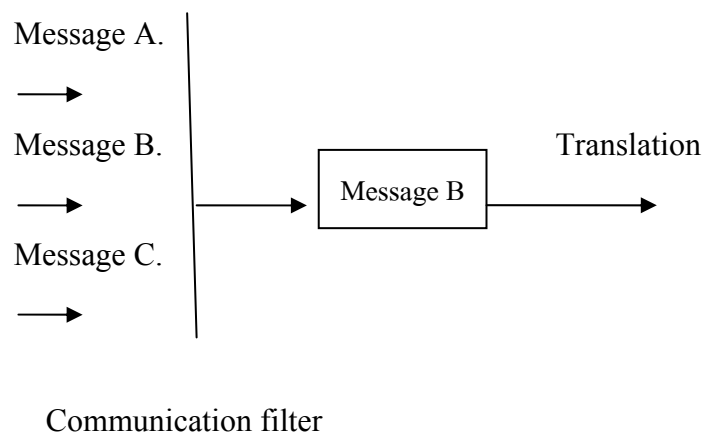


Figure 2.4 The recognition process.

Source: Patcharee Choeyjunya, Mettha Wiwatthanukul and Thiranunt Anawatsiriwong. 1998: 13

Figure 2.4 shows that perception process starts from information exposure through the communication filters whether it be feeling, thought, attitude, value, belief and experience. This is in order to interpret it into various aspects based on the understanding of the receiver. In general, perception process takes place unconsciously or inadvertently and often based on experience and social accumulation. We cannot pay attention to all things around us. We select to percept some parts of information. Each person has different interests and perception. Therefore, when expose to the same information two receivers may have different interests and perception. The differences in perception are the result of effects of some filters (75).

(1) Motives We often see what we want to see and hear what we want to hear in order to meet our own needs.

(2) Past experience We all grew up in the different environments or were raised with the different ways and socialize with different people. Therefore, we have different perception according to the previous experiences.

(3) Frame of reference which is caused by the upbringing from family and social accumulation. Therefore, people of different religions have different beliefs and attitudes.

(4) Environment such as those who live in different environment, temperature, atmosphere and place will interpret information differently.

(5) Mental and emotional state such as anger and fear. People who have different mental and emotional state will have different point of view and perception.

Perception is an important component of health belief model that used to explain and predict health behavior. There are 3 important components including (76):

(1) Perceived susceptibility

Perceived susceptibility refers to belief of person that has the direct effects on compliance with health advices on normal health and illness. This belief is different from person to person. Some people have medium-level belief and some people have high-level belief. Therefore, these people avoid illness by using healthy lifestyle at the different level.

(2) Perceived seriousness or severity

Perceived seriousness or severity refers to feelings of people toward the effects of the disease severity such as disability, death, difficulty and treatment time for complications or effect on social status.

Perceived susceptibility together with perceived severity make people aware of the threat (perceived threat) of disease. People want and tend to avoid this perceived threat.

(3) Perceived benefits and costs

Perceived benefits and costs refers to when people seeking the ways to cure or prevent disease. People have to believed that such practices are good, useful and appropriate to cure or prevent disease. Therefore, the decision to follow the advice depends on the comparison of advantages and disadvantages of such behavior and people will choose to the practices that have more advantages than disadvantages. In addition, understanding in the advices including the confidence in staffs influence the advice compliance. Because healthcare cost is not just a waste of money but it includes pain, discomfort, risk and complications. It can be seen the patients' beliefs about the benefits of medical treatments determine the disease prevention behaviors and medical advice compliance (77).

From all 3 components the researchers have applied the perceived susceptibility to study the perception of smoking risk among junior high school students under the Bangkok Metropolitan Administration.

It can be concluded that perception refers to the expression of person through physical behaviors such as seeing, hearing, smelling, tasting or touching with the five senses or through emotional behaviors such as thought, experience and attitude or stimuli and responses. When people expose to information from various media they will have the particular physical behaviors or feelings. Exposing to cigarette ads from various forms of media is considered as a human perception process. When people see or hear the ads they know the product, content format and the purposes of advertising.

2.5 Related Research

2.5.1 The dependent variable in the study of factors associated with smoking behavior of high school students, belong to Bangkok Metropolis. This dependent variable of the study is smoking behavior.

2.5.2 Independent variable

1) Personal factor (Predisposing factor)

Gender The study of relationships between gender and drug abuse showed that gender is associated with drug abuse. As the study by Chutima Pattarat which studied the relationships between factors and attitudes toward drug abuse of grade 9 students and found that gender is associated with drug abuse. Male students tend to have higher risk of drug abuse than female students at significant level of 0.05 (78). Male students also have higher drug addiction behavior than female students (79). The study by Thavorn Suksamran also found that girls have higher drug preventive behaviors than boys which results in the significant difference in immune to drug addiction between girls and boys at the significant level of 0.05 (80). Women have higher immune in drug abuse prevention than men. Therefore, men have higher amphetamine addiction behavior (81). Male adolescents tend to be persuaded to use drugs more than female adolescents (82) because male students tend to have more

knowledge about drugs than female students (79). Moreover, the study by Preecha Vihokto and colleagues studied drug abuse among grade 6 and 6 students and found that male and female students have ever used cigarette, alcohol, volatile substances and amphetamine (76). Male students have higher drug abuse rate such as amphetamine (82.0%), cigarette (72.4%), alcohol (63.7%) and volatile substances (63.5%) than female students (76). Moreover, gender can predict 27.4% of alcohol drinking behavior at the significant level of 0.01. The probability of alcohol drinking in male students is 2.98 higher than in female students (83).

In addition, the similar results are also found in the studies in other countries. For example, the study by Trutz Hanse et al. studied the risk and protection factors for substance use among young people and found that substance abuse behaviors are different in each gender. Women use more cigarette than men and men like drinking alcohol and marijuana than women (84). However, the study in 1985 showed that the substance abuse rate in female adolescents is higher than male adolescents, especially alcohol, cigarette, marijuana and volatile substances. Substance abuse among female adolescents start from peer group (85) and the substance abuse rate among women tends to increase (86).

Gender and smoking In addition to the studied that found the relationships between gender and substance abuse it s also found that cigarette has similar results as other substances. There are many studied that found that gender has statistically significant relationship with smoking and starting smoking. The study by Surattana Pornvivattanachai found that the personal factor that most influence smoking behavior is gender. Male adolescents have the opportunities to smoke 9.6 times higher than female adolescents (87). This is consistent with the study by Ladawan Kantathasiri which found that difference in gender has most effect on smoking behavior at the significant level of 0.05 (11). The smoking rate in men is higher than women (11).

The similar results are found in the studies in other countries which found that gender is associated with smoking behavior (88). Men and women have different smoking behaviors (89). Men smoke more than women and women have better health behavior than men. Therefore, it can be predicted that men have smoking behavior than women and the smoking rate among men tends to increase and higher than among

women (90). However, the study in 1980 found that the number of female smokers is higher than male smokers such as England, New Zealand and USA. The number of female smokers in these countries is higher than in China, Japan and Sri Lanka. The increased smoking behavior among Western women may be due to the advertising, foreign films or needs for weight control (91).

Education level The study by Chonlada Samutpong on “The Influence of Communication upon Drugs Prevention among Vocational Students in Bangkok Metropolis” found that the vocational and higher vocational students which are at same age (15 – 22 years old) have different attitudes toward substance abuse prevention. This is because these students have the differences in education level, experience and knowledge on substances which may be due to the difference in knowledge in classroom, courses, information perception as well as duration and result in different attitudes toward substance abuse prevention including behaviors (92). The study of factors affecting smoking behavior among teenagers found the similar results as other substances that education level is associated with smoking behavior. Teenagers in primary schools have highest smoking rate (40.3%), followed by teenagers in junior high schools (13.1%) (8). The study by Ladawan Kantathasiri which studied the smoking behavior by education level of the respondents found that the highest smoking behavior is found in grade 3 student (17 students smoke which representing 68.0% of grade 3 students), followed by grade 4 students (15 students representing 46.9% of grade 4 students). The hypothesis testing about the relationship between smoking behavior and education level showed that the difference in class level influence smoking behavior at the significant level of 0.05. Students in grade 3 and higher have smoking rate than grade 1 and grade 2 students which indicates that the higher education level the higher risk of smoking (11).

According to study “Message in Alcohol Advertising Target to Youth” by Sandra C. Jone which the sample groups are grade 11 students, aged 15 – 19 years and undergraduate students, aged 19 – 21 years found that undergraduate students are able to perceive the messages in alcohol advertising more than grade 11 students. This is because undergraduate students have better experience, interpretation and understanding in ads content which indicates that education level has effect on the perception of substance information through media and may also has effect on

substance abuse behavior (93). The study of factors associating with smoking behavior among junior high school students in Wisconsin also found that students of higher education level have higher smoking behavior than students of lower education level which is consistent with the studies in Thailand (94).

Age and smoking It is found that for teen smoker the older they are, the higher smoking rate (8,10). One year of age increased the possibility of smoking is 1.5 times higher (8). The survey on smoking (10) it is found that there are 30 smokers in ≥ 20 years old group representing 54.5% of total >20 years old sample. It is higher when compared to 13 smokers in <20 years old group which representing 28.9% of total ≤ 20 years old sample. The hypothesis testing on the relationship between smoking and age shows that the difference in age has effect on smoking behavior at the significant level of 0.05. The smoking rate of >20 years old group is higher than <20 years old group. In addition the study of relationship between age at start smoking and continuous smoking (95) found the relationship between age at start smoking and continuous smoking and the relationship between age at start smoking and quitting smoking. Those who start smoking when they are younger than 20 years old have highest continuous smoking rate of 90.91%, followed by 30 – 39 years old and 20 – 29 years old which are 75% and 73.21%, respectively. While the highest discontinuous smoking rate is found in 20 – 29 years old group of 26.79%, followed by 30 – 30 years old and <20 years old which are 25% and 9.09%, respectively.

The studies in other countries also found the relationships between age and smoking. People with different age have different smoking behavior (89) and the smoking rate increase as people older (96).

Living allowance The relationships between living allowance and substance abuse behavior are found. The study by Niparat Chamsomboon found that students with low living allowances are less likely to have knowledge about substance than students with high living allowances (79). However, the study by Niramorn Pleancharoon showed that almost 1/3 of students who use substances have daily living allowance of 21-30 Baht and about 3/4 of students who use substances have adequate daily living allowance but have no saving (97). It suggests that most students who use substances have low living allowance (97). This contradicts with the study by Pavinee Yuprasert which found that daily living allowance is positively correlated with

substance abuse among students. Higher living allowance, more money students spend with substances (98). The study of smoking behavior among undergraduate students in Chiang Mai University (68) showed that the respondents with >5,000 Baht monthly income have highest smoking behavior (20 people representing 40.0% of sample with >5,000 Baht monthly income), followed by respondents with 3,001 – 5,000 Baht and ≤ 3,000 Baht monthly income (15 and 8 people representing 40.5% and 61.5% of sample group, respectively). This indicates that income is a factor affecting smoking among youth. The better financial status, the higher try-smoking rate (99).

The studies in other countries found that income is associated with smoking behavior. Higher income is associated with higher smoking rate (89). Smoking rate increases as income increases (100). This is consistent with the study by Suzanne L. Tyas and Linda L Pederson which found that teens with higher living allowance have higher smoking rate because money is needed to buy cigarettes (91).

Grade report The relationships between GPA and substance abuse among teenagers are found. Prakit Potiast studied the factors affecting alcohol drinking behavior among adolescents in Ayutthaya province and found that GPA has a statistical significant relationship with alcohol drinking behavior among teenagers (101). This is consistent with the study by Nuanchan Tasanachaikul who studied a spread of drugs among children and youths who are in the central and regional Child Observation and Protection Centre in total of 800 people and found that the GPA of children and youths are correlated with frequency of substance abuse. The better GPA the lower frequency of substance abuse (102). At the same time it is also found that an GPA is a factor influencing substance prevention behavior (103). Students with different GPA have different level of immune to substance addiction at the significant level of 0.05 (103). It is also found that GPA can predict 23.03% of substance abuse behavior. The study of factors affecting substance prevention behavior among vocational students in Ratchaburi province also found that vocational students with different GPA have different substance prevention behavior. Students with 3.01 – 4.00 GPA have higher substance prevention behavior than students with <2.00 PGA and 2.01 – 3.00 GPA. Because students with higher GPA have better knowledge and understanding in effects and dangers of substances than students with lower GPA . Thus, in the situations at risk of substance abuse they have more restraint and have

more substance prevention behavior. It can be seen that the higher GPA the lower risk of substance abuse. This study is consistent with the studies on cigarettes (104). The study by Chuchai Supawongse and colleagues found that young men who are the regular smoke age 15 and 22 years old have poor GPA (99). The study by Atcharawan Soithong found that GPA is a factor that is correlated with smoking behavior among teenagers (105). The smoking probability increase 3.11 times in students with low GPA (106). Moreover, the study by Urai Sumaritam also found that GPA is the most important factor influencing smoking behavior among students. Most students who smoke have low GPA (107). This is accordance with the study by Pornnapa Homsin which found that the GPA lower than 3.00 is the predictor of starting smoking of Thai young men at try-smoking stage (OR = 1.49) and occasional smoking stage (OR = 1.59) (108). Moreover, the study by Uthumporn Na Nakhon shows that academic achievement is correlated with trying smoking at the significant level of 0.05. Almost 30% of students with <3.5 GPA have tried smoking while only 7.9% of students with ≥ 3.5 GPA have tried smoking. It can be seen that trying smoking rate of students with <3.5 GPA is about 4 times higher than students with higher GPA (109). However, only the study by Anuparp Thongyhoo reported that GPA has no effect on smoking behavior among male students in high schools. Therefore, from the above related literatures it can be concluded that academic achievement is correlated with smoking behavior (110).

Person who students live with; A study of Nidarat Chamsomboon (79) about knowledge and drug risk behaviors of high school students: a case study of Suphanburi. By studying the causes and factors that lead young people to drug use of the High School in Suphanburi 590 people found that students living with their parents are likely to be knowledgeable about drugs than students living with the other person. Because most students can get information about drugs from their parents are bringing with it the protection of the drug. But in the study of factors that affect the behavior of the students repeated amphetamine was admitted in Thanyarak hospital (111) found that the factors contributing to the results of students admitted to amphetamine in Thanyarak hospital was addictive left most residents with parents is a minor living with her. It can be seen that the results from these two studies are conflicting. Moreover, to study factor has relation with behavior of student smoking (112) found

similar result; person variable that student staying with has relation with behavior of smoking as significant statistics at 0.05.

In the study of foreign The European School Survey Project on Alcohol and other Drugs (ESPAD) conducted a study of adolescents in 35 European countries (113) found a correlation between live with his any parents with behavior of drugs among adolescents. That is, to live with one parent or stepparents associated with alcohol use, teens and smoking marijuana in some European countries. Reported that teens are smoking , alcohol, and marijuana increased in the group who lived with one parent and stepparent.

Spending time with family : Parents who had no time to take care children or living alone by themselves without doing activities together might make children felt lonely, distracted and smoked (65).

While, majority of adolescents who spent less time with family in weekdays and weekends would take most of their time with friends. This was consistent with the study that found that friend was associated with smoking behavior of adolescents (114).

2 Media Exposure Several studies to give priority to the exposure variables and found that exposure from various sources correlated with drug use and drug prevention. The study of the influence of communication in preventing drug of vocational students in Bangkok of Chonlada Samutpong found that when using predictive variables exposure variables predicted participation in anti-drug (92). Including provide information to students about drugs continuously to help prevent drug abuse (101). It was found that students who exposed media about the drug is likely to have drug-risk behaviors than students who did not exposed drug. It also has more knowledge than those who did not exposed media about drug (64). In a study of the problem of drug abuse among students in schools expand educational opportunities under Office of Primary Education, Chainat of Chatchawan Makerd found that student will recognize any drug such as (115).

- Cigarette from reality meeting as 78.80%, from television 34.10%, from reading book 24.70%.

- Liquor recognize drug from television 78.60%, reading book 31.0% and movie 22.0%

- Cough syrup from reality meeting 53.80%, eating and use 49.70%, and from telling 26.20%

- Analgesic from watching television 52.20%, eating and use 46.50% and reading book 21.80%

- Sleeping pill from reality meeting 33.10%, reading book 23.10% and 22.30%, respectively (115).

Preecha Wihokto and colleagues study condition of addict drug of primary student for 5,413 students, found that source of taking drug from seeing and listening from media as following (76).

- Cigarette from reality meeting 75%, movie 53.51% and television 49.8%

- Liquor from reality meeting 80.7%, television 68.8% and movie 59.6%

- Volatile matter knowing from television 62.8%, reality meeting 53.6% and newspaper 51.1%

- Amphetamine knowing from television 57.1%, newspaper 52.4% and reality meeting 47.6% (76).

Aporn Suksawat study format of drug of secondary student belong to Department of General Education, Muang District, Hnongkai Province. Found that access to information The majority responded that publicity about the penalty and the harm of drugs to make drugs decreased by 71.6 sources of information received from the TV 54.2 % and frequency of access to information about substance abuse of 67.28 % on a regular basic (12).

Moreover, from study of Penchan Sutheepichetkul about the relationship between media exposure, knowledge, attitude and behavior in the campaign for non-smokers: A Case Study of Bangkok found that the behavior of radio exposure is associated with smoking behavior and found a positive relationship between behavior and exposure of media per week with smoking habits, and exposure broadcasting Journal magazine is correlated with participation in the campaign no smoking, and found a positive relationship between media exposure per week and behavioral involvement in the campaign for the non-smokers (116).

From study of Kriangkrai Pattanakulkomet found that behavior of exposure campaign information in order to stop smoking has relation with behavior of participate in campaign in order to stop smoking (117).

Wiyada Kao-On study entitled "A Study of the relationship between exposure to the non-smoking campaign. Radio, television and newspapers on knowledge, attitude and participation in the campaign for a non-smoking youth: Special case study make student of Nakornpathom Ratchabhat Institute" found that (118).

(1) Frequency of exposure to smoking and non-smoking campaign correlated positively and relatively low levels of knowledge about smoking.

(2) Frequency of exposure to smoking and non-smoking campaign is moderate positive correlation with attitude towards non-smoking and attitudes to cooperate in the campaign for non-smokers.

(3) Frequency of exposure to smoking and non-smoking campaign correlated positively with relatively low levels of smoking behavior.

(4) Frequency of exposure to smoking and the campaign to not smoke is relatively high positive correlation with the behavior involved in the campaign for the non-smokers (118).

The study of foreign media showed similar result that media effect to drug use. The results of Brian A. Primack et al. study the Media Exposure and Marijuana and Alcohol use among Adolescent. Sample groups is 1,211 number of high school students in suburban Pittsburgh found that 27% smoked marijuana, 60% alcohol. The answer is media 8.6 hours per day, most music takes 2.6 hours, followed by the TV take 2.3 hours and the internet takes 2.3 hours and they get other media day 1.2 hours consisted of reading a book a day. 0.6 hours and read the magazine for a day, 0.6 hours in the study of the relationship between cannabis use and the amount of gain media music when compared with adolescents exposed to music at less than 1 hour per day to 3.4 hours per day and more than 4 hours per day. Found that people who take music more per day to use marijuana was also found that the level of exposure movie was correlated with an increase in the use of alcohol, people who see the movie 2-4 in 2 weeks, 95% used alcohol (44).

From study of Marcella Nunez-Smith et al. is study Media Exposure and Tobacco, Illicit Drugs and Alcohol use among children and adolescents: A Systematic review, found that exposure media has relation with use cigarette, alcohol and illegal drug (16).

Moreover, from study of Sevgi Yurt found that reason of smoking due to advertising and foreign movie is display image of smoking (89).

Study in Thailand and abroad and concluded that exposure is associated with behavior whether any other drugs or smoking all affect the behavior of all. They also found that obtaining information about smoking, both positive and negative, can also affect the behavior of the non-smokers. Suggest that exposure to smoking in both positive and negative effects on behavior and smoking and not smoking.

Otherwise adolescent (aged 10-14 years) enrolled in grades 5 through 8 at 14 school in Vernont and New Hampshire U.S.A. found that students had seen 16 of the 50 movies they asked about from which they were exposed to an average of 98.5 (SD 75.1) smoking occurrences. Exposure to movie smoking increased with age and was higher in boys than in girls. Girls saw a mean of 14.6 movies (7.4), from which they viewed a mean of 85.1 smoking occurrences (66.4), whereas boys saw a mean of 17.1 movies (8.2), from which they viewed 113.5 smoking occurrences (81.2). Exposure to movie smoking was positively associated with sensation seeking ($p < 0.0001$) and rebelliousness ($p < 0.0001$), and inversely associated with school performance and measures of authority parenting ($p < 0.0001$) (10% $n=259$) of participants initiated smoking during the follow-up period. Most (80%, $n=208$) of those who initiated smoking reported that they had smoked "just a few puffs" of a cigarette. Only 2% (six) of those who initiated smoking had smoked more than 100 cigarettes during follow-up. The effect of exposure to movie smoking is important both because the effect on smoking initiation is moderately strong and because the exposure is almost universal. Based on the lists of 50 randomly selected movies, only five (0.2%) participants were unexposed to movie smoking. If the link between exposure to smoking in movies and smoking initiation proves to be causal, our data suggest that eliminating adolescents' exposure to movie smoking could reduce smoking initiation by half. (119)

Moreover, found various research focus on movies, it is key role to smoking of children and juvenile as follows.

Smoking in movies : There have been many studies of movie smoking using content analysis, a research method in which coders systematically count and characterize media inputs. Content analyses of top box office movies that span the past

decade indicate that most (87%) movies portrayed tobacco use; however, tobacco use only accounted for a small proportion of screen time (120). In 75% of movies tobacco exposure accounted for less than 4% of total screen time. Cigarettes are the predominant form of tobacco used, followed by cigars, with little use of smokeless tobacco. Tobacco use typically increases with the “adulthood” of the censorship rating. For example, whereas PG-13 movies contain an average of four smoking occurrences, R-rated movies contain an average of eight (120). Tobacco use also varies by movie genre. It is more common in dramas than in comedies, science fiction, or child or family genres. Nonetheless, many children’s films depict tobacco use. Content analyses of children’s animated films that were released between 1937 and 1997 indicated that more than two thirds of the films included tobacco use (121). The amount of tobacco use in movies is not associated significantly with their box office success (120).

Examination of changes over the years in the frequency with which tobacco is depicted on screen highlights some discrepancies between movie portrayal of smoking and the social reality of smoking. In Dalton et al (120) content analysis of the top 25 box office hits from 1988 to 1997, there were 1400 major characters, among whom the rate of tobacco use was 0.25; this was not discordant with the prevalence of smoking among U.S. adults during that period. There was no upward or downward trend in the average number of smoking depictions in movies during this period, despite declining smoking prevalence in the U.S. population. In a sample of top box office U.S. films from 1950 to 2002, the number of smoking incidents per 5-minute interval of film declined from 10.7 per hour in 1950 to a minimum of 4.9 in 1980–1982 but increased to 10.9 in 2002 (122,123). Another study found that after an initial decrease in the frequency of depicting tobacco in the 1970s and mid-1980s, the rate of depiction increased (124). The depiction of smoking in children’s animated films did not decrease between 1937 and 1997 (123). Thus, the argument that on-screen smoking reflects social realism does not hold up in terms of trends for the rate of smoking depiction in movies in recent years, where movie content seems to be out of step with declining smoking rates in the U.S. population. These results raise questions about the role of films in amplifying the notion of smoking being widespread. It also is noteworthy that several studies observed a pattern of increased smoking depiction in

the late 1980s and early 1990s; this period follows the period for which there is documented evidence of paid tobacco product placement deals occurring in relation to film (125).

Measuring influence of movie smoking: Movie smoking influence has been measured in two ways. The first assessment involved ascertaining favorite movie star, which taps into the process of identity formation. Identity formation is one process by which exposure to movie smoking might exert influence on an adolescent's perceptions of smoking. Adolescents form their own identities by adopting parts of the identities of people they admire. In theory, as adolescents watch movies, they develop preferences for movie stars. After star preference is determined, adolescents seek out movies in which the star plays a role.

One strategy of assessing movie influence, therefore, is to determine star preference for a sample of adolescents and to ask whether the screen smoking status of the star has a relation with the smoking status of the adolescent. One problem with the favorite star measure is that adolescents tend to choose a wide variety of stars; it is not feasible to ascertain smoking status on all chosen favorite stars which leads to loss of sample.

The second approach to measuring exposure to movie smoking is a two stages method that directly estimates exposure to movie smoking. The first stage involves content analysis to determine the amount of smoking contained in the movie sample of interest. Because adolescents cannot be surveyed on all movies the second stage of this method requires special survey techniques that present the adolescent with a movie title that has been selected randomly from the larger content-analyzed sample. This direct assessment method has the advantage that exposure to movie smoking can be estimated directly and in an unbiased fashion for all adolescents in the survey sample (126,127).

Linking exposure to movie smoking with adolescent smoking: favorite star

An association between star smoking and adolescent smoking was first reported by Distefan and colleagues (128) using the California Tobacco Survey. Adolescents were asked to name their two favorite male and female actors. The researchers examined the on- and off-screen smoking behavior for the top 10 favorite male and female actors and determined if there was an association between favorite

star smoking status and smoking status of the adolescent. Favorite star varied by gender (top two actors for girls were Brad Pitt and Tom Cruise; top two actors for boys were Arnold Schwarzenegger and Jim Carrey). Favorite stars differed significantly among adolescent ever and never smokers; most favorite stars of ever smokers had smoked on- and off-screen compared with favorite stars of never smokers. In a multivariate analysis, adolescent never smokers who preferred the favorite stars of adolescent ever smokers were significantly more likely to be susceptible to smoking, even after adjustment for known predictors of adolescent smoking and demographic variables; this effect was only slightly weaker than that of exposure to friends and family who smoke. This study was followed by another study in which adolescents were asked to name their favorite movie star (120). The study examined smoking status of favorite star for all stars were chosen by five or more adolescents. Again, smoking status of favorite star was associated with the smoking status of the adolescent.

For favorite stars who smoked in two previous films, the adjusted odds of smoking was 1.5; for stars who smoked in three or more previous films, the adjusted odds of smoking was 3.1. Smoking status of the star also was linked strongly with the susceptibility to smoke among the never smokers. Distefan and other (129) published a longitudinal follow-up of the initial sample of California adolescents. Adolescent never smokers who nominated a star who smoked on screen were 1.4 times more likely to take up smoking over the 4-year follow-up period, even after controlling for other baseline influences. The effect on future smoking was seen only for girls (adjusted odds ratio = 1.86); in boys, future smoking was determined more strongly by participation in tobacco promotional campaigns. This study represents one of two longitudinal studies that linked exposure to smoking in movies and adolescent smoking. Sargent and other (130) used the direct method of assessing exposure to movie smoking to estimate lifetime exposure to movie smoking from a sample of 601 popular contemporary movies among 4919 northern New England adolescents. The subjects had seen an average of 30% of the movie sample, from which they were exposed to an average of 1160 movie smoking depiction shows a smoothed curve for the dose smoking response; there was a direct linear relation between higher exposure

to movie smoking and higher rate of smoking through most of the exposure range, with the dose-response flattening out past the 95th percentile of exposure.

2.5.3 Motivation

Many studies showed that sometimes providing information might be the motivation that led to new behavior. The study of the effectiveness of applying information motivation behavioral skills model for anal cancer prevention in men who have sex with men the researchers provided information with the aims to change the motivation and develop the better behaviors. The results showed that the sample change their behaviors in the right direction. This indicates that providing information influences motivation and behavior. Media also induce the changes in motivation and lead to behavioral changes (131).

Moreover, motivation also influences media exposure choice. Kanchana Kanchanatawee (132) studied the motivations, behavior and satisfaction of Thai online newspaper readers. The study covered the readers of seven online newspapers; Thairath, DailyNews, Manager, Bangkok BizNews, Thansettakij, Bangkok Post and The Nation. The results showed that readers in Thailand used the online newspaper as the fourth most preferred sources of news after television, radio and newspaper, respectively. On the other hand, readers living abroad used online newspaper as their second most preferred source of news after television. Overall, the respondents said that the motivation for reading online newspapers was convenience because they regularly used the Internet and that it was easier to find any specific news of interest in online newspapers. On average, readers accessed to 2 - 3 online newspapers whenever they used Internet and spend 10 -to 20 minutes reading the news. They also accessed to the newspaper websites between 8.00 am to 4.00 pm. In terms of content, the respondents indicated that they mostly read news and entertainment articles. The type of news they explored the most were headline news followed by computer-technology and business news, respectively. For main problem for the leader was delay in news update, followed by too little information on the websites, the problems with Thai fonts, fatigue and eyestrain and the limited reading time. The above study shows that motivation influences media exposure choice. People will expose more to the media

they interested, meet their need or highly attractive. In contrast to advertising, media also induce motivation and behavior.

It is also found that, in addition to the relationship with media exposure and behavior, motivation is also the factor that makes youth smoke and quit smoking. The study of the motivation affecting the smoking behavior among vocational students in Kalasin province (133) found that smoking was associated with motivation. Having smokers in family, being persuaded to smoke by close relatives, being asked to buy cigarettes by close relatives, having close friends who smoke, being persuaded to smoke by close friends, having close people who smoke, exposing to media that encourage to smoke, having media as the motivation of smoking, impress or special respect in people who smoke, seeing places with smoking and being in the situations that led students to smoke were all associated with smoking behavior of students at the significant level of 0.05.

From the study of Theories of smoking have been developed about the conditions and causes of smoking, as well as explaining of maintenance. Moreover, factors of smoking motivation have been identified, which describe incentives to smoke and types of smoking behavior. The most frequently reported motives are psychosocial smoking, sensorimotor smoking, indulgent smoking, stimulation smoking, sedation smoking, dependent smoking, and automatic smoking. In the first phase after the start of smoking, psychosocial smoking is the dominating motive, which is best represented by theories of social psychology. (134). In addition, the relationship between smoking motivation and personality was found. More introverted smokers primarily use cigarettes to help them feel more confident in social situations and that more neurotic smokers primarily use cigarettes as a way of controlling negative effect. The relationship between smoking motivation and self-efficacy to quit was also found. Lower self-efficacy is associated with smoking for controlling their negative emotions and dealing with social situations. Therefore, we would suggest that teaching clients alternative ways of controlling negative emotions and coping with social – situations might be of some potential benefit increasing self efficacy to quit. (135).

In the study of Health Behavior change Through Television: The roles of De Facto and motivated selection processes (136) found that the motivated selection

hypothesis postulates that people who are motivated to make a particular change will actively seek out programs to help them make that change. Katz suggests that such selectivity is a major mediator of mass communication effects because it influences both the nature of the content to which someone is exposed and how deeply he or she processes the message.

From this perspective, it seems reasonable to hypothesize that people who are more ready (motivated) to stop smoking will be more likely than others to seek out and view a televised smoking cessation program and to process the program content more deeply in ways that add to program effects over and beyond those that might be attributed to motivation alone. Indeed, earlier experimental social psychological research found little evidence for widespread selective exposure to materials with a particular point of view (137,138). and some scholars have suggested that a lack of motivated selective exposure to media programs is one possible reason for a lack of media effects (139). Various aspects of motivation were associated with quitting smoking such as Present health, future health and example for children were associated with increased likelihood of successful smoking cessation, whereas cost, effect on others, and pressure from friends and family were associated with decreased successful cessation. Present health, future health and example for children will thus be termed the positive reasons, whereas cost, effect on others, and pressure from friends and family are the negative reasons (140).

2.5.4 Attitude

According to different studies, the relationships between attitude and information exposure were found as follows:

Kayon Csewhakan (141) studied media exposure, knowledge, attitude concerning drug prevention of industrial workers in Samutprakarn province and found that media exposure about drugs from newspaper was correlated with the attitude toward drug prevention. Newspaper had a great influence on attitude toward drug prevention because of durability, cheap price, readily available and it offers more details than other media. This is consistent with the study by Waewta Tanabat who found that exposure to anti-amphetamine campaign media was associated with

attitude. Youth in Bangkok who were more exposed to media would have the right attitudes.

Sansanee Ritthongpitak studied the information exposure, knowledge, attitude and use of Thai herbs among people in Bangkok (142) and found that exposing to information and knowledge about Thai herbs was associated with attitudes toward Thai herbs and use of Thai herbs. Attitude was also associated with use of Thai herbs.

Buppa Lapawattanaphun (143) studied the relationship between media exposure, attitudes, and gambling behaviors of college students in national universities. It was found that college students exposed to information about gambling from friends, television and websites which resulted in positive attitude towards gambling and led to gambling behaviors. This is consistent with the concept of Riley and Flowerman (144) who mentioned that media exposure which is the incentives of the needs to be accepted by society members can determine the interest in information exposure from media. Information exposure results in changes in knowledge, attitude and behavior of the receivers.

It is also found that attitude is associated with smoking behavior (90, 145, 146, 147, 112, 148, 109, 149, 150, 151, 152). Those who have positive attitude toward smoking will have higher smoking behavior than those who have the negative attitude toward smoking.

The similar results are also found in the studies in other countries that smoking is associated with attitude (153,154,155,156). In the study of "Influence of Knowledge and Attitude on Smoking Habits Among Young Military Conscripts in Taiwan (155)" which studied with 3,249 military conscripts by collecting the respondents' socio-demographic characteristics, lifestyle, knowledge, attitude, and cigarette smoking practices found that the overall attitude towards smoking among young military conscripts was significantly associated with age, education level, residential area, cigarette smoking, betel nut chewing, and alcohol drinking (all $p < 0.05$). Older subjects had higher scores than younger subjects, and subjects with higher levels of education had higher scores than less educated subjects. In addition, subjects who lived in the middle area of Taiwan had lower scores for attitude toward smoking in residential areas. Subjects who were smokers, betel nut chewers, or drinkers had

lower scores for attitudes toward smoking compared with non-chewers and non-drinkers. The results of multivariate logistic regression analyses to explore the associations between knowledge about and attitudes toward smoking and the practice of cigarette smoking. In an unadjusted logistic regression model, we found that both knowledge about and attitudes toward smoking were significantly associated with cigarette smoking. Subjects with higher scores on knowledge or attitudes had a relatively lower risk of cigarette smoking when compared to those with lower levels of knowledge or attitudes [knowledge: OR, 0.88; 95% confidence interval (CI), 0.86–0.91; and attitudes: OR, 0.88; 95% CI, 0.86–0.89].

In USA, the study of “Smoking college women: The role of thinness pressures, media exposure, and critical” (157). Because in American society women are under the social pressure to be skinny and control their weight. Various media are all advertise and show interest in slimness. Sometimes, tobacco advertising media present that smoking make people skinny and women misunderstand that smoking will make them skinny and decide to smoke for weight control. So in study to tested these hypotheses in a study of 188 female undergraduates, both never-smokers and daily smokers. Believing that smoking controls weight, exposure to thinness-depicting media, and low levels of skepticism about tobacco advertising were associated with being a smoker. Among smokers, believing that smoking controls weight, internalizing thinness pressures, and low levels of feminist consciousness were associated with smoking for weight control. A logistic regression was performed to predict smoking status (daily smoker vs. never-smoker) from thinness awareness, thinness internalization, believing that smoking helps people control their weight, thinness-depicting magazine exposure, and tobacco ad skepticism. The model was significant, Cox and Snell, $R^2 = .17$, $X^2(5, 187) = 33.80$, $p < .001$, and correctly classified 69% of the cases. Believing smoking helps people control their weight, and magazine exposure increased the odds of being a smoker, whereas tobacco advertising skepticism decreased the odds.

A report on research using the National Statistics Opinions Survey produced on behalf of the NHS Information Centre for health and social care (154) have surveyed and found that attitude is related to smoking.

- Just over two-thirds (69 per cent) of people said that smoking was not allowed at all in their home, similar to the 67 per cent in 2007 but a statistically significant increase since 2006 when 61 per cent of people said this. A fifth (20 per cent) said it was allowed in some rooms or at some times and only 10 per cent said it was allowed anywhere. People who smoked 20 or more cigarettes a day were the least likely to say that smoking was not allowed at all – only 21 per cent of those who smoked 20 or more a day said so. This compared with 38 per cent of those who smoked fewer than 20 cigarettes a day and 81 per cent of those who had never smoked.

- 62 per cent of those who did not smoke said they would mind if other people smoked near them, similar to the percentages since 2004 (60 per cent or higher) and slightly higher than in years prior to this.

- 77 per cent of smokers said they did not smoke at all when they are in a room with a child and 14 per cent said they would smoke fewer cigarettes in the presence of a child.

- The percentage of smokers who would not smoke at all in front of children has increased over the survey years from 54 per cent in 1997 to 77 per cent in 2008/09.

- The majority of smokers said they would modify their smoking in a room with adult non-smokers – 50 per cent would not smoke at all and 31 per cent would smoke fewer cigarettes.

- Three-fifths (60 per cent) of people who were in work said that smoking was not allowed in enclosed places where they worked in accordance with the smoke-free law and a further 33 per cent said there was no smoking allowed on the premises, including the grounds.

These results show that information exposure affects attitude and behavior. At the same time attitude also induces different behaviors of person.

2.5.5 Perception

Media exposure, perception and behavior are interrelated. Information exposure influences perception of person and influences behavior. The study of “Expose and Awareness of marketing communications Nok Fan Club Project of Nok

Airs' Users" (158) by Weerada Prasert found that most sample exposed to the marketing communication of Nok Fan Club Project through the spot 7th Anniversary Nok Air" the most. For weekly exposure, it was found that most sample exposed to information via www.nokair.com the most. For the duration of information exposure in minutes, it was found that most sample exposed to information via www.nokair.com the most. For product, it was found that information exposure had moderate positive relationship with the users' perception of the marketing communication of Nok Fan Club Project. This indicates that perception is associated with communication. In addition, person perception also influences behavior. In the study of "Knowledge, Perception and Prevention Behavior regarding the Chikungunya Fever among Nursing Students at Boromarajonnai College of Nursing, Phayao" showed that the perception was significantly associated with disease prevention behavior at the significant level $f 0.05$ ($r = 0.156$) (159).

In addition, the above study also found that perceptions and smoking behavior were correlated (149, 23, 160, 161, 162, 163, 164) such as perception of cigarette advertising, tobacco law, risk of smoking, violence, effects and dangers of smoking, benefits and obstacles of avoiding smoking and self-efficacy in quitting smoking. These perceptions influenced smoking behavior and quitting smoking.

For the studied in other countries, Anton Aluja-Fabregat and other study about viewing of mass media violence, perception of violence, personality and academic achievement (165). to study the relationship between the viewing of and interest in violent episodes on tv, whether they be in action and adventure films or cartoons, and both personality, measured by the Eysenck Personality Questionnaire (EPQ), the Sensation Seeking Scale (SSS) and the Sensitivity to Punishment and Sensitivity to Reward Scales (SP-SR), and academic achievement. The sample was made up of 235 teenage boys and 235 teenage girls. The study also took account of teachers' reports on student personality traits and attitudes such as aggressivity, excitability, leadership, responsibility and interest in studies. Our results reveal that those boys who perceive violent cartoon films as being funny and thrilling are deemed more aggressive and excitable by their teachers. Those boys who rate action and adventure films as more interesting attain lower academic achievement. Boys and girls who perceive violent cartoon films as being thrilling and funny get higher scores on N, P, SSS and SR. Those boys who rate action and adventure films watched as more interesting get higher scores on N, P, SSS and SR, whereas girls do likewise on E and P, SSS. The possible relationship between disinhibited, not very socialised personality and interest in violent topics on tv is thereafter discussed.

The study about filthy or fashion? young people's perception of smoking in the media (166) in order to explore young people's perceptions of smoking imagery in the media, 16 focus groups were conducted with 117 school students. Participants were asked to rate smoking images selected from audio-visual and print media, and to discuss their perceptions of these images. The results showed that young people perceived smoking in these media selections to be normal and acceptable. They identified with the stress relieving and social aspects of smoking, despite being well aware of the harmful health effects. Its acceptability as part of a 'cool' image was also noted. Positive images of smoking in the media have the potential to down-play the serious health consequences of smoking by portraying it in a way that young people interpret as a normal part of everyday life. The respondents perceived in 7 areas as follows:

(1) Social acceptability In this study, if smoking in the media clip was perceived by young people as appearing normal, it was coded as positive for social

acceptability. In general, the social acceptability of smoking was rated quite positively across the majority of media clips. The mean proportion of overall positive responses was 64%. Those images of smoking which rated particularly positive for social acceptability were depicting smoking in association with success, sociability, coolness, popularity and reward.

(2) Cool Being cool is associated with image, and young people admire people who appear popular and to be good fun. Given this, many young people looked favorably upon images of this kind, despite the fact that all of these 'cool' characters were smoking. In some instances, they thought smoking even added to the overall 'cool' image.

(3) Physical health attributes in general were rated quite negatively, although overall the mean proportion of negative responses was less than 50%. This is in part because 21% of all responses indicated that the images portrayed smoking as neither positive or negative on physical health characteristics. The overall mean proportion of responses that were negative towards the physical health attributes of smoking was 46%, while 33% of responses were positive.

(4) Mood Image that represents the positive emotion is associated with the perception of smoking such as cigarette helps relieve stress. Images which were perceived as portraying control or confidence were rated as a positive association between mood and smoking.

(5) Appearance/image :Compared with physical health and mood attributes, there was more variation in the rating of associations between smoking and appearance or image for each individual media item. In general, responses were evenly divided, with 39% of responses across all scenes being positive and 44% being negative. The most outstanding feature in the rating of this theme was that smoking tended to be rated more positively if the person featured in the scene was physically attractive or if they appeared to take care in their appearance.

(6) Overall rating of smoking as good thing to do or a bad thing to do: Most respondents considered smoking as good thing rather than bad thing (52% and 48%, respectively).

(7) Overall attitude to smoking image in the media: Older teenagers were more cynical and generally displayed an awareness or suspicion of the intent behind

the incidental portrayal of smoking in the media and some older teenagers were also more likely to be accepting of smoking images in the media, seeing it as a reaction of everyday life.

Otherwise in U.S.A to study about Perceptions of smoking-related risks and benefits as predictors of adolescent smoking initiation. (167) To study administered surveys assessing perceptions of smoking-related risks and benefits to 395 high school students, beginning at the start of their ninth grade year. And conducted follow-up assessments every 6 months until the end of 10th grade, obtaining 4 waves of data found that adolescents who held the lowest perceptions of long-term smoking related risks were 3.64 times more likely to start smoking than were adolescents who held the highest perceptions of risk. Adolescents who held the lowest perceptions of short-term smoking-related risks were 2.68 times more likely to initiate smoking. Adolescents who held the highest perceptions of smoking-related benefits were 3.31 times more likely to initiate smoking.

CHAPTER III

MATERIALS AND METHODS

3.1 Study design

This research is about “ Media exposure and impact on cigarette smoking behavior among junior high school students under Bangkok Metropolitan Administration, Thailand”. This was survey research the data collection was conducted during 15 December 2015 to 15 January 2016.

3.2 Target population and study sites

3.1.1 Target Population

This study was collected data from junior high school students from 13-15 years in schools under Bangkok Metropolis Administration for 108 schools.

3.1.2 Study site

This research had objective to study population of junior high school students of Bangkok Metropolis in academic year 2013 for 108 schools of Bangkok Metropolis. In addition, this research had divided into 6 parts; Central Bangkok, South Bangkok, North Bangkok, East Bangkok, North Krungthon and South Krungthon group, total junior high school student 33,231 students. (169)

3.1.3 Inclusion criteria

- 1) class: the study included high school students from 7st grades till 9rd grades.
- 2) Nation: the study included Thai citizen students.
- 3) This was study on students who can communication with read and write Thai language.

4) Study was included schools and students who were willing to follow the study.

3.1.4 Exclusion criteria

- 1) The study were excluded students who are not Thai citizen.
- 2) The study were excluded students who inability communication with read and write Thai language.
- 3) The study were excluded the participant who are not completed the questionnaire.

3.3 Sample size

This study has defined sample group on statistical estimation, number of student in school education expansion, junior high school students under Bangkok Metropolitan Administration are selects education area for 33,231 students, which appropriate calculated sample size as follows. (170)

$$n = \frac{z^2 NP(1-P)}{z^2 P(1-P) + (N-1)E^2}$$

$$n = \frac{1.96^2 (33231)(.39)(.61)}{1.96^2 (.39)(.61) + (33231-1)(.05)^2} = 362 \text{ students}$$

When

n = Desired sample size

N = Total number of population = 33,231 students

Z = Standard normal score at 95% of confidence interval Z = 1.96

P = Percentage of smoking = 0.39 (percent of age 13-15 years old is students who smoking about 38.76% from all students (161)

E = Proportion of allowance, acceptable error is 0.05

Z = 1.96 at 95% confidence interval.

In case of incomplete data plus 10% of the desire sample size 10%.

Therefore, total require sample size will be 398 persons.

3.4 Sample technique

Population of research was junior high school students under Bangkok Metropolitan Administration form 108 schools, which divided into 6 groups as zone of Bangkok Metropolis on group sampling as follows (see figure 3.1)

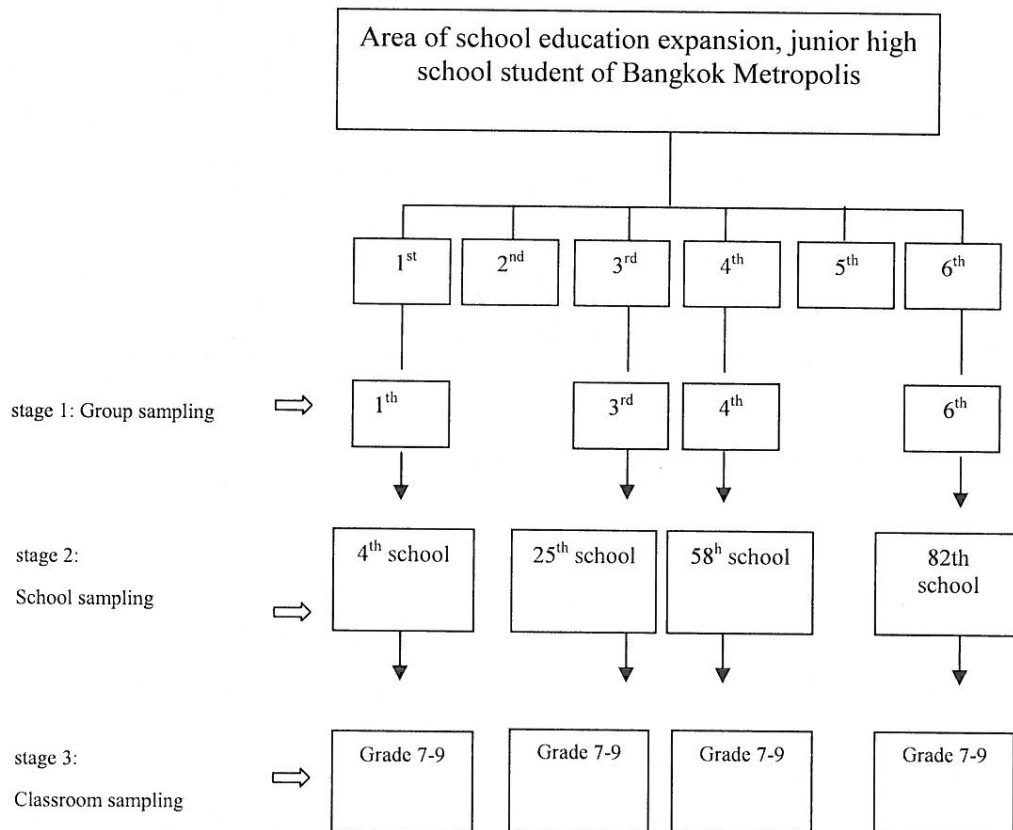


Figure 3.1: A three-stage-cluster random sampling

When collection all data and then sampling as follows.

Stage 1: After division area of schools under Bangkok Metropolitan Administration as 6 education groups and then sampling 4 groups by simple random sampling ; 1st group is Central Bangkok, 3rd group is North Bangkok, 4th group is East Bangkok and 6th group is South Krungton. Which such sampling was Proportional Allocation of population was calculated (if any part more people shall be sampling more agents)

Stage 2: Sampling one of school by simple random sampling for each of one school had followed (see school list in appendix) according to the current criteria of junior high school student amount (104):1 school and criteria of school which had population of many students.

- Group of 1st: Gained school in 4th is Wichuthit School, Dindaeng District.
- Group of 3rd: Gained school in 25th is Loisai Anusorn School, Ladpraw District.
- Group of 4th: Gained school in 58th is Kronggroum School, Bouenggoum District.
- Group of 6th: Gained school in 82th is Wat Aungkaew School (Jeep Phankham), Pasicharoen District.

Stage 3: Classroom sampling from school in stage 2nd by teacher in 4 schools.

Table 3.1 Number of respondents by each journal high school from 108 schools under Bangkok Metropolitan Administration.

School	Number of students (Grade 7-9)	Sample (n)
Wichuthit	409	114
Loisai Anusorn	293	82
Kronggroum	424	117
Wat Aungkaew	315	87
Total	1,441	400

Table 3.1 shows that from sample size 398 students in 4 schools would be calculated proportional allocation 25% as follow: Wichuthit school=114 students, Loisai Anusorn school=82 students, Kronggroum school=117 students and Wat Aungkaew=87 schools.

3.5 Research instruments

Measurement tools of this research were a questionnaire, which were created and developed by the related researches. The content of questionnaire was following.

Part 1: personal data of respondent.

Part 2: exposure media regarding cigarette

Part 3: Psychological factor : Motivation, Attitude and Perception

Part 4: Behavior of smoking

Part 5: Recommendations of campaign of anti-smoking

Part 1 The questions that the reality of most students was only one answer regarding personal information including gender, age, class, living allowance, grade report , person who student was stayed with and time that student use with family.

Part 2 Questionnaire of media exposure about cigarette developed by the research of Jittra Thanasanseni (35), studied from frequency of behavior on exposure media from any media used questions include the 5 levels of the variable . (Likert scale)

(1) To be viewed, listen to, read information about the anti-smoking campaign from any media (radio, television, newspapers, magazines / journals in classroom/school, internet and other). These were questions assessed the level of 5-level variables were as following.

Answer	Score
Most	5
Much	4
Moderate	3
less	2
Never	1

Translation from received score of questionnaire was depended on scope of score 1 2 3 4 5 and translated as defined criteria as following. (171)

$$\begin{aligned} \text{Width of measure level in each level} &= \frac{\text{maximum score} - \text{Lowest score}}{\text{Division level}} \\ &= \frac{(5-1)}{3} \\ &= 1.33 \end{aligned}$$

Criteria of translation mean of exposure media about anti-smoking campaign, researcher was defined follow criteria.

Mean 1.00-2.33 refer to respondent were exposed media about anti-smoking campaign in the low level

Mean 2.34-3.66 refer to respondent were exposed media about anti-smoking campaign in the medium level

Mean 3.67-5.00 refer to respondent were exposed media about anti-smoking campaign in the high level

(2) Is question asking about ability of retention and recall about anti-smoking campaign was assessment of variable 5 levels as following particulars.

Answer	Score
Most	5
Much	4
Moderate	3
Less	2
Never	1

Translation from received score of questionnaire was depended on scope of score 1 2 3 4 5 and translate as defined criteria as following. (171)

$$\begin{aligned} \text{Width of measure level in each level} &= \frac{\text{maximum score} - \text{Lowest score}}{\text{Division level}} \\ &= \frac{(5-1)}{3} \\ &= 1.33 \end{aligned}$$

Criteria of translation mean of ability of retention and recall, researcher was defined following criteria.

Mean 1.00-2.33 refer to respondent were recall about anti-smoking campaign in the low level

Mean 2.34-3.66 refer to respondent were recall about anti-smoking campaign in the medium level

Mean 3.67-5.00 refer to respondent were recall about anti-smoking campaign in the high level

Item (3) - (4) were question asked about satisfaction, interesting of respondent toward campaign of anti-smoking via any media was Checklist question.

(5) To viewed/listen/read information of cigarette sale promotion from any media (internet, poster of star, sportswear, stadium, calendar, shop/store, chapman, in product, place of amusement and other). These were questions assessed level of 5 level variables are as follows.

Answer	Score
Most	5
Much	4
Moderate	3
Less	2
Never	1

Translation from received score of questionnaire was depended on scope of score 1 2 3 4 5 and translate as defined criteria as following. (171)

$$\begin{aligned} \text{Width of measure level in each level} &= \frac{\text{maximum score} - \text{Lowest score}}{\text{Division level}} \\ &= \frac{(5-1)}{3} \\ &= 1.33 \end{aligned}$$

Criteria of translation mean of exposure media about advertising of cigarette sale promotion, researcher was defined following criteria.

Mean 1.00-2.33 refer to respondent were exposed media about advertising of cigarette sale promotion low level

Mean 2.34-3.66 refer to respondent were exposed media about advertising of cigarette sale promotion low level

Mean 3.67-5.00 refer to respondent were exposed media about advertising of cigarette sale promotion low level

Item(6) Is question asking about Ability of retention and recall about cigarette promotion advertising was assessment of variable 5 levels as following particulars.

Answer	Score
Most	5
Much	4
Moderate	3
Less	2
Never	1

Translation from received score of questionnaire was depended on scope of score 1 2 3 4 5 and translate as defined criteria as following. (171)

$$\begin{aligned} \text{Width of measure level in each level} &= \frac{\text{maximum score} - \text{Lowest score}}{\text{Division level}} \\ &= \frac{(5-1)}{3} \\ &= 1.33 \end{aligned}$$

Criteria of translation mean of ability of retention and recall about cigarette promotion advertising, researcher was defined following criteria.

Mean 1.00-2.33 refer to respondent were recalled about advertising of cigarette sale promotion in the low level

Mean 2.34-3.66 refer to respondent were recalled about advertising of cigarette sale promotion in the medium level

Mean 3.67-5.00 refer to respondent were recalled about advertising of cigarette sale promotion in the high level

7-8 is a question that asked about satisfaction, attention of respondents was advertising of cigarette sale promotion through the media was included Checklist question.

Part 3: Psychological factor divided into motivation of smoking, attitude to cigarette and recognition regarding cigarette.

3.1 Motivated about smoking was developed from studies of motivation to smoke of Yutthapong Khampetdee (133). A survey ranking the quality of the Likert scale questions, which is a Rating scale with 5 levels of 10 questions, each respondent must choose only one answer. The answer to your emotions the fact that most occurred has scoring is as follows.

Statement is positive such as 3,7,8 if answer

Answer	Score
Very agree	5
Agree	4
Moderate	3
Disagree	2
Very disagree	1

Statement is negative such as 1,2,4,5,6,9,10 will opposite point as 1,2,3,4,5

Translation from the median of the total motivation score that motivation level, there were 2 levels of motivation. A low level of motivation about smoking was more than, the median of the total motivation score (44-50 score). A high level of motivation was equal to , or less than the median of the total motivation score (0-43 score).

3.2 Attitudes about smoking had developed from studies, Nontri Sutjatham (172)in the study of Attitude and Intention of Ratchaphruek College 's students to stop Smoking and Uthumporn Na Nakorn (109) to study the factors associated with cigarette trial of students in the Secondary School of Chonrat Bumrung, Muang District, Chonburi Province. A survey ranking the quality of the Likert scale questions, which is a Rating scale with 5 levels of 10 questions, each

respondent must choose only one answer. The answer to your emotions the fact that most occurred has scoring is as follows.

Statement is positive such as 3,4,5,7,8,10 if answer

Answer	Score
Very agree	5
Agree	4
Moderate	3
Disagree	2
Very disagree	1

Statement is negative such as 1,2,6,9 will opposite point as 1,2,3,4,5

Translation from the median of the total attitude score that attitude level, there were 2 levels of attitude. A positive attitude level (right attitude about smoking) was more than, the median of the total attitude score (43-50). A negative level (right attitude about smoking) was equal to , or less than the median of the total attitude score (0-42).

3.3 Perception about the risks of smoking which measured by questionnaire developed from Manoonsri Petsai (28). To study factors of health believe that influence smoking among male students of Grade 6, public schools in Pattani is of 10 questions a scale assessment, 5-levels respondents answered each question will have to choose only one answer. The answer to this fact, the most happening has scoring is as follows.

Statement is positive such as 1,2,3,4,6,8 if answer

Answer	Score
Very agree	5
Agree	4
Moderate	3
Disagree	2
Very disagree	1

Statement is negative such as 5,7,9,10 will opposite point as 1,2,3,4,5

Translation from the median of the total perception score that perception level, there were 2 levels of perception. A High level of perception about opportunity

of disease from smoking was more than, the median of the total perception score (39-50). A low level of perception was equal to , or less than the median of the total perception score (0-38).

Part 4: Questionnaire regarding behavior of smoking is developed from questionnaires of International Tobacco Control Policy Survey (The 7th Thailand), the 3rd round of the Institute for Population and Social Research, Mahidol University (173) is checklist question. Consists of 2 part ;

part 1 for students was non smoking that its have 3 questions.

Part 2 for students was smoking that its have 5 question1-2 is question of measure smoking behavior of respondent that used to smoking or not and currently are smoking or not. Respondent is selectable only one choice and item 3-4 is question of measure source of cigarette item 5 is question of measure behavior of other drug, which answer than 1 item.

Part 5: Recommendations was questionnaire of activities form in campaign for anti-smoking, 13 items to select, answer, require and not require which respondent must answer all items.

3.6 Verify and reliability test of instruments

The researcher were tested validity and reliability of questionnaire as following.

Validity is questionnaire compiling by external expert in the field of Communication Arts, Medical and Health Social Sciences and addiction studies based on the content validity and the appropriateness of wording for instructions to update and select text with accuracy and then asked to collecting data.

Reliability; questionnaire were pre-tested with a group of adolescents similar to the sample group, but there were not studies in the same school with the sample group.

The pre-testing of the questionnaire was done with 30 students. In reliability test of questionnaire, Cronbach's Alpha was used for motivation, attitude and perception component of the questionnaire. The result of reliability test were for Conbrach' s Alpha : motivation part was 0.704 and perception part was 0.752.

The reliability coefficient of the attitude part was 0.675. If item 4 was deleted, the coefficient was 0.712. However, item 4 was revised and researcher was been retested in attitude part. The result of attitude part after retest was 0.858.

3.7 Protection of human subjects

In this research, the researcher aware of the research ethics and prior to the data collection, and approved by the ethics committee. Additionally, the researcher was explained the objectives and details of the study to the sample. Then the sample was informed of the protection of their rights and agreed to participate and sign the consent form, start answering the questionnaire and the information was kept confidential and was presented as a whole picture with the objective to extend the benefits of the study. During the data collection procedure, participants can withdraw from the research without having to indicate the reasoning without any effect on the sample at all.

An ethics approval from Mahidol University Institutional. Review Board of Social Science (MU-SSIRB) (Serial no: COA.NO.2015/261.0408) was obtained prior to conduct of the study.

3.7.1 The researcher requested permission from the Faculty of Graduate Studies, Mahidol University before collecting data to junior high school students under Bangkok Metropolitan Administration.

3.7.2 Requested permission from the director of each school for.

3.7.3 The researcher the informed the objectives of the study and data collection procedures to the school cooperators.

3.7.4 After which the instruments to be used in data collection was prepared and pre-tested.

3.7.5 Introduce to the students and provide the explanation of the purpose of the study. The researcher brought the questionnaire to collect data from the samples by themselves. (Before the start of data collection, introduction was held for the students to provide information regarding the purpose of the research.)

3.8 Data analysis

To manage data, the questionnaire will be labeled and coded by the researcher. The data will analyze by using SPSS version 16.

First, univariate analysis was used to calculate descriptive statistics. The descriptive statistics were median, quartile deviation (QD), mean, standard deviation (SD), minimum and maximum, numbers and percentage of each independent and dependent variables.

Second, a Chi-Square test and simple logistic regression analysis were used in bivariate analysis. These statistical tests were used to determine association between each independent variable and smoking behavior (dependent variable).

Lastly, a multiple logistic regression analysis was used to determine significant the strongest factors affecting smoking behavior ($p\text{-value} < 0.05$).

CHAPTER IV

RESULTS

A study of media exposure and impact on cigarette smoking behavior among junior high school students under Bangkok Metropolitan Administration, Thailand was to determine the prevalence of smoking behavior of students grade 7-9 and to examine the relationship between their respondents' socio-demographic factor, media exposure, motivation, attitude, perception, with smoking behavior.

The results were presented in the form of number and percentage. The quantitative data were shown with standard deviation (SD), median, quartile deviation (QD), minimum and maximum. Chi-square test and multiple logistic regression were used to examine the relationship between independent variables and smoking behavior. The detail of the results was as follows :

- 4.1 Distributions of respondents by dependent and independent variables
- 4.2 Association between independent variable and smoking behavior.
- 4.3 Predicting factors for smoking behavior of students

4.1 Distributions of respondents by dependent and independent variables.

4.1.1 Socio – demographic factors , consisted of gender, age, class, living allowance per day, GPA, person who students stay with, spending time with family on Monday-Friday, and spending time with family on weekend.)

500 participants involved in this study. All these participants were students in 4 high schools under Bangkok Metropolitan Administration, Bangkok and answer to students was cross-checked with records in 4 schools. As shown in Table 4.1 about 50.8% were male, while 49.2% were female students.

Most respondents 69.4% were in the youngest age group about 12-14 years old. The median age was 14 years old , youngest was 12 years old and oldest was 17 years old. 38.2% of the respondents were in grade 7 and 62.4% had having allowance per day in 101-200 baht. The median income was 60 baht. With regard to GPA, 42.9% had grade duration 2.01-3.00. The median of grade was 2.50. With regard to person who respondents stay with, 50% from stayed with parents. With regard to spending time with family on Monday-Friday, majority of respondents spent time with their family as for 5-9 hours /day (27.8%) and 10-14 hours/day (27.8%). 38.6% of respondents were spent time with their family as on weekend for 20-24 hours (38.6%).

Table 4.1 Percentage of respondents by socio-demographic factors.

Socio – demographic factors	Number	Percent
Gender	500	
Male	254	50.8
Female	246	49.2
Age group (years)	500	
12-14	347	69.4
15-17	153	30.6
Median = 14 , QD= 1 , Min = 12, Max = 17		
Class	500	
Grade 7	191	38.2
Grade 8	164	32.8
Grade 9	145	29.0
Living allowance (baht/day)	500	
1-100	156	31.2
101-200	312	62.4
201-300	32	6.4
Median = 60 QD=25 Min = 20 Max = 300		
GPA	500	
0.01-1.00	41	8.2
1.01-2.00	135	27.1
2.01-3.00	214	42.9
3.01-4.00	110	21.8
Median = 2.50 QD=0.5 Min = 0.07 Max = 4.00		

Table 4.1 Percentage of respondents by socio-demographic factors (cont).

Socio – demographic factors	Number	Percent
Person who students stay with	500	
Father	48	9.2
Mother	91	18.2
Parent	250	50.0
Relative	42	8.8
Other	69	13.8
Spending time with family on Monday- Friday		
0-4 hour	77	15.4
5-9 hour	139	27.8
10-14 hour	139	27.8
15-19 hour	87	17.4
20-24 hour	58	11.6
Spending time with family on weekend		
0-4 hour	35	7.0
5-9 hour	80	16.0
10-14 hour	102	20.4
15-19 hour	90	18.0
20-24 hour	193	38.6

4.1.2 Exposure positive media (smoking protection campaign). Factors consisted of exposure positive media, retention of positive media, liking of positive media and reason for liking its.

Hence, respondents were asked about exposure media on to television, radio, poster, billboard, newspaper, magazine, theatre, internet, pack of cigarette, disco/karaoke/game center and exhibition/activity about smoking campaign.

Table 4.2 shows percentage of positive media exposure of respondents, majority of respondents exposed positive media on to internet ($\bar{X} = 3.88$), and television was 3.51 ,radio was the least exposed positive media ($\bar{X} = 1.70$)

Table 4.2 Percentage of respondents by exposure regarding positive media
M= Most, MU = Much, MO = Moderate, L = Less, N = Never

Positive media	M	MU	MO	L	N	(\bar{X})
1. Television	27.8	22.2	26.4	20.8	2.8	3.51
2. Radio	0.8	2.6	10.6	37.8	48.2	1.70
3. Poster	5.2	17.2	21.6	36.0	20.0	2.52
4. Billboards	6.0	20.0	28.8	32.4	12.8	2.74
5. Newspaper	6.4	15.0	23.6	39.1	15.9	2.58
6. Megazine	3.2	8.0	23.2	36.4	29.2	2.20
7. Theatre (before and after show movie)	7.2	15.6	25.4	35.6	16.2	2.62
8. Internet	41.4	24.4	18.4	12.2	3.6	3.88
9. Pack of cigarette	30.8	17.6	14.4	17.2	20.0	3.22
10. Disco /karaoke/game center	10.8	17.6	19.8	25.6	26.2	2.61
11. The exhibition/activity about smoking campaign at school, shirt, hat,etc.	14.4	22.6	26.6	28.8	7.6	3.07
12. Other	3.6	2.6	2.4	1.8	89.6	1.29

The positive media exposure was categorized into 3 levels. When the mean score of exposure was between 1.00 and 2.33, the positive media exposure was classified into a low level. If the mean score was between 2.34 and 3.66, their exposure was classified into a medium level. Respondents with mean score of exposure between 3.67 and 5.00 were classified into have a high level positive media exposure.

In this study table 4.3 shows that 68.5% of the respondents were exposed positive media at a medium level.

Table 4.3 Percentage of respondents by the positive media exposure levels.

Positive media exposure levels	Number	Percent
Low (1.00-2.33)	156	28.0
Medium (2.34-3.66)	328	68.5
High (3.67-5.00)	16	3.5

Table 4.4 shows percentage of respondents by positive media retention, majority of respondents could remember positive media on internet ($\bar{X}=3.71$), television ($\bar{X}=3.58$) and the least of respondent could remember positive media on to radio ($\bar{X}=1.87$).

Table 4.4 Percentage of respondents by positive media retention

M= Most, MU = Much, MO = Moderate, L = Less, N = Never

Positive media	M	MU	MO	L	N	(\bar{X})
1. Television	25.8	27.3	30.9	10.8	5.2	3.58
2. Radio	0.8	4.8	17.4	34.8	42.2	1.87
3. Poster	6.0	11.8	29.6	33.2	19.4	2.52
4. Billboards	5.8	14.7	32.9	29.5	17.1	2.63
5. Newspaper	5.4	12.2	29.2	32.0	21.2	2.49
6. Megazine	1.8	6.0	27.2	35.0	30.0	2.15
7. Theatre (before and after show movie)	6.4	14.2	30.4	29.8	19.2	2.59
8. Internet	33.7	25.7	24.0	11.0	5.6	3.71
9. Pack of cigarette	32.4	18.0	17.8	12.2	19.6	3.31
10. Disco /karaoke/game center	6.6	12.2	23.0	30.2	28.0	2.39
11. The exhibition/activity about smoking campaign at school, shirt, hat, etc.	14.8	17.6	30.4	25.2	12.0	2.98
12. Other	4.0	4.2	4.2	3.0	84.6	1.40

The positive media retention was categorized into 3 level. When the mean score of media retention was between 1.00 and 2.33, the positive media retention level was classified into a low level. If the mean score was between 2.34 and 3.66, their retention was classified into a medium level. Respondents with mean score of retention between 3.67 and 5.00 were classified into a high score positive media retention.

In this study Table 4.5 shows that 65.3% of the respondents could remember positive media in a medium level.

Table 4.5 Percentage of respondents by retention of positive media exposure

Positive media retention levels	Number	Percent
Low (1.00-2.33)	165	29.7
Medium (2.34-3.66)	311	65.3
High (3.67-5.00)	24	5.0

As shown in table 4.6 the percentage of respondents who like positive media, the majority liked positive media on television (35.6%) and nobody liked positive media on magazine.

Table 4.6 Percentage of respondents who like positive media

Liking of positive	Number	Percent
Television	188	37.6
Radio	1	0.2
Poster	15	3.0
Billboards	18	3.6
Newspaper	4	0.8
Theatre	16	3.2
Internet	127	25.4
Pack of cigarette	105	21.0
Disco /karaoke/game center	6	1.2
The exhibition/activity about smoking campaign at school,shirt,hat,etc	16	3.2
Other	4	0.8

No one liked the campaign for smoking prevention in any magazines.

Otherwise Table 4.7 below shows reasons of respondents liking by they could answer more than 1 answer, 64.4% of respondents liked positive media because argument/slogan and teaching of that media.

Table 4.7 Percentage of respondents by reasons for liking positive media

Reasons for liking positive media	Number	Percent
Beautiful image	90	18.0
Content of media	248	49.6
Song/music of media	47	9.4
Presenter of media	43	8.6
Argument/slogan/teaching	322	64.4
Other	13	2.6

*Respondents could answer more than 1 answer

4.1.3 Negative media exposure (advertising smoking) factors , consisted of exposure negative media, retention of negative media, liking of negative media and reasons for liking its.

Hence, respondents were asked about negative media exposure on to internet, sticker of star photo, sportswear, stadium, movie, calender, retail shop, peddle, field product such as cloth, earring etc, disco/karaoke/game center .

Table 4.8 shows percentage of respondents by negative media exposure, the majority exposed negative media on to retail shop ($\bar{X} = 3.12$), mean was 2.82 of internet and the least which the respondents were exposed negative media on calendar ($\bar{X} = 1.81$).

Table 4.8 Percentage of respondents by exposure to negative media.

M= Most, MU= Much, MO = Moderate, L = Less, N = Never

Negative media	M	MU	MO	L	N	(\bar{X})
1. Internet	19.6	13.4	21.4	20.8	24.8	2.82
2. Sticker of star photo	2.6	6.2	17.4	29.4	44.4	1.93
3. Sportswear	3.6	7.6	14.4	25.4	49.0	1.91
4. Stadium	4.3	9.8	15.6	24.8	45.5	2.03
5. Movie	7.0	13.0	21.8	20.2	38.0	2.31
6. Calendar	2.6	7.0	14.8	20.4	55.2	1.81
7. Retail shop	19.0	22.6	23.0	22.2	13.2	3.12
8. Peddle	5.8	8.6	23.2	28.2	34.2	2.24
9. Fielded product such as cloth, earring , etc.	3.6	7.4	14.2	24.6	50.2	1.90
10. Disco /karaoke/game center	7.4	10.8	18.0	25.0	38.8	2.23
11. Other	1.6	1.0	1.4	2.8	93.2	1.15

The negative media exposure was categorized into 3 levels. When the mean score of negative media exposure was between 1.00 and 2.33, the negative media exposure was classified into a low level. If the mean score was between 2.34 and 3.66, their exposure was classified into a medium level. Respondents with mean score of exposure between 3.67 and 5.00 were classified into a high score negative media exposure.

In this study Table 4.9 shows that 62.2 % of the respondents were exposed to negative media at a low level.

Table 4.9 Percentage of respondents by negative media exposure levels.

Negative media exposure levels	Number	Percent
Low (1.00-2.33)	311	62.2
Medium (2.34-3.66)	172	34.4
High (3.67-5.00)	17	3.4

Table 4.10 shows percentage of respondents by negative media retention, majority could remember negative media on internet ($\bar{X}=2.81$), retail shop ($\bar{X}=2.73$) and the least which the respondents could remember negative media is the calendar ($\bar{X}=1.80$).

Table 4.10 Percentage of respondents by negative media retention

M= Most, **V** = Very, **MO** = Moderate, **L** = Less, **N** = Never

Negative media (n= 500)	M	V	MO	L	N	(\bar{X})
1. Internet	16.4	16.6	21.8	22.2	23.0	2.81
2. Sticker of star photo	2.6	6.2	18.4	25.0	47.8	1.91
3. Sportswear	4.6	6.2	13.2	24.8	51.2	1.88
4. Stadium	5.3	6.4	14.4	24.6	49.3	1.94
5. Movie	4.4	11.0	23.0	21.0	40.6	2.18
6. Calendar	2.4	5.6	14.8	23.8	53.4	1.80
7. Retail shop	12.6	17.4	22.2	26.2	21.6	2.73
8. Peddle	4.0	9.8	21.6	27.4	37.2	2.16
9. Fielded product such as cloth, sportswear, stadium, calendar etc.	3.6	8.6	15.4	23.8	48.6	1.95
10. Disco /karaoke/game centre	4.6	12.2	18.0	22.4	42.8	2.13
11. Other	1.8	2.0	2.8	3.6	89.8	1.22

The negative media retention was categorized into 3 level. When the mean score of retention media was between 1.00 and 2.33, the negative media retention level was classified into a low level. If the mean score was between 2.34 and 3.66, their retention was classified into a medium level. Respondents with mean score of retention between 3.67 and 5.00 were classified into a high score negative media retention.

In this study table 4.11 shows that 65.2 % of the respondents could remember negative media in low level.

Table 4.11 Percentage of respondents by retention negative media exposure

Negative media retention levels	Number	Percent
Low (1.00-2.33)	326	65.2
Medium (2.34-3.66)	153	30.6
High (3.67-5.00)	21	4.2

Table 4.12 shows percentage of respondents who liked negative media, majority of respondents liked negative media on internet (34.0%) and the least of respondents liking negative media on calendar (0.2%).

Table 4.12 Percentage of respondents who like negative media

Liking of negative media	Number	Percent
Internet	170	34.0
Sticker of star photo	15	3.0
Sportswear	3	0.6
Stadium	7	1.4
Movie	22	4.4
Calendar	1	0.2
Retail shop	145	29.0
Peddle	24	4.8
Fielded product such as cloth, earring , etc.	7	1.4
Disco/karaoke/game center	27	5.4
Other	79	15.8

Table 4.13 shows reasons of respondents liking. They could select more than one answer, 64.4% of respondents liked negative media because argument/wording of the media.

Table 4.13 Percentage of respondents by reasons regarding liking negative media

Reasons regarding prefer negative media	Number	Percent
Notable	100	20.0
Content of media	108	21.6
Song/music of media	23	4.6
Presenter of media	27	5.4
Beautiful image/symbol	67	13.4
Slogan/wording	145	29.0
Other	80	16.0

*Respondents could select more than one answer

4.1.4 Psychological factors (motivation, attitude, perception about smoking)

Percentage of respondents by motivation about smoking was shows in Table 4.14 majority of respondents have positive of motivation that show in 7,8,3 item such as “the prevention smoking campaign to make their don’t want to smoke” ($x_{\square} = 3.98$), “my friend is warning me about the behaviour of smoking” ($x_{\square} = 3.73$), and “ I obey my parents warn me not to be friends with the smokers” ($x_{\square} = 3.65$). the least of respondents agreed with they would like smoking according to member of my family ($\bar{X} = 1.47$).

Table 4.14 Percentage of respondents by motivation to smoking.**VG= Very agree , A= Agree , MO = Moderate , DG = Disagree , VD = Very disagree**

Motivation to smoking	VG	A	MO	DG	VD	(\bar{X})
1. I prefer to smoke.	2.8	4.0	12.6	19.2	61.4	1.68
2. I would like to smoke according to member of my family.	1.6	1.8	6.8	22.0	67.8	1.47
3. I obey my parents warn me not to be friends with the smokers.	37.6	20.2	22.8	8.8	10.6	3.65
4. It is so easy for me to buy cigarette.	7.6	8.0	18.6	26.8	39.0	2.18
5. I have seen my friend smoked and rather like to do so.	3.0	2.6	11.4	23.0	60.0	1.66
6. Smoking help me to be accept from the group.	2.6	3.6	6.8	23.4	63.6	1.58
7. Campaign of protect the smoking to make me not eager smoke.	45.8	26.6	15.0	4.6	8.0	3.98
8. My friend is warning me about the behavior of smoking.	36.4	28.6	17.0	7.6	10.4	3.73
9. The cigarette spots of many media make me eager to have experience of smoking.	2.4	5.8	10.0	24.4	57.4	1.71
10. Movie stars smoking make me eager to have experience of smoking.	2.2	3.2	7.0	23.6	64.0	1.56

Table 4.15 shows that 54% of respondents have been high level of motivation to smoking . And only 46% have been low level motivation to smoking.

Table 4.15 Levels of motivation to smoking (motivation 2 level when finding median of the total)

Levels of motivation to smoking	Number	Percent
High Level	270	54
Low Level	230	46

Median = 43 QD=4.4 Min = 16 Max = 50

Percentage and mean of respondents by attitude about smoking Table 4.16 shows the majority of respondents have been attitude about smoking that it not good and not appropriate show in 3,4,5,7 and 10 item. Such as “I think smoking is waste money”($\bar{X}=4.11$), “I think smoking is the bad behavior of the adolescence” ($\bar{X}=4.06$), “I think smoking is taking to drug abuse” ($\bar{X}=4.02$). “I think smoking is dangerous and it would be negative than positive”($\bar{X}=4.02$) and “I think smoking is behaviour for not inmitate” ($\bar{X}=4.02$). And the least of respondents agreed with smoking made me confident. ($\bar{X} = 1.58$).

Table 4.16 Percentage of respondents by attitude to smoking.**VG= Very agree , A= Agree ,MO = Moderate , DG = Disagree , VD = Very disagree**

Attitude to smoking	VG	A	MO	DG	VD	(\bar{X})
1. I think that smoking made me smart.	2.8	4.0	12.6	19.2	61.4	1.63
2. I think smoking made me confident.	1.6	1.8	6.8	22.0	67.8	1.58
3. I think smoking is waste money.	37.6	20.2	22.8	8.8	10.6	4.11
4. I think smoking is the bad behaviour of the adolescence.	7.6	8.0	18.6	26.8	39.0	4.06
5. I think smoking is taking to drug abuse.	3.0	2.6	11.4	23.0	60.0	4.02
6. If someone in my peer group are smoking, I think I have to do so.	2.6	3.6	6.8	23.4	63.6	1.62
7. I think smoking is dangerous and it would be negative than positive.	45.8	26.6	15.0	4.6	8.0	4.01
8. I think smoking is difficult to given up.	36.4	28.6	17.0	7.6	10.4	3.61
9. I think to try smoking of only one is not effect to addict.	2.4	5.8	10.0	24.4	57.4	2.23
10. I think smoking is behaviour for not immitate.	2.2	3.2	7.0	23.6	64.0	4.00

Table 4.17 shows that 54.6 % of respondents have been attitude on negaive to smoking (wrong attitude about smoking). And only 45.4% was positive attitude to smoking (right attitude about smoking) .

Table 4.17 Levels of attitude to smoking (attitude 2 level when finding median of the total)

Levels of attitude to smoking	Number	Percent
Negative	273	54.6
Positive	227	45.4
Median = 42 QD=5 Min = 22 Max = 50		

The percentage of respondents by perception about smoking Table 4.18 shows the majority of respondents perception that smoking is cause of the mouth disease. ($\bar{X} = 4.38$). Smoking make older ($\bar{X} = 3.95$) and smoking makes a bad body odour ($\bar{X} = 4.38$). And the least of respondents perception with smoking is helping to prevent a cold. ($x_{\square} = 1.85$).

Table 4.18 Percentage of respondents by perception about risk opportunity of disease from smoking.**VG= Very agree , A= Agree ,MO = Moderate , DG = Disagree , VD = Very disagree**

Perception about smoking	VG	A	MO	DG	VD	(\bar{X})
1. Smoking is cause of the mouth disease.	60.9	27.1	5.6	1.4	5.0	4.38
2. Smoking is low perception of the smell and the taste of food.	33.4	31.4	20.8	5.4	9.0	3.75
3. The young who is smoking has a lower intellectual than the one who is not smoke	28.4	25.0	18.8	10.6	17.2	3.37
4. Smoking make older.	40.0	33.2	15.0	5.4	6.4	3.95
5. Smoking is helping to prevent a cold.	6.0	6.0	10.6	21.8	55.6	1.85
6. Smoking is increase risk for heart disease.	37.2	28.6	19.6	6.6	8.0	3.80
7. Smoking of the young is not harm to body.	8.8	8.6	7.6	19.2	55.8	1.95
8. Smoking makes a bad body odour.	42.0	23.8	19.8	6.8	7.6	3.86
9. Smoking is harm for only lung disease.	17.8	22.0	31.6	14.6	14.0	3.15
10. Smoking is to relief the stress.	8.8	9.2	18.2	21.0	42.8	2.20

Table 4.19 shows that 54.8 % of respondents ‘ perception about smoking was low perception about opportunity of disease from smoking. And only 45.2% was high level perception about opportunity of disease from smoking.

Table 4.19 Levels of perception about risk opportunity of disease from smoking (attitude 2 level when finding median of the total)

Levels of perception about smoking	Number	Percent
Low levels	274	54.8
High levels	226	45.2

Median = 38 QD=4 Min = 21 Max = 50

4.15 Distribution of respondents by smoking behavior (smoker/non smoker, want to try smoking, frequency of smoking, age of start smoking, cause of smoking, occasion of smoking and to try other drugs.)

Table 4.20 below shows percentage of experience to smoking, 61.0% non smoking , 17.4% abstinence and 21.6% current smoker. 17.4% present time were smoking.

Table 4.20 Percentage of respondents by experience to smoking .

Experience to smoking	Number	Percent
Non smoking	305	61.0
Have experience		
- Current smoker	87	17.4
- Abstinence	108	21.6

Table 4.21 shows percentage and number of non smoker who want to try and don't want to try smoke. 98% of non smoker don't want to try smoke.

Table 4.21 Percentage of non smoker who want to try and don't want to try smoking (especially respondents who don't smoke)

Wanting to try smoke	Number	Percent
Want to try smoke	6	2.0
Don't want to try smoke	299	98.0

Table 4.22 below shows percentage of respondents by age of start smoking. Majority of smoker start to smoke at 12-14 years old (51.8%).

Table 4.22 Percentage of respondents by age of start smoking.

Age of start smoking	Number	Percent
6-8	11	5.6
9-11	80	41.1
12-14	101	51.8
≥15	3	1.5

Median = 12 QD = 1.5 Min = 6 Max =15

Table 4.23 shows percentage of respondents by cause of smoking. The respondents could select more than one answer. 46.2% reported that they smoke because they want to try it.

Table 4.23 Percentage and number of cause of smoking.(especially respondents who smoke)

Cause of smoking	Number	Percent
Relax	65	33.3
Smoking as a friend	62	31.8
Want to try smoke	90	46.2
Lonely Relieve	25	12.8
Smoking for accept	17	8.7
Smoking for confident	10	5.1
Smoking for smart	8	4.1

*Respondents could select more than one answer

Table 4.24 shows percentage of respondents by occasion for smoking by respondents could select more than one answer. The majority of smoker will smoked when their stress (55.9%).

Table 4.24 Percentage of respondents by occasion for smoking.

Occasion for smoking	Number	Percent
Lonely	37	19.0
Stress	109	55.9
Nervous	8	4.1
after meal	23	11.8
before meal	7	3.6
after wake	11	5.6
every time for occasion	46	23.6
break between class	37	19.0
other	11	5.6

*Respondents could answer more than 1 answer

Table 4.25 shows percentage of respondents who ever try to other drugs. Respondents could select more than one answer. Majority of respondents never try other drugs (67.2%).

Table 4.25 Percentage of respondents who ever try to use other drugs

Try to use other drugs	Number	Percent
Never	336	67.2
Alcohol	129	25.8
Amphetamine	7	1.4
Marijuana	35	7.0
Cottage	54	10.8
Heroin	10	2.0
Metamphetamine	7	1.4
Other	13	2.6

*Respondents could select more than one answer

4.2 Association between independent variables and smoking behavior.

4.2.1 Association between smoking behavior and socio-demographic factors.

Table 4.27 describes the relationship between smoking behavior and socio-demographic factors

There was a significant association between gender with smoking behaviour ($p\text{-value} < 0.001$). Male students were nearly 2 times more likely to smoke than female students. When asked about GPA, students who had been GPA between 0.01 to 1.00 were 3.60 times more likely to smoke than those who other GPA group. Students who live with other (friend and dormitory of athelets) were 1.30 times more likely to smoke than those live with father, mother, parent or relative ($p\text{-value} = 0.003$). Student who spent time with family on Monday-Friday between on 0-4 hours were 1.53 times more likely to smoke than those who spent time with family on Monday-Friday 20-24 hours ($p\text{-value} = 0.003$) Student who spending time with family on

weekend between on 0-4 hours were 6.44 times more likely to smoke than those who spending time with family on weekend other times (p-value<0.001) as illustrated in Table 4.26.

Table 4.26 Association between socio- demographic factors and experience to smoking.

Socio-demographic factors	Smoking behaviour			(95% CI)	p-value
	N	Yes (%)	No (%)		
Gender					<.001*
Male	254	46.9	53.1	1.97 (1.37-2.84)	<.001
Female	246	30.9	69.1	1	
Age					0.289
12-14	347	37.5	62.5	1	
15-17	153	42.5	57.5	1.23 (0.84-1.82)	0.289
Median = 14 , QD= 1 , Min = 12, Max = 17					
Class					0.524
Grade 7	191	41.9	58.1	1	
Grade 8	164	38.4	61.6	0.87 (0.57-1.33)	0.506
Grade 9	145	35.9	64.1	0.78 (0.497-1.21)	0.263
Living allowance (bath/day)					0.148
1-100	156	32.7	67.3	1	
101-200	312	42.0	58.0	1.49 (0.996-2.23)	0.052
201-300	32	40.6	59.4	1.41 (0.65- 3.08)	0.390
Median= 60 QD=25 Min = 20 Max=300					

Table 4.26 Association between socio- demographic factors and experience to smoking. (cont.)

Socio-demographic factors	Smoking behavior			(95% CI)	p-value
	n	Yes (%)	No (%)		
GPA					0.008*
0.01-1.00	41	61.0	39.0	3.60 (1.70-7.61)	0.001
1.00-2.00	13	40.0	60.0	1.54 (0.90-2.62)	0.116
2.01-3.00	21	38.8	61.2	1.46 (0.89-2.39)	0.133
3.01-4.00	10	30.3	69.7	1	
	9				
Median = 2.50 QD=0.5 Min = 0.07 Max = 4.00					
Person who students stay with					0.004*
Father	49	50.0	50.0	1	
Mother	91	38.5	61.5	0.63 (0.31-1.28)	0.198
Parent	25	34.4	65.6	0.53 (0.28-0.99)	0.046
Relative	44	27.3	72.7	0.38 (0.16-0.91)	0.029
Other	69	56.5	43.5	1.30 (0.62-2.75)	0.492

Table 4.26 Association between socio- demographic factors and experience to smoking. (cont.)

Socio-demographic factors	Smoking behaviour		(95% CI)	p-value	
	n	Yes (%)			No (%)
Spending time with family on Monday- Friday				0.003*	
0-4 hour	77	51.9	48.1	1.53 (0.77-3.05)	0.224
5-9 hour	139	43.9	56.1	1.11 (0.60-3.05)	0.746
10-14 hour	139	35.3	64.7	0.77 (0.41-1.45)	0.418
15-19 hour	87	24.1	75.9	0.45 (0.22-0.92)	0.029
20-24 hour	58	39.0	61.0	1	
Spending time with family on Weekend				< 0.001*	
0-4 hour	35	71.4	28.6	6.44 (2.90-14.29)	<0.001
5-9 hour	80	52.5	47.5	2.85 (1.66-4.88)	<0.001
10-14 hour	102	35.3	64.7	1.40 (0.84-2.35)	0.195
15-19 hour	90	42.2	57.8	1.88 (1.12-3.17)	0.018
20-24 hour	193	28.0	72.0	1	

4.2.2 Association between experience to smoking and positive media exposure factors.

Table 4.27 describes the relationship between smoking behaviour and positive media exposure

There was a significant association between smoking behaviour and positive media exposure (anti-smoking campaign) (p-value=0.039). Students who exposed positive media at high level were 2.33 times more likely to smoke than those who exposed to it at low level. as illustrated in Table 4.27.

Table 4.27 Association between Positive media and experience to smoking.

Exposure media	Smoking behaviour			Crude OR (95% CI)	P-value
	n	Yes (%)	No (%)		
Level of Positive media exposure					0.039*
Low	156	30.0	70.0	1	
Medium	328	42.1	57.9	1.70 (1.10-2.63)	0.017
High	16	50.0	50.0	2.33 (0.82-6.66)	0.114
Level of retention of positive media					0.082
Low	165	32.9	67.1	1	
Medium	311	40.9	59.1	1.42 (0.93-2.15)	0.105
High	24	54.2	45.8	2.42 (1.01-5.81)	0.049

4.2.2 Association between experience to smoking with negative media exposure factors.

Table 4.28 describes the relationship between smoking behaviour and negative media exposure.

There was a significant association between smoking behavior and negative media exposure (cigarette sale promotion) (p-value=0.002), retention of negative media (p-value=0.019) Students who exposed negative media at high level were 6.02 times more likely to smoke than those who exposed to it at low level. Otherwise students who could remember about negative media in high level were 2.98 times more likely to smoke than those who could remember it in at low levels as illustrated in Table 4.28.

Table 4.28 Association between Negative media and experience to smoking

Exposure media	Smoking behavior			Crude OR (95% CI)	P-value
	n	Yes (%)	No (%)		
Level of negative media					0.002*
Low	311	35.0	65.0	1	0.002
Medium	172	42.0	57.6	1.37 (0.93-2.00)	0.109
High	17	76.5	23.5	6.02 (1.92-18.92)	0.002
Level of retention of negative media					0.019*
Low	326	35.3	64.7	1	
Medium	153	43.8	56.2	1.43 (0.97-2.12)	0.074
High	21	61.9	38.1	2.98 (1.20-7.40)	0.019

4.2.3 Association between experience to smoking and psychological factors consisted of motivation, attitude and perception.

Table 4.29 describes the relationship between smoking behavior and motivation about smoking. There was a significant association between smoking behavior and motivation about smoking. (p-value<0.001) When asked about motivation about smoking ,students who have been high motivation for smoking were 4.35 times more likely to smoke than those who have been low motivation for smoking as illustrated in Table 4.29.

Table 4.29 Association between motivation and experience to smoking.

Motivation	Smoking behavior		Crude OR (95% CI)	P-value	
	n	Yes (%)			No (%)
High levels	270	54.1	45.9	4.35 (2.93-6.46)	<0.001*
Low levels	230	21.3	78.7	1	<0.001

Median = 43 QD=4.38 Min = 16 Max = 50

Table 4.30 describes the relationship between smoking behaviour and attitude about smoking.

There was a significant association between smoking behaviour and attitude about smoking (p-value<0.001) Students who had been attitude on negative (wrong attitude about smoking) were 4.01 times more likely to smoke than those who had been attitude on positive (right attitude about smoking) as illustrated in Table 4.30.

Table 4.30 Association between attitude and experience to smoking.

Attitude	Smoking behavior			Crude OR (95% CI)	P-value
	n	Yes (%)	No (%)		
Negative	273	53.1	46.9	4.01 (2.71-5.95)	<0.001*
Positive	227	22.0	78.0	1	<0.001

Median = 42 QD=5 Min = 22 Max = 50

Table 4.31 describes the relationship between smoking behaviour and perception about smoking.

There was a significant association between smoking behaviour and perception about opportunity of disease from smoking (p-value<0.001). Students who had been perception on low level were 4.12 times more likely to smoke than those who had been perception on high level as illustrated in Table 4.31.

Table 4.31 Association between perception about risk opportunity of disease from smoking and experience to smoking.

Perception	Smoking behavior			CrudeOR (95% CI)	P-value of Chi-square test
	n	Yes (%)	No (%)		
Low level	274	53.3	46.7	4.12 (2.75-6.12)	<0.001*
High level	226	21.7	78.3	1	<0.001

Median = 38 QD=4 Min = 21 Max = 50

4.3 Predicting factors for smoking behavior of students

Full model of multiple logistic regression of predicting factors for smoking behaviour of students was shown in Table 4.32

All significant independent variables that had a relationship with smoking behaviour of students in the Chi-square tests were included in the full model. Data from this study would be mixed group such as GPA would mixed categorized into two groups, person who students stay with would mixed categorized into two groups, spending time with family on Monday- Friday would mixed categorized into two groups and spending time with family on weekend would mixed categorized into two groups too. In this full model, five variables were significant consisted of gender (p-value=0.040), spending time with family on weekend (p-value=0.003), motivation about smoking (p-value=0.004), attitude about smoking (p-value=0.034) and perception about smoking (p-value < 0.001)

Table 4.32 shows students who had a high level positive media exposure were 2.59 times more likely to smoke than those with a low level when adjusting for other factors. Students who had a high level of negative media exposure were 2.18 times more likely to smoke than those with a low level. However, these two variables were not significant associated with smoking. Students who had high motivation were 2.08 times more likely to smoke than those with low motivation. Students who had negative attitude were 1.75 times more likely to smoke than those with positive attitude. Students had a low level of perception were 2.54 times more likely to smoke than those with a high level of perception when adjusting other factors.

Table 4.32 full model of multiple logistic regression analysis for smoking behavior among students.

Variables	Adj.OR	Crude OR (95% CI)		P-value
		Lower	Upper	
Gender				0.040*
Male	1.61	1.02	2.52	
Female	1			
GPA				0.376
0.01-2.50	1.22	0.78	1.91	
2.51-4.00	1			
Person who students stay with				0.458
Parent	1			
Other	0.82	0.49	1.38	
Spending time with family on Monday- Friday				0.463
0-14 hours	1.19	0.74	1.92	
15-24 hours	1			
Spending time with family on weekend				0.003*
0-14 hours	2.22	1.31	3.78	
15-24 hours	1			

Table 4.32 full model of multiple logistic regression analysis for smoking behaviour among students. (cont.)

Variables	Adj.OR	Crude OR (95% CI)		P-value
		Lower	Upper	
Positive media (campaign media)				0.093
Lower level	1			
Medium level	1.68	1.01	2.80	
High level	2.59	0.69	9.75	
Negative media (cigarette advertising)				0.592
Lower level	1			
Medium level	1.04	0.57	1.90	
High level	2.18	0.49	9.74	
Retention of negative media				0.942
Lower level	1			
Medium level	0.99	0.54	1.83	
High level	1.25	0.32	4.82	
Motivation about smoking				0.004*
High level	2.08	1.26	3.45	
Low level	1			
Attitude about smoking				0.034*
Negative	1.75	1.04	2.93	
Positive	1			
Perception about opportunity of disease from smoking				<0.001*
Low level	2.54	1.57	4.12	
High level	1			

When the non-significant factors were removed from the model, the media positive exposure and media negative exposure were not significant associated with smoking. Table 4.33 shows students who had a high level positive media exposure

were 2.59 times more likely to smoke than those with a low level when adjusting for other factors. Students who had a high level of negative media exposure were 2.18 times more likely to smoke than those with a low level .

Table 4.33 final model of multiple logistic regression analysis for smoking behaviour among students.

Variables	Adj.OR	Crude OR (95% CI)		P-value
		Lower	Upper	
Gender				0.040*
Male	1.61	1.02	2.52	
Female	1			
Spending time with family on weekend				0.003*
0-14 hours	2.22	1.31	3.78	
15-24 hours	1			
Positive media (campaign media)				0.093
Lower level	1			
Medium level	1.68	1.01	2.80	
High level	2.59	0.69	9.75	
Negative media (cigarette advertising)				0.592
Lower level	1			
Medium level	1.04	0.57	1.90	
High level	2.18	0.49	9.74	

Table 4.33 final model of multiple logistic regression analysis for smoking behaviour among students. (cont.)

Variables	Adj.OR	Crude OR (95% CI)		P-value
		Lower	Upper	
Retention of negative media				0.942
Lower level	1			
Medium level	0.99	0.54	1.83	
High level	1.25	0.32	4.82	
Motivation about smoking				0.004*
High level	2.08	1.26	3.45	
Low level	1			
Attitude about smoking				0.034*
Negative	1.75	1.04	2.93	
Positive	1			
Perception about opportunity of disease from smoking				<0.001*
Low level	2.54	1.57	4.12	
High level	1			

Activity recommendation

Table 4.34 shows that students suggestion about smoking prevention campaign acitivities that majority of students want medias about smoking prevention on to teaching, exhibition . (83.2% and 81.2%)

Table 4.34 recommendation of students about smoking prevention campaign format that they want it.

Smoking prevention campaign activities	n	Percent
1. Discussion	370	74.1
2. Teaching	415	83.2
3. Debate	264	52.9
4. Exhibition	405	81.2
5. Interviewing someone who is famous.	225	45.1
6. Interviewing super star.	242	48.5
7. Movie about danger of smoking	395	79.2
8. Song about smoking prevention.	338	67.7
9. Game in computers	249	49.9
10. Game in papers.	264	52.9
11. Cartoon books.	351	70.3
12. Internet/facebook/social Network.	381	76.4
13. Line stickers	339	67.4

*Respondents could select more than one answer

CHAPTER V

DISCUSSION

The chapter presents discussion of the findings according to three independent variables groups: socio-demographic, media exposure and psychological factors ; motivation, attitude, perception. In course of discussion, findings were compared with previous studies and also in relation other findings in this study.

A cross-sectional study was conducted in 4 high schools under Bangkok Metropolitan Administration, Bangkok, Thailand. The study was conducted in Wichuthit School, Loissai Anusorn School, Kronggroum School, Wat Aungkaew School. There were a total of 500 respondents from 4 high schools in the study.

The aim of present study was determine factors affecting smoking behavior among junior high school students under Bangkok Metropolitan Administration, Bangkok, Thailand. In the current study, independent factors included were in socio demographic factors, media exposure factors and psychological factors. Data collection was carried out from 15th December 2015 to 15th January 2016 using a structured questionnaire.

5.1 Prevalence of smoking behavior

Smoking remains an important public health concern. Smoking is a major cause of death in the United State and smoking is common in youth (174). The worrisome is more than 3 million of those smokers are teenagers under 18 years old, the tobacco consumption is up to 500 millions per year which results in the direct medical care cost is up to 75 billion US dollars (175). In addition, from 11 billion smokers are in developing countries and over 50% in Asia respondents who are 13 – 15 years old it is found that 10 – 12% have tried smoking (176), 5.9% in Bangladesh, 56.5% in Timor-late (177), 38% in Indonesia, 30% in Taiwan 28% in the Philippines ,12% in Nepal and 30% in Thailand(176).

The results in this study showed that 195 students or 39% of respondents had experience to smoking. Experience to smoking, consisted of 21.6% abstinence and 17.4% were current smoker. The result in this study was higher than some previous studies. In United State the study of smoking behavior in college students in 18 – 24 years old showed that the smokers are only 12% of total sample (178). In addition, the comparison of smoking behavior of students in the same age range showed that the rate of smoking behavior varies from 22% to 30% (109,147,179).

In students who did not smoke cigarettes only 2% of them want to try smoking and 98% did not want to try it. While in students who smoked cigarette it was found that the majority of students had ever tried to smoke but not current smokers (40.2%), follow by current smoked but not daily smoking (28.4%).

The results in this study showed that the students age of smoking onset to smoke between 12 - 14 year olds (51.8%), followed by between 9 - 11 year olds (41%). This is because teenagers have curiosity, want to be accepted by friends, like to imitate the behaviors of close people and their favorite persons (180).

Students who smoking in this study, 46.2% they want to try smoking, follow by want to relax (33.3%) and over half of students were smoked when they are stress (55.9%). Occasion for smoking in this study, 55.9% smoked when their stress and smoked every time for occasion (23.6%). It indicates that stress and anxiety are emotional pressures that need to adjust for mental balance to make teenagers feel happy. Therefore, teenagers find ways to adjust the pressures from stresses. However, due to lack of experience in learning to adapt properly, they relieve themselves with smoking (181).

Moreover, the current study asked students about other drugs used. they Most respondents had never used (67.2%). Only 25.8% of respondents drank alcohol and this group might be smokers as well.

5.2 Socio – demographic profile

Out of total 500 study participants, the male gender constituted 50.8% (n=254) and 49.2% (n=246) were females. The age of the study was divided into 2 groups (12-14 years old (n=347) and 30.6% (n=153) and 15-17 years old (30.6%). Population was grade 7 (38.2%) ,8 (32.8%) and grade 9 (29.0%). The living allowance range 1-100 THB constituted 31.2% (n=156) , range 101-200 THB constituted 61.4% (n=312) and 6.4% (n=32) constituted by the daily income range 201-300 THB. Majority of student get grade range 2.01-3.00 constituted 42.9%(n=214), second range 1.00-2.00 constitute 27.1% (n=135). Students stay with parent constituted 50.0%(n=250), stay with mother constituted 18.2% (n=91), stay with other constituted 13.8% (n=69), stay with father constituted 9.2% (n=49) and 8.8%(n=44) constituted by stay with relative. Spending time with family on Monday-Friday of students between 5-9 hours constituted 27.8%(n=139) , between 10-14 hours constituted 27.8% (n=139), between 15-19 hours constituted 17.4% (n=87), between 0-4 hours constituted 15.4% (n=77) and 11.6%(58) constituted by spending time with family on Monday-Friday between 20-24 hours. Spending time with family on weekend of students between 20-24 hours constituted 38.5%(n=193) , between 10-14 hours constituted 20.4% (n=102), between 15-19 hours constituted 18.0% (n=90), between 5-9 hours constituted 16.0% (n=80) and 7.0% (n=35) constituted by spending time with family on weekend between 0-4 hours.

In answering this research question, socio-demographic factors were examined in this study. The details of these factors are discussed below.

5.2.1 Gender

With regards to gender, over half students who participated in this study were male (50.8%). Both bivariate and multivariate reveals gender of student was associated with smoking behavior among students (p-value<0.001, p-value0.040). Male students smoke more likely than female but gender and smoking behavior non associated when adjusting other factor in multivariate analysis revealed. This finding of our study supported previous studies that male smokers were higher than female smoker (182,11,179,183,184,185) may be from cultural reasons (182) in Thai social, smoker was almost in male which represents manhood and smoking was considered

as normal. Youth who were in the same group tend to had similar behavior. Therefore, when friends in the same group smoked they would also smoke to be recognized (152). Meanwhile, male were likely to socialize than female so they often seen or easily entered a place that had tobacco and more attached to friends. (11)

5.2.2 Age

With regard to age, students who participated in this study were 12-17 years old. Bivariate was not associated age and smoking behavior among students (p-value = 0.289).

The result in this study was not significant due to similar age among students (12-17 years old) which affect to similar experiences and same behavior especially smoking behavior because they have a similar recognition and interest in similar things (186).

Furthermore, this current study concurred with previous studies (179,187,188,189,190) that age of students were not linked with difference smoking behavior among students because each age range was in same environment which leaded to the similar perception (188) and junior high schools would have the curriculum about drugs including tobacco in health education subject. Schools must arrange the courses according to curriculums to provide knowledge to students. All kind of media should have a better understanding and knowledge on drugs. From media, secondary school students will obtain the similar knowledge which make secondary school students with different ages have no difference in smoking behavior (187).

In contrast, some studies found that earlier ages at smoking initiation in adolescence to be strongly correlated with subsequent adolescent smoking levels including both smoking amount and frequency. Adolescents who start smoking at an early age smoked more frequently and were heavier smokers than those who started at later age (191).

5.2.3 Class

Class of students in this study was grade 7-9. Chi-square was not associated class and smoking behavior among students (p-value=0.524).

This current study was not significant due to similar class (grade 7,8 and grade 9) among students and smoking behavior. The previous studies found that class had no effect on smoking behavior (11,192). This was due to students in the same age range had no difference in maturity. Their knowledge might come from learning and experience gained (188).

In previous studies reported that grade had effect on smoking. Students in higher grade were more likely to smoke than students in lower grades, indicating that older students are more likely to smoke (100,147,10,193). This might be due to students in higher grades were more active in social life and more independent than students in lower grades (193). If this study covers high school students the results may differ. That is education level may be correlated with smoking behavior due to the differences of samples.

5.2.4 Living allowance

With regard to pocket money, over half students who participated in this study were 101 – 200 THB (62.4%).

Chi-square test revealed that daily income was not associated with smoking behavior among students (p-value= 0.148). The result in this study concurred with previous studies that pocket money was not associated with smoking behavior (11,109, 194, 195). This result can be explained that Tobacco Products Control Act prohibits selling tobacco products to person under 20 years of age (196) which makes it difficult for early adolescents to access tobacco.

This was contrast with the studies by Thitithip Yimploy (95), Chuchai Supakorn and Naunanan (99) which found that income was the factor that encouraged smoking among youth. Students who spent money for smoking had to save in other expenses such as lunch and necessities (99)

5.2.5 GPA of students (school record)

With regard to GPA of students, majority of students are 2.01-3.00 (42.9%), 1.01-1.00 (27.1%) 21.8%, 3.01-4.00 ,0.01-1.00 (8.2%), respectively.

Chi-Square test showed that GPA of student was associated with smoking behavior (p -value=0.008). Students who have GPA between 0.01 to 1.00 were 3.60 times more likely to smoke than high GPA group.

It was similar with the result from previous studies that non-smoker had higher GPA than smoker (109,107,194, 106) . 30% of students who had GPA < 3.50 had ever tried smoking while only 7.9% of students who had GPA \geq 3.50 had ever tried smoking. It could be observed that the number of students who had GPA < 3.50 that had ever tried smoking was almost 4 times higher than students who had GPA \geq 3.50 (109). Over half of non-smokers had good or relatively good learning concentration while only 30.5% of smokers had good learning concentration (106).

Otherwise students who smoked tended to had poor achievement (107) because students with high GPA had more interested in study and could remember the contents in an instruction or contents on dangers and effects of tobacco in their lessons more than students with low GPA. Therefore, students with high GPA tended to have the accurate knowledge about tobacco. Students with low GPA trend to lack of knowledge about dangers of tobacco and thought that smoking made them do not tried easily and had good feeling to tobacco (197) so they tried smoking more .

However, the results showed that students with low GPA tended to smoke more than students with high GPA. So to prevent smoking in students, it should be focus to make students interest and dedicate to learning. This will encourage students to have good achievement and success in all subjects as well as will be the immune against smoking. In other words, if students concentrate to or interest in study and have good GPA it will reduce the risk of smoking.

There were the results that in contrasted with this study showed that. student achievement was not correlated with trying to smoke (11,198). Because adolescents perceived that trying to smoke was considered as common among adolescents. This did not only happen in children with learning problems but youths with good school records also smoked as well. Most of them smoked in various occasions in the gathering only to have fun (108).

5.2.5 Person who students stay with

With regard to person who students stay with, 50% of students stay with parent, stay with mother (18.2%) ,13.8% stay with other person such as stay with their friend in dormitory of athlete, stay with father (9.2%) ,8.8% of students stay with relative.

Chi-Square test showed that person who students stay with was associated with smoking behavior (p-value=0.004). Students who stay with other were 1.30 more likely to smoke than stay with father, mother, parent and relative.

It was similar with a previous studies that students who lived in different residences had different smoking behavior (199, 200, 112). Students who live in dormitory with friends, persuaded by friends, opportunities to party with friend were important factors of smoking (201) because it is important environment for student. Students who lived with their parents often had knowledge about tobacco more than lived with other people because students would gain knowledge from their parents (85). While several studies reported that having close friends or close people who smoked was significantly associated with smoking (106, 202, 203, 105, 194, 107, 204). More than a half of students who had close friends smoker had ever tried smoking while only 8.6% of students who didn't have close friends smoker had ever tried smoking (109,119, 203) because they are participated in social activities for fun and friendly so making new friends or creating relationship were easier (108).

In contrast, the study in Pattani (188) and Chaing Mai provience (11) found that residence had no effect of smoking behavior of student because smoking was not depend on only one factor but it was a result of personal and environmental factors such as imitating the person they respected (11).

5.2.5 Spending time with family

With regard to spending time with family consist of spending time with family on Monday- friday, and spending time with family on weekend. Spending time with family on Monday-Friday, majority of students are spending time 5-9 hours (27.8%), and 10-14 hours (27.8%), 15-19 hours (17.4%), 15.4% of students spent time with family 0-4 hours , 20-24 hours (11.6%).

Chi-Square test showed that Spending time with family on Monday-Friday was associated with smoking behavior (p -value=0.003). Student who spent time with family on Monday-Friday between on 0-4 hours were 1.53 times more likely to smoke than spent time with family on Monday-Friday 20-24 hours.

Student who spent time with family on weekend , majority of students are spending time 20-24 hours (38.6%), 10-14 hours (20.4%), 15-19 hours (18.0%), 5-9 hours (16.0%) , 0-4 hours (7.0%).

Both Chi-Square test and multiple logistic regression analysis showed that Spending time with family on weekend was associated with smoking behavior (p -value<0.001). Student who spent time with family on weekend between on 0-4 hours were nearly 7 times more likely to smoke than spent time with family other times on weekend .

This study results found spending time with family were significant because students who spent more time together of families both in weekdays or weekend spent time to do activities with their families. Their parents or guardians would provide information about dangers of tobacco and warned about tobaccos. This was because family was an institution that served in building the right foundation and shaping the behaviors of family members. These could make students able to adapt and live in societies securely and happily (205). Parents could arrange the activities or encourage useful activities for their children. This was consistent with the studies by Rungrat Pornchaiwattanakorn (114) that adolescents who did homework and read newspaper, listened to radio, watched TV were likely to smoke in free time less than those who did not activities. This might be because they had a lot of free time, lack of guidance to spend their free time usefully, lack of spiritual anchor so they turned to drugs easily (206). Parents who had no time to take care children or living alone by themselves without doing activities together might make children felt lonely, distracted and smoked (65).

While, majority of adolescents who spent less time with family in weekdays and weekends would take most of their time with friends. This was consistent with the study that found that (114) adolescents who have smoker friend were more likely to smoke than those who had friend non smoker because most teenagers spent almost of their time outside their home, so friends influenced their

attitudes, the choice of words, interests and behavior more than family members. (207) and wanted to be accepted by their friends. Therefore, it was often observed that the inappropriate behaviors of adolescents arose from imitating or persuading by friend and they usually comply with their group (206).

5.3 Media exposure factors

Media exposure in this study consists with mass media and specialized media related to smoking which can be divided in to 2 main types which are:

1. Exposure to positive media about tobacco (anti-smoking media campaign), the ability to recognize such positive media and positive media preferences.

2. Exposure to negative media about tobacco (advertising encourage smoking), the ability to recognize such negative media as well as negative media preference.

The details of the discussion are presented below.

5.3.1 Media exposure

Respondents were asked about exposure media on to television, radio, poster, billboard, newspaper, magazine, theatre, internet, pack of cigarette, disco/karaoke/game center and exhibition/activity about smoking campaign.

The majority of respondents exposed positive media on to internet ($\bar{X} = 3.88$), and television was 3.51, and the least are radio ($\bar{X} = 1.70$) that concurred with study of Sopana Kittiratchawan reported that majority of respondents exposed campaign media on TV (broadcast media) ($m = 3.21$), Internet ($m = 2.62$) (55). Because TV media can access to a large audiences, easily recognized because of color, light, sound and motion picture and not limited by literacy while students were least exposed to radio media because radio media also have the limitation on perception because only listening cannot results in good consumer's perception. The interests of consumers on such information may decrease because most consumers do something while listening to radio (208).

Respondents were asked about negative media exposure on to internet, sticker of star photo, sportswear, stadium, movie, calender, retail shop, peddle, field product such as cloth, earring etc, disco/karaoke/game center .

Respondents by negative media exposure, the majority exposed negative media on to retail shop ($\bar{X} = 3.12$), internet ($\bar{X} = 2.82$) and the least are calendar ($\bar{X} = 1.81$). The previous studies showed that there were at least one or more types of tobacco advertising and promotion at point of sale in retail shop (137). The companies or sellers believe that advertising is important for their businesses because the advertising will motivate juvenile to smoke. Moreover, the major source of tobacco advertising was vendors, especially smokers who live in rural area followed by on the mirrors of shops or in shop selling tobacco (10).

Chi-Square test indicated that both positive media exposure and negative media exposure were associated with experience smoking (p-value =0.039, p-value = 0.002).

The positive or negative media, affected to students smoked more than ones who didn't perceive that media but the negative media affected to the smoking behavior. It was more than 6.0 times, while the affected from the positive media downed to 2.33 times.

It was similar with the result from previous studies that positive media affected to students more smoked. (179,112). It may be dicuss that students received a lot of anti-smoking media campaign and make them have knowledge about tobacco but adolescences are more open to trying on which provide even more opportunities for students to access tobacco (179,112). It is a challenge and makes adolescents want to try smoking. There are other factors that encourage students to smoke such as easy access to tobacco (109). Students also exposure to various positive media but the effectiveness is inadequate as well as students do not interest or it does not meet their need (12). If there are media campaigns or campaign programs that are interesting and meet the needs of students, they can help prevent smoking among students (209).

An evaluation of California's Tobacco Education and Media Campaign concluded that the campaign contributed reductions in smoking prevalence among both youth and adults. And the campaign encouraged adult smokers to quit and deterred smoking initiation among youth. 24 An earlier study found that California's

anti-tobacco media campaign reduced cigarette consumption. In its early years, the California tobacco control program produced a 10-percent to 13-percent decline in cigarette consumption, with about a fifth of the decline caused by the media campaign alone (210).

For exposed negative media in the current results supported previous studies (211,137,212) that student who exposed negative media at a high level to smoke more than exposed negative media at a low level because level students aged 13-15 years age is a vulnerable group and are easily tempted by tobacco promotion. Most students will notice the person who smoked in media or Internet and notice the cigarette advertising at shop (182), especially having famous people smoked in mass media resulted in higher smoking behavior among students. This might due to the values of adolescents that preferred imitating actors/actresses, singers or celebrities on various media. When adolescents saw these people smoked they tended to crave to smoke as on that media. If mental state of youth were not strong enough, they might smoke as well. Youth who frequently saw actors/actresses smoked in various media had higher smoking behavior than those who saw it occasionally or never saw/ watch that media (147). As well as having utensils, clothing that had the tobacco brands or see the name of tobacco brand on various media might encourage higher smoking behavior. In due to frequently seeing these symbols or names made students want to try smoking. When they wanted to try smoking they would buy the brand they saw and when they were attracted they would repeat smoking habit (147). In addition, media presented both image, audio and animation making it was interesting and could attract audience to see it. When adolescents exposed to an interesting media about tobacco promotion that, they would absorb such information and subsequently imitated smoking behavior (213).

The tobacco companies purposely market to youths because they know that few people initiate smoking in adulthood, and the tobacco industry's advertising and marketing strategies are indeed quite effective and are responsible for increasing the rate at which young people start smoking (214, 215).

5.3.2 Retention of media

Retention of positive media

Majority of respondents could remember positive media on internet ($\bar{X}=3.71$), television ($\bar{X}=3.58$) and the least are media on to radio ($\bar{X}=1.87$).

Chi-square test revealed that retention of positive media not associated with smoking behavior (p-value = 0.082).

The result in this study was not significant because anti-smoking media campaigns the students in Bangkok exposed were inadequate effective, discontinuous and lack of consistency (12). Students could remember only in short-term memory. If it was not reviewed or used regularly, it would be forgotten. Therefore, the existing anti-smoking media campaigns had no effect on smoking behaviors of students (216). Although some students could remember media more than others, if media was discontinuous and inconsistency students would forget them. Such media therefore had no effect on smoking behavior. There were also other factors encouraging students to smoke such as personal, family, friend factors (217).

This current study contrasted with the study in Australia that the national campaign used graphic in advertising to emphasize smoker's health. This made smokers remembered, learned as well as affected the attitude on risk of smoking and led to smoking cessation (218).

This study which found that most students tended to prefer anti-smoking media campaign on television (35.6%), followed by on internet (27.4%) and on cigarette case (21.0%), respectively. Most students preferred the argument/ slogan/ teaching (64.4%),

Retention of negative media

The majority of respondents could remember negative media on internet ($\bar{X}=2.81$), retail shop ($\bar{X}=2.73$) and the least are calendar ($\bar{X}=1.80$).

Previous studies reported that television provides the greatest exposure among smokers, and that smokers are more likely to be heavier users of television and radio and less likely than non-smokers to be magazine or newspaper readers (219).

Chi-Square Test revealed that retention negative media associated with smoking behavior (P-Value =0.019). Student who could remember about negative media in high level were 2.98 times more likely to smoke than those who could remember it in low levels. It similar with results in United State which reported that scenes with smoking remain common in movies and, to a lesser extent, on prime-time television. Hollywood seems to use smoking as a shorthand for troubled or antiestablishment characters, but the smoking status of the actors themselves is also influential in whether their characters will smoke on-screen (220) because students who saw the interesting tobacco advertising both patterns or sometimes presented by students' favorite people such as actors/actresses smoked in movies or product placement in various from that encouraged students to prefer and remember it. If such advertising was presented by images and interesting, It could be better recognized as well as could be recognized when students remembered its contents (219). This would lead to word of mouth or behavior.

In this study it was found that students who liked negative media, majority of respondents liked negative media on internet (34.0%) , 29.0% liked negative media on retail shop and the least of respondents liking negative media on calendar (0.2%) which were the first two of negative media students exposed the most. It was found that the main reason that made student like negative media was the liking in argument/wording of the media.

5.3.3 ACTIVITY RECOMMENDATION

Students suggestion about smoking prevention campaign activities that majority of students want medias about smoking prevention on to teaching, exhibition . (83.2% and 81.2%) and the least were interviewing someone who is famous. In 2016 Thai Health Promotion Foundation and Tobacco Control Research and knowledge management Center. has organized the contest media campaign on the topic of "Youth know smoking" clip video, expanding smoke-free home network to the community, young media producer, preparation of tobacco advertising in various formats (221) in order to develop the media to be up-to-date and meets the needs of adolescents. At present, there is no development of teaching styles in classroom and modern and interesting exhibition.

5.4 Psychological factors

This section presents discussion of findings about psychological factors namely: motivation, attitude and perception about smoking.

5.4.1 Motivation about smoking

This current study consisted of access of smoking, wanting try smoking, exposure media, prevention campaign activity, model from parent and friend. Majority of students have high level motivation to smoking (54%), 46% have low motivation to smoking. The majority of respondents agreed that the prevention smoking campaign to make they don't want to smoke ($\bar{X} = 3.98$). And the least of respondents agreed with they would like smoking according to member of my family ($\bar{X} = 1.47$).

Both bivariate and multivariate analysis revealed that motivation to smoking was associated with smoking behavior among students (p-value <0.001 , when adjusting other factors p-value=0.004). Students who had high level motivation to smoking were 4.35 times more likely to smoke than those who had motivation low level because motivation stimulated human to behave as expected or desired (222).

It was similar with the previous studies that students with have high level motivation to smoking which consisted of personal preference, easy to access tobacco, tobacco use of family members, advertising media or model on media were all the incentives making students curious to try and imitate (222,223,133).

In addition, students who wanted to try smoking, they have high motivation to smoking (133). Teenagers were curious to try and believed that tobacco could suppress, relieve stresses ,enjoyment, curiosity, freedom (148). Therefore, trying smoking is one of experiences that arise from motivation and satisfaction. Imitation person that smoking was high motivation about smoking.. Children often started to imitate their friends, parents, teachers and the important person they admired. This was also consistent with the concept of external motivation in the social motivation and imitation aspects that teachers, Buddhist monks, doctors, health authorities, actors/actresses, singers and group leaders who were socially accepted were the role models for people (224).

In the other hand, students who have motivation to quit smoking such as their own health and the motivation to be accepted by friends were associated with the

intentions to quit smoking. Especially, if students had friends that wanted to quit smoking, it would motivate students to quit smoking as well. Families and parents also significantly contributed to smoking and quitting smoking (225).

5.4.2 Attitude about smoking

Attitude was divided into 2 groups consisted of negative attitude is think that smoking is good and positive attitude is think that smoking is not good.

With regard attitude about smoking, 54.6 % of attitude respondents about smoking was negative attitude. 45.4% was positive score which was different from the study by Nonsee Sutchatham who found that most respondents had the positive attitudes toward smoking (225).

The majority of respondents agreed that smoking wasted money. ($\bar{X} = 4.11$). And the least of respondents agreed that smoking made them confident. ($\bar{X} = 1.58$).

Both bivariate and multivariate analysis revealed that attitude about smoking was associated with smoking behavior among students (p-value <0.001 ,p= 0.034 when adjusting other factors).

This current study found that students who had negative attitude were 4.01 times more likely to smoke than those who had been attitude on positive. This was consistent with the study in Muldives which found that students who had poor attitude are risk of being a smoker than those who had good attitude (226) because attitude was the important factor of behavior. If people liked, agreed or thought that behavior was useful they were more likely to have that behavior (149). From this study, it could explain that students who had negative attitudes which perceived that smoking was useful such as smoking made them look smart and confident and thought that just one cigarette stick would not make them addicted, students were more likely to smoke. On the other hand, if students had positive attitudes or not agreed with smoking they would aware of dangers of smoking and were less likely to smoke (94,130)

On the other hand, attitude on smoking was not associated with smoking behavior of high school students in Pattani because these students had similar attitude on smoking which resulted in no difference between attitude (188).

5.4.3 Perception about risk opportunity of disease from smoking.

In this study it was the perception of risk of diseases caused by smoking.

With regard perception about risk opportunity of disease from smoking, 54.8 % of respondents was low level perception and 45.2% was high level of perception.

The majority of respondents perceived that smoking is cause of the mouth disease ($\bar{X} = 4.38$). And the least of respondents perception with smoking is helping to prevent a cold. ($\bar{X} = 1.85$).

Both Chi-Square test and multiple logistic regression analysis showed that perception about smoking was associated with smoking behavior among students (p -value < 0.001). Students who have a low level were 4.12 time more likely smoke than a high perception.

It was similar the result from previous studies (77,18,227) that the perception of risk of disease by smoking was significantly associated with anti-smoking and could predict smoking behavior or affected to smoking behavior of students. It was the most important and influential factor that made people recognize the importance of being healthy and have healthy behavior (77). When students have perception they appreciate the value of self-protection and learning will subsequently take place. Perception is important to learning. Without perception, learning cannot take place. When learning takes place people tend to response by not smoking. With low level of perception, people tend to have high smoking behavior (228).

CHAPTER VI

CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This section presents conclusion on the research objective. The following conclusions were based on five parts in this study.

6.1.1 Smoking behavior of students

The prevalence of smoking behavior among students among students under Bangkok Metropolitan Administration was found that the majority of respondents were non smoker (61%) and 39% were experience to smoking . Experience to smoking consisted of 21.6% abstinence and 17.4% were current smoker. and 98% don't want to try smoke. 40.2% of smoker ever try smoking but present not smoke. Majority of age of smoking onset at 12-14 years old (51.8%).

With regarding cause of smoking, 42% reported that they smoke because they want to try it. 33% were smoke because they want to relax. And occasion for smoking the majority of smoker will smoked when their stress (55.9%) and 23.6% every time for occasion. 67.2% of respondents never try other drugs.

6.1.2 Socio demographic factors and smoking behavior

The frequency of respondents were age between 12-14 year s old(69.4%). The youngest was 12 years old and oldest was 17 years old. 38.2% of the respondents were in grade 7 and 62.4% had having allowance per day in 101-200 baht. With regard to GPA, 42.9% had GPA between 2.01-3.00. With regard to person who respondents stay with, 50% from stayed with parents. With regard to spending time with family on Monday-Friday, majority of respondents spent time with their family as for 5-9 hours /day (27.8%) and 10-14 hours/day (27.8%). 38.6% of respondents were spent time with their family as on weekend for 20-24 hours (38.6%).

With regards to Socio demographic factors and smoking behavior among students, five variable might affect smoking behavior; this variable is gender (p-value<0.001), GPA(p-value=0.008), Person who students stay with(p-value=0.004), Spending time with family on Monday- Friday(p-value=0.003), Spending time with family on Weekend (p-value<0.001).

Male students were nearly 2 times more likely to smoke than female students. When asked about GPA, students who had been GPA between 0.01 to 1.00 were 3.60 times more likely to smoke than those who other GPA group. Students who live with other (friend and dormitory of athelets) were 1.30 times more likely to smoke than those live with father, mother, parent or relative (p-value=0.003). Student who spent time with family on Monday-Friday between on 0-4 hours were 1.53 times more likely to smoke than those who spent time with family on Monday-Friday other times .(p-value=0.003) Student who spending time with family on weekend between on 0-4 hours were 6.44 times more likely to smoke than those who spending time with family on weekend the other times.(p<0.001)

In this full model, only one variables was significant consisted of gender (p-value=0.040). when adjusting other factors.

6.1.3 Media exposure factors and smoking behavior among students

Regarding positive media exposure, the results showed that majority of respondents exposed positive media on to internet ($\bar{X} = 3.88$), and television was 3.51 ,radio was the least exposed positive media ($\bar{X} = 1.70$). There was a significant relationship between positive media exposure and smoking behavior (p-value=0.039). By students who exposed positive media at high level were 2.33 times more likely to smoke than those who exposed to it at low level.

Regarding positive media retention, the results showed that majority of respondents could remember positive media on internet ($\bar{X}=3.71$) , television ($\bar{X}=3.58$) and the least of respondent could remember positive media on to radio ($\bar{X}=1.87$). However, there no association between smoking behavior and positive media retention (p-value=0.082).

Regarding negative media, the results showed that the majority exposed negative media on to retail shop ($\bar{X} = 3.12$), mean was 2.82 of internet and the least which the respondents were exposed negative media on calendar ($\bar{X} = 1.81$). There were association between negative media exposure and smoking behavior (p-value=0.002). Students who exposed negative media at high level were 6.02 times more likely to smoke than those who exposed to it at low level.

Regarding negative media retention, the results showed that majority could remember negative media on internet ($\bar{X} = 2.81$), retail shop ($\bar{X} = 2.73$) and the least which the respondents could remember negative media is the calendar ($\bar{X} = 1.80$). There were association between negative media retention and smoking behavior (p-value=0.019). Otherwise students who could remember about negative media in high level were 2.98 times more likely to smoke than those who could remember it in at low levels.

6.1.4 Psychological factors and smoking addiction behavior among students

With regards to research objective about psychological factors and smoking behavior among students. This study is findings that motivation, attitude and perception about smoking were associated with smoking behavior. (p-value<0.001).

In this full model, three variables was significant consisted of motivation about smoking (p-value=0.004), attitude about smoking (p-value=0.034), perception about smoking (p-value<0.001), when adjusting other factors.

6.2 Recommendations

6.2.1 Recommendations for the factories

1) This results showed that the advertising media commonly exposed by student is retail advertising. The internet has a lot of various tobacco advertising. Therefore, Thailand should enforce the law strictly as well as create understanding

with retailers to make them comply with laws strictly and the advertising on internet should be more strictly monitored.

2) This results showed that attitudes affect smoking behavior. Students have low smoking behavior if they have the right attitude. Therefore, the right attitude about smoking should be cultivated by starting from the curriculum that provide the correct knowledge about smoking since kindergarten in order to create the foundation and the right attitude.

3) This results showed that the media format students needed are lecture and exhibition which are the traditional format of education that ineffective. The more interesting lecture and exhibition should be developed such as 4D exhibition or 2-way lecture which allows students to engage in for example discussion and expressing opinions.

4) This results showed that most students are opened to campaign media as well as remembering the contents via television and internet the most. Therefore, the anti-smoking campaign should be broadcasted via television and internet media to get more attention and recognition. Moreover, students will like the touching slogans and doctrines but not interest in the presenter of media. Therefore, the media should highlight the touching slogan rather than using the actors/actresses as the presenters.

5) This results showed that students with low perception of risk of smoking-related diseases have higher smoking behavior. Therefore, the curriculum should be improve by focusing on the knowledge about risk of smoking-related diseases since childhood in order to cultivate and create such perception.

6) This results showed that most students in schools under the Department of Education Bangkok Metropolitan Administration smoked out of curiosity and to relax. Therefore, in addition of providing knowledge about dangers of smoking, the methods for relieving stress should be provided such as exercise, meditation as well as free time activities that student interested or other stress relieving activities in order to allow student use their free time wisely and resolve their stressful problem properly which make them do not use tobacco as the way to resolve their problems.

7) The research results indicated that the variables on motives, attitudes, and perception could most considerably forecast the smoking behaviors. Related organizations

should reduce the smoking motives and create correct attitudes and perception of smoking by producing the modern and interesting media to prevent the students from smoking.

6.2.2 Future research

This study's findings suggests that several areas for further study in future. These areas include:

1) In this study it is found that the person students lived with are associated with smoking behavior. Students who lived with other people such as friend or lived alone tended to smoke more than students who lived with father, mother or both parents. So, the qualitative study is need to assess friend's influence for smoking behavior and quitting tobacco.

2) The further study should investigate the product placement or Brand DNA because even though Thailand has the tobacco advertising prohibition law through various channels but the many tobacco traders still use product placement to to make it more accessible to children and youth. This can be done by qualitative study to determine the effects of Brand DNA on secondary school students in Bangkok Metropolitan.

3) Develop models for anti-smoking campaign programs and determine whether the developed anti-smoking campaign programs for students in Bangkok are effective.

4) There is a need for further study with case-control study or longitudinal study by allowing students to expose with various tobacco advertising media and follow-up to confirm whether the existing campaign media is effective in preventing and resolving smoking problem or not.

6.3 Limitation of studies

This study was conducted in school setting during working hours; as such interviewees were not in same natural environment as their homes. This might affect respondents somehow in responding to some questions. The interviewers were teacher and graduate student as such respondents might not be relaxed to express their actual opinion to fully answer the questions. This might have affected the outcome of this

study. However, study interviewers identified a separate room for interviews at each school so that respondents should be relaxed.

Otherwise, some student may be not answer on fact because they not sure for their answer ,fear that teacher will known about your data and someone have answer copy. However ,interviewer explained about secret of data for student so that respondents should be select answer from questionnaire in fact.

The studies relationship between exposure positive media and smoking behavior found that positive media affected to students more smoked because in this study have recall bias.

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APPENDICES

APPENDIX A

ตัวอย่างแบบสอบถาม

การเปิดรับสื่อและผลกระทบต่อพฤติกรรมการสูบบุหรี่ของนักเรียนมัธยมศึกษาตอนต้น
ในสังกัดกรุงเทพมหานคร ประเทศไทย

คำชี้แจง

1. ลักษณะแบบสอบถามประกอบด้วยคำถาม5ตอนคือ

ตอนที่ 1 ข้อมูลส่วนบุคคล

ตอนที่ 2 การเปิดรับข่าวสารเกี่ยวกับบุหรี่

ตอนที่ 3 ปัจจัยด้านจิตวิทยา ได้แก่ แรงจูงใจ ทศนคติ และการรับรู้

ตอนที่ 4 พฤติกรรมการสูบบุหรี่

ตอนที่ 5 ข้อเสนอแนะเกี่ยวกับการจัดกิจกรรมรณรงค์ต่อต้านการสูบบุหรี่

2. การวิจัยครั้งนี้เป็นการศึกษาเพื่อทำวิทยานิพนธ์ของนักศึกษาปริญญาโท หลักสูตรวิทยาการเสพติด สถาบันพัฒนาสุขภาพอาเซียน มหาวิทยาลัยมหิดล ซึ่งการทำแบบสอบถามนี้จะไม่มีผลกระทบใดๆ ต่อตัวของผู้ตอบ จึงขอให้นักเรียนตอบแบบสอบถามตามความเป็นจริงโดยไม่ต้องเขียนชื่อในแบบสอบถามฉบับนี้ และคำตอบที่ได้จะถือเป็นความลับโดยไม่มีเปิดเผยเป็นรายบุคคล เพื่อผลจากการศึกษาที่ได้รับจะนำไปใช้ให้เป็นประโยชน์ต่อไป

ตอนที่ 1 ข้อมูลส่วนบุคคล

คำชี้แจง: โปรดทำเครื่องหมาย/ลงในช่อง ที่ตรงกับความเป็นจริงของนักเรียนมากที่สุดเพียงคำตอบเดียวและ/หรือ เติมข้อมูลให้ตรงกับความจริงเกี่ยวกับตัวท่าน

1. เพศ

1. ชาย

2. หญิง

2. อายุ.....ปี.....เดือน

3. กำลังศึกษาอยู่ระดับชั้น

1. ม. 1

3. ม. 3

2. ม. 2

4. นักเรียนได้รับเงินค่าใช้จ่ายจากครอบครัวต่อวัน

จำนวนบาท

3นักเรียนได้เกรดเฉลี่ยเทอมที่ผ่านมาต่ำสุดเท่าใด.....(โปรดระบุ)

4. ปัจจุบันนักเรียนพักอาศัยอยู่กับใคร

1. พ่อ

4.ญาติ(โปรดระบุ).....

2. แม่

5. อื่นๆ ระบุ.....

3. ทั้งพ่อและแม่

5. นักเรียนใช้เวลาอยู่ร่วมกับครอบครัวในวันจันทร์-ศุกร์ คิดเป็นกี่ชั่วโมงต่อวัน

1. 0-4 ชั่วโมง

4. 15-19 ชั่วโมง

2. 5-9 ชั่วโมง

5. 20-24 ชั่วโมง

3. 10-14 ชั่วโมง

6. นักเรียนใช้เวลาอยู่ร่วมกับครอบครัวในวันเสาร์-อาทิตย์ คิดเป็นกี่ชั่วโมงต่อวัน

1. 0-4 ชั่วโมง

4. 15-19 ชั่วโมง

2. 5-9 ชั่วโมง

5. 20-24 ชั่วโมง

3. 10-14 ชั่วโมง

ตอนที่ 2 การเปิดรับข่าวสารด้านบุหรื

โปรดทำเครื่องหมาย/ลงในช่อง ที่ตรงกับความเป็นจริงของนักเรียนมากที่สุดเพียงคำตอบเดียว

ด้านสื่อธรรมรงค์ (Positive media)

1. ใน 1 สัปดาห์ที่ผ่านมา นักเรียนได้รับข่าวสารทางช่องทางต่างๆที่เกี่ยวข้องกับ การธรรมรงค์ต่อต้านการสูบบุหรี่ มากน้อยเพียงใด (ตอบให้ครบทุกข้อ)

ลำดับ	สื่อ	บ่อยที่สุด (ทุกวัน)	บ่อย (5-6 ครั้ง ต่อสัปดาห์)	พอสมควร (3-4 ครั้ง ต่อสัปดาห์)	นานๆ ครั้ง (1-2 ครั้ง ต่อสัปดาห์)	ไม่เคยเลย
1	โทรทัศน์					
2	วิทยุ					
3	โปสเตอร์					
4	ป้ายโฆษณาขนาดใหญ่					
5	หนังสือพิมพ์					
6	นิตยสาร					
7	ในโรงหนัง ก่อนหรือหลัง การฉายภาพยนตร์					
8	อินเทอร์เน็ต					
9	บนของบุหรื					
10	ดิสโก้เทค/คาราโอเกะ/ร้าน เกม สถานบันเทิงต่างๆ					
11	การชมนิทรรศการ, กิจกรรม การเรียนการสอนใน โรงเรียน, สื่อ, หมวฯลฯ					
12	อื่นๆ (โปรดระบุ).....					

2. จากข้อ 1 นักเรียนสามารถจดจำเนื้อหา และภาพจากการณรงค์ต่อต้านบุหรี่จากสื่อต่างๆ มากน้อยเพียงใด (ตอบทุกข้อ)

ลำดับ	สื่อ	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
1	โทรทัศน์					
2	วิทยุ					
3	โปสเตอร์					
4	ป้ายโฆษณาขนาดใหญ่					
5	หนังสือพิมพ์					
6	นิตยสาร					
7	ในโรงหนัง ก่อนหรือหลัง การฉายภาพยนตร์					
8	อินเทอร์เน็ต					
9	บนซองบุหรี่					
10	ดิสโก้เทค/คาราโอเกะ/ร้าน เกม สถานบันเทิงต่างๆ					
11	การชมนิทรรศการ, กิจกรรมการเรียนการสอน ในโรงเรียน,เสื้อ,หมวก ฯลฯ					
12	อื่นๆ ตามที่ระบุไว้ในข้อ 1					

3. นักเรียนชื่นชอบการณรงค์ต่อต้านการสูบบุหรี่ผ่านสื่อใดมากที่สุด(เพียงคำตอบเดียว)

- | | |
|--|---|
| <input type="checkbox"/> 1. โทรทัศน์ | <input type="checkbox"/> 8. อินเทอร์เน็ต |
| <input type="checkbox"/> 2. วิทยุ | <input type="checkbox"/> 9. บนซองบุหรี่ |
| <input type="checkbox"/> 3. โปสเตอร์ | <input type="checkbox"/> 10. ดิสโก้เทค/คาราโอเกะ/ร้านเกม/
สถานบันเทิงต่างๆ |
| <input type="checkbox"/> 4. ป้ายโฆษณา | <input type="checkbox"/> 11. การชมนิทรรศการ,กิจกรรมการเรียนการสอน
ในโรงเรียน,เสื้อยืด,หมวก |
| <input type="checkbox"/> 5. หนังสือพิมพ์ | <input type="checkbox"/> 12. อื่นๆ (โปรดระบุ)..... |
| <input type="checkbox"/> 6. นิตยสาร | |
| <input type="checkbox"/> 7. ในโรงหนังก่อนหรือหลังฉายภาพยนตร์ | |

4. นักเรียนชื่นชอบในการณรงค์ดังกล่าวเพราะ(ตอบได้มากกว่า 1 คำตอบ)

- | | |
|--|---|
| <input type="checkbox"/> 1. มีภาพที่สวยงาม | <input type="checkbox"/> 5.ชอบข้อคิด/คำสอน/สโลแกน |
| <input type="checkbox"/> 2. ชอบเรื่องราว/เนื้อหาของสื่อ | ภาพลักษณ์ของสื่อรณรงค์ |
| <input type="checkbox"/> 3. ชอบเสียงเพลง/ดนตรีในสื่อรณรงค์ | <input type="checkbox"/> 6. อื่นๆ ระบุ..... |
| <input type="checkbox"/> 4. ชอบผู้แสดง/พิธีเซ่นเซอร์ในสื่อ | |

ด้านสื่อโฆษณาส่งเสริมการขาย (Negative media)

5. ใน 1 สัปดาห์ที่ผ่านมานักเรียนได้รับข่าวสารทางช่องทางต่างๆที่เกี่ยวข้องกับโฆษณาส่งเสริมการขาย
บุหรี่ยี่ต่อไปนี้มีอย่างน้อยเพียงใด(ตอบให้ครบทุกข้อ)

ลำดับ	สื่อ	บ่อยที่สุด (ทุกวัน)	บ่อย (5-6 ครั้ง ต่อสัปดาห์)	พอสมควร (3-4 ครั้ง ต่อสัปดาห์)	นานๆ ครั้ง (1-2 ครั้ง ต่อสัปดาห์)	ไม่เคยเลย
1	อินเทอร์เน็ต					
2	สติ๊กเกอร์ภาพศิลปิน					
3	ชุดนักกีฬา					
4	สนามกีฬา					
5	ภาพยนตร์					
6	ปฏิทิน					
7	ร้านค้าย่อย/ร้านค้าใหญ่					
8	ผู้ขายเร่ตามท้องถนน					
9	สอดแทรกในสินค้าอื่นๆ เช่น เสื้อผ้า ต่างหู ฯลฯ					
10	ดิสโก้เทค/คาราโอเกะ/ร้าน เกม สถานบันเทิงต่างๆ					
11	อื่นๆ (โปรดระบุ).....					

6. จากข้อ 5 นักเรียนสามารถจดจำเนื้อหา และภาพจากโฆษณาส่งเสริมให้สูบบุหรี่จากสื่อต่างๆมากน้อยเพียงใด(ตอบให้ครบทุกข้อ)

ลำดับ	สื่อ	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
1	อินเตอร์เน็ต					
2	สติ๊กเกอร์ภาพศิลปิน					
3	ชุดนักกีฬา					
4	สนามกีฬา					
5	ภาพยนตร์					
6	ปฏิทิน					
7	ร้านค้าย่อย/ร้านค้าใหญ่					
8	ผู้ชายเร่ตามท้องถนน					
9	สอดแทรกในสินค้าอื่นๆ เช่น เสื้อผ้า ต่างหู ฯลฯ					
10	ดิสโก้เทค/คาราโอเกะ/ร้านเกม สถานบันเทิงต่างๆ					
11	อื่นๆ ตามที่ระบุไว้ในข้อ 5					

7. นักเรียนชื่นชอบโฆษณาส่งเสริมการขายบุหรี่ผ่านทางช่องทางใดมากที่สุด (ตอบเพียงคำตอบเดียว)

- | | |
|---|--|
| <input type="checkbox"/> 1. อินเตอร์เน็ต | <input type="checkbox"/> 7.ร้านค้าย่อย/ร้านค้าใหญ่ |
| <input type="checkbox"/> 2. โปสเตอร์ภาพศิลปิน | <input type="checkbox"/> 8.ผู้ชายเร่ตามท้องถนน |
| <input type="checkbox"/> 3. ชุดนักกีฬา | <input type="checkbox"/> 9.สอดแทรกในสินค้าอื่นๆ เช่น เสื้อผ้า ต่างหู ฯลฯ |
| <input type="checkbox"/> 4. สนามกีฬา | <input type="checkbox"/> 10.ดิสโก้เทค/คาราโอเกะ/ร้านเกม/
สถานบันเทิงต่างๆ |
| <input type="checkbox"/> 5. ภาพยนตร์ | <input type="checkbox"/> 11. อื่นๆ โปรดระบุ..... |
| <input type="checkbox"/> 6. ปฏิทิน | |

8.นักเรียนชื่นชอบโฆษณาส่งเสริมการขายบุหรีดังกล่าว เพราะว่า

- | | |
|---|---|
| <input type="checkbox"/> 1. เคนสะดูดคา | <input type="checkbox"/> 5.มีภาพ สัญลักษณ์ที่สวยงามและน่าสนใจ |
| <input type="checkbox"/> 2. ชอบเนื้อหา/เรื่องราวของโฆษณา | <input type="checkbox"/> 6. ชอบสโลแกน หรือคำพูดในโฆษณา |
| <input type="checkbox"/> 3. ชอบเสียงเพลง/ดนตรีในโฆษณา | <input type="checkbox"/> 7. อื่นๆ โปรดระบุ..... |
| <input type="checkbox"/> 4. ชอบผู้แสดง/พิธีเซ้นเตอร์ในโฆษณา | |

ตอนที่ 3 ปัจจัยด้านจิตวิทยา ได้แก่ แรงจูงใจ,ทัศนคติ และการรับรู้

คำชี้แจง : โปรดพิจารณาเลือกข้อความที่ตรงกับความรู้สึก หรือความคิดเห็นของนักเรียนมากที่สุด แล้วทำเครื่องหมาย ✓ ลงในช่องว่าง

3.1 แบบสอบถามด้านแรงจูงใจในการสูบบุหรี่

ข้อความ	เห็นด้วย อย่างยิ่ง	เห็นด้วย	ปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วย อย่างยิ่ง
1. ข้าพเจ้าชอบและอยากทดลองสูบบุหรี่					
2.ข้าพเจ้าสูบบุหรี่ตามบุคคลในครอบครัว					
3.ข้าพเจ้าเชื่อตามที่บิดามารดาเตือนไม่ให้คบเพื่อน ที่สูบบุหรี่					
4. ข้าพเจ้าสามารถหาซื้อบุหรี่ได้ง่าย					
5.ข้าพเจ้าเห็นเพื่อนสูบบุหรี่แล้วมีความสุขเลย อยากทำตาม					
6.การสูบบุหรี่ทำให้ข้าพเจ้าเป็นที่ยอมรับจากเพื่อน ในกลุ่ม					
7.การจัดกิจกรรมการรณรงค์ต่อต้านการสูบบุหรี่ ทำให้ข้าพเจ้าไม่อยากสูบบุหรี่					
8.เพื่อนดักเตือนข้าพเจ้าเกี่ยวกับพฤติกรรมกาสูบ บุหรี่					
9.โฆษณาขายบุหรี่ในสื่อต่างๆทำให้ข้าพเจ้าอยาก ลองสูบบุหรี่					
10. การสูบบุหรี่ของคารามีส่วนทำให้ข้าพเจ้าอยาก สูบบุหรี่					

3.2 ทักษะคิดต่อการสูบบุหรี่

คำชี้แจง : โปรดพิจารณาเลือกข้อความที่ตรงกับความรู้สึก หรือความคิดเห็นของนักเรียนมากที่สุด แล้วทำ

เครื่องหมาย ✓ ลงในช่องว่าง

ข้อความ	เห็นด้วย อย่างยิ่ง	เห็นด้วย	ปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วย อย่างยิ่ง
1. ข้าพเจ้าคิดว่าการสูบบุหรี่ทำให้เท่					
2.ข้าพเจ้าคิดว่าการสูบบุหรี่ทำให้มีความมั่นใจในตนเองมากขึ้น					
3.ข้าพเจ้าคิดว่าการสูบบุหรี่เป็นการสิ้นเปลืองเงิน					
4. ข้าพเจ้าคิดว่าการสูบบุหรี่ของวัยรุ่นเป็นพฤติกรรมที่ไม่ดี					
5.ข้าพเจ้าคิดว่าการสูบบุหรี่จะนำไปสู่การใช้ยาเสพติดอื่นๆ					
6.ถ้าเพื่อนในกลุ่มสูบบุหรี่ ข้าพเจ้าคิดว่าข้าพเจ้าจำเป็นต้องสูบด้วย					
7.ข้าพเจ้าคิดว่าการสูบบุหรี่มีทั้งอันตรายและผลเสียมากกว่าผลดี					
8.ข้าพเจ้าคิดว่าคนที่ติดบุหรี่จะเลิกบุหรี่ได้ยาก					
9.ข้าพเจ้าคิดว่าการลองสูบบุหรี่แค่แอมวนเดียวจะไม่ติดบุหรี่					
10.ข้าพเจ้าคิดว่าการสูบบุหรี่เป็นพฤติกรรมที่ไม่น่าเลียนแบบ					

3.3 การรับรู้เกี่ยวกับโอกาสเสี่ยงในการเกิดโรคที่เกิดจากการสูบบุหรี่

คำชี้แจง นักเรียนเห็นด้วยกับข้อความต่อไปนี้เพียงใด โปรดเขียนเครื่องหมาย ✓ ลงในช่องว่างที่ตรงกับความคิดเห็นที่แท้จริงของท่านเพียงข้อเดียว (โปรดทำให้ครบทุกข้อ)

ข้อความ	เห็นด้วย อย่างยิ่ง	เห็นด้วย	ปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วย อย่างยิ่ง
1. การสูบบุหรี่เป็นสาเหตุของโรคในช่องปาก เช่น ฟันผุ ปากเหม็น เป็นต้น					
2. การสูบบุหรี่ทำให้การรับรู้กลิ่นและรสอาหาร ลดลง					
3. วัยรุ่นที่สูบบุหรี่จะมี ความฉลาด ต่ำกว่าวัยรุ่นที่ไม่สูบบุหรี่					
4. การสูบบุหรี่ทำให้ผู้สูบบุหรี่แก่เร็วกว่าผู้ไม่สูบบุหรี่					
5. การสูบบุหรี่เป็นประจำช่วยป้องกันโรคหัวใจ					
6. การสูบบุหรี่ทำให้เสี่ยงต่อการเกิดโรคหัวใจ					
7. การสูบบุหรี่ของวัยรุ่นไม่มีผลเสียต่อร่างกาย					
8. การสูบบุหรี่ทำให้มีกลิ่นตัวเหม็น					
9. การสูบบุหรี่เป็นสาเหตุของการเกิดโรคเฉพาะที่ปอดเท่านั้น					
10. การสูบบุหรี่เป็นวิธีการลดความเครียด					

ตอนที่ 4 พฤติกรรมการสูบบุหรี่

โปรดทำเครื่องหมาย✓ที่เป็นคำตอบที่ตรงกับความเป็นจริงมากที่สุด และ/หรือเติมข้อมูลให้ตรงกับความจริงเกี่ยวกับตัวท่าน(โดยผู้ที่ไม่สูบบุหรี่ตอบเฉพาะข้อ 1 และ 6 และผู้สูบบุหรี่ตอบเฉพาะข้อ 2-6

1. ให้ตอบเฉพาะผู้ที่ไม่สูบบุหรี่

อนาคตอยากลองสูบบุหรี่หรือไม่

- | | |
|---|--------------------|
| <input type="checkbox"/> 1. อยากลอง เพราะ..... | } (ข้ามไปตอบข้อ 6) |
| <input type="checkbox"/> 2. ไม่อยากลอง เพราะ..... | |

2. ให้ตอบเฉพาะผู้ที่สูบบุหรี่ (ตอบเพียงข้อเดียว)

1. เคยทดลอง แต่ปัจจุบันไม่สูบแล้ว
2. สูบ แต่ไม่ได้เป็นประจำทุกวัน
3. สูบเป็นประจำทุกวัน
4. เคยสูบเป็นประจำแต่ปัจจุบันเลิกสูบแล้ว
5. เลิกสูบแล้ว

3. นักเรียนสูบครั้งแรกเมื่ออายุ.....ปี (โปรดระบุ)

4. สาเหตุของการสูบบุหรี่ครั้งแรกของท่าน (ตอบได้มากกว่า 1 ข้อ)

- | | |
|--|---|
| <input type="checkbox"/> 1. สูบคลายเครียด | <input type="checkbox"/> 5. สูบเพื่อให้เป็นที่ยอมรับของเพื่อน |
| <input type="checkbox"/> 2. สูบตามเพื่อน | <input type="checkbox"/> 6. สูบเพื่อแสดงความมั่นใจในตัวเอง |
| <input type="checkbox"/> 3. สูบเพราะอยากลอง | <input type="checkbox"/> 7. สูบเพื่อแสดงความโก้, เท่ |
| <input type="checkbox"/> 4. สูบแก้เหงาในเวลาว่าง | <input type="checkbox"/> 8. อื่นๆ ระบุ..... |

5. โอกาสในการสูบบุหรี่ (ตอบได้มากกว่า 1 ข้อ)

- | | |
|---|---|
| <input type="checkbox"/> 1. เวลาใช้ความคิดอยู่คนเดียว | <input type="checkbox"/> 6. หลังตื่นนอนใหม่ |
| <input type="checkbox"/> 2. เมื่อเครียด | <input type="checkbox"/> 7. ทุกครั้งที่มีโอกาส |
| <input type="checkbox"/> 3. เมื่อมีความประหม่า | <input type="checkbox"/> 8. เวลาหยุดพักระหว่างเรียน |
| <input type="checkbox"/> 4. หลังรับประทานอาหาร | <input type="checkbox"/> 9. อื่นๆ ระบุ..... |
| <input type="checkbox"/> 5. ก่อนรับประทานอาหาร | |

6. นอกเหนือจากการสูบบุหรี่นักเรียนเคยลองใช้สารเสพติดชนิดอื่นหรือไม่ อย่างไร (ตอบทุกคน)

- | | |
|---|--|
| <input type="checkbox"/> 1. ไม่เคย | <input type="checkbox"/> 5. กระท่อม |
| <input type="checkbox"/> 2. แอลกอฮอล์ เช่น เบียร์ เหล้า | <input type="checkbox"/> 6. เฮโรอีน |
| <input type="checkbox"/> 3. ยาบ้า | <input type="checkbox"/> 7. ยาไอซ์ |
| <input type="checkbox"/> 4. กัญชา | <input type="checkbox"/> 8. อื่นๆ(ระบุ)..... |

ตอนที่ 5 ข้อเสนอแนะเกี่ยวกับการจัดกิจกรรมรณรงค์ต่อต้านการสูบบุหรี่

โปรดทำเครื่องหมาย✓ที่เป็นคำตอบที่ตรงกับความเป็นจริงมากที่สุด โดยให้นักเรียนตอบทุกข้อ

1. ถ้ามีกิจกรรมรณรงค์ต่อต้านการสูบบุหรี่ ท่านอยากจะให้กิจกรรมมีรูปแบบต่างๆ ดังต่อไปนี้

ลำดับ	รูปแบบกิจกรรม	ต้องการ	ไม่ต้องการ
1	การจัดอภิปราย		
2	การบรรยายให้ความรู้		
3	การได้วาที		
4	การจัดนิทรรศการ		
5	การสัมภาษณ์บุคคลที่มีชื่อเสียง		
6	การสัมภาษณ์ศิลปิน/ดารา		
7	ทำละครสอดแทรกโทษของบุหรี่		
8	แต่งเนื้อเพลงรณรงค์		
9	สร้างเกมคอมพิวเตอร์		
10	สร้างเกมในแผ่นกระดาษ		
11	ออกหนังสือการ์ตูน		
12	ออกสื่ออินเทอร์เน็ต/Face book /Social network		
13	ทำสติ๊กเกอร์ใน Line		

2. อื่นๆระบุ.....

.....

.....

APPENDIX B



Certificate of MU-SSIRB Approval



Certificate of Approval No.: 2015/261.0408
MU-SSIRB No.: 2015/298 (B1)
Title of Project: MEDIA EXPOSURE AND IMPACT ON CIGARETTE SMOKING BEHAVIOR AMONG JUNIOR HIGH SCHOOL STUDENTS UNDER BANGKOK METROPOLITAN ADMINISTRATION, THAILAND
Principal Investigator: Miss Renuka Tupwech
Name of Institution: ASEAN Institute for Health Development, Mahidol University
Approval includes:
1) MU-SSIRB Submission form version received date 4 August 2015
2) Participant Information sheet version date 4 August 2015
3) Informed Consent Form version date 29 June 2015
4) Questionnaire version received date 4 August 2015

The Committee for Research Ethics (Social Sciences) is in full compliance with International Guidelines of Human Research Protection such as Declaration of Helsinki, The Belmont Report, CIOMS Guidelines and the International Conference on Harmonization in Good Clinical Practice (ICH-GCP)

Date of Approval: August 4, 2015
Date of Expiration: August 3, 2016

Chairman

Handwritten signature of Santhat Semsri in black ink.

(Emeritus Professor Dr.Santhat Semsri)

Head of the Institute

Handwritten signature of Wariya Chinwanno in black ink.

(Assoc.Prof.Dr.Wariya Chinwanno)
Dean of Faculty of Social Sciences and Humanities

โครงการวิจัยที่ได้รับการรับรองจริยธรรมการวิจัยในคนจากคณะกรรมการจริยธรรมการวิจัยในคน

สาขาสังคมศาสตร์ มหาวิทยาลัยมหิดล แล้ว

ระเบียบในการดำเนินการวิจัย ดังนี้

- 1) ขอให้ผู้วิจัยนำเอกสารชี้แจงผู้เข้าร่วมการวิจัย และหนังสือแสดงเจตนายินยอมเข้าร่วมการวิจัยที่ได้รับการบอกกล่าวและเต็มใจ ที่มีตราประทับรับรองจากคณะกรรมการจริยธรรมการวิจัยในคน สาขาสังคมศาสตร์ ไปสำเนาให้กับผู้เข้าร่วมการวิจัยของโครงการวิจัยนี้เท่านั้น
- 2) หากผู้วิจัยต้องการปรับเปลี่ยนรายละเอียดบางส่วนของโครงการวิจัย ขอให้ผู้วิจัยแจ้งมายังสำนักงานคณะกรรมการจริยธรรม โดยกรอกแบบฟอร์ม “แบบขอปรับเปลี่ยนโครงร่างวิจัย (Protocol Amendment)” เพื่อขอรับการพิจารณารับรองก่อนเริ่มดำเนินการวิจัย เมื่อคณะกรรมการจริยธรรมฯ พิจารณารับรองแล้ว จะมีหนังสือตอบรับ (Acceptance Letter) แจ้งไปยังผู้วิจัย โดยระบุวันที่พิจารณารับรอง ผู้วิจัยจึงสามารถเริ่มดำเนินการวิจัยต่อไปได้
- 3) หากเกิดเหตุการณ์ไม่พึงประสงค์อย่างร้ายแรง รวมทั้งเหตุการณ์ที่ไม่อาจคาดเดาได้ล่วงหน้ามาก่อนเกิดขึ้นกับผู้เข้าร่วมการวิจัย ขอให้ผู้วิจัยรายงานมายังสำนักงานคณะกรรมการจริยธรรมฯ โดยกรอกแบบฟอร์ม “รายงานเหตุการณ์ไม่พึงประสงค์” หรือส่งสำเนาการรายงานที่ส่งไปยังผู้ให้ทุนวิจัยมาให้สำนักงานคณะกรรมการจริยธรรมฯ ด้วย เมื่อคณะกรรมการจริยธรรมฯ พิจารณารายงานเหตุการณ์ไม่พึงประสงค์แล้ว จะมีหนังสือแจ้งไปยังผู้วิจัย โดยระบุวันที่พิจารณา
- 4) หากผู้วิจัยดำเนินการวิจัยเสร็จสิ้นภายใน 1 ปี ขอให้ผู้วิจัยดำเนินการส่งรายงานความก้าวหน้าของโครงการวิจัยตามแบบฟอร์ม “แบบติดตามผลการดำเนินการวิจัยประจำปี” มายังสำนักงานคณะกรรมการจริยธรรมฯ หลังจากสำนักงานคณะกรรมการจริยธรรมฯ ได้รับรายงานแล้ว จะมีหนังสือตอบรับการรายงานโครงการวิจัยและแจ้งปิดโครงการมายังผู้วิจัย
- 5) ในกรณีที่โครงการวิจัยของผู้วิจัย มีระยะเวลานานกว่า 1 ปี ผู้วิจัยจะต้องส่งรายงานความก้าวหน้าของโครงการวิจัยตามแบบฟอร์ม “แบบติดตามผลการดำเนินการวิจัยประจำปี” เพื่อขอต่ออายุโครงการวิจัย มายังสำนักงานคณะกรรมการจริยธรรมฯ หลังจากสำนักงานคณะกรรมการจริยธรรมฯ ได้รับรายงานแล้ว จะมีหนังสือตอบรับการรายงานโครงการวิจัยและต่ออายุโครงการมายังผู้วิจัย (**ทั้งนี้ตามประกาศคณะกรรมการและมนุษยศาสตร์ มหาวิทยาลัยมหิดลเรื่อง หลักเกณฑ์และอัตราค่าธรรมเนียมการพิจารณาโครงการวิจัยเสนอขอรับรับรองจริยธรรมการวิจัยในคน ของคณะกรรมการจริยธรรมการวิจัยในคน สาขาสังคมศาสตร์ มหาวิทยาลัยมหิดล (MU-SSIRB) พ.ศ. 2557 ลงวันที่ 17 พฤศจิกายน 2557 ข้อ 1.2 (1) การต่ออายุการรับรองโครงการวิจัย เก็บค่าธรรมเนียมการพิจารณา จำนวน 1,000 บาท**)



This research project had been certified by MU-SSIRB.

Research methodology was as follows:

- 1) The researcher had to use the copies of Participant Information Sheet and Informed Consent Form with the seal of MU-SSIRB for research project participants only.
- 2) If the researcher wanted to amend some details of the research project, the researcher had to inform MU-SSIRB by completing the Protocol Amendment Form for consideration and certification before beginning doing the research. After considering and certifying, MU-SSIRB would send the researcher an acceptance letter with date of consideration and certification. After that, the researcher was able to begin doing the research.
- 3) If research participants severely faced an adverse event and an unexpected event, the researcher had to report this issue to MU-SSIRB by completing the Adverse Event Report Form or send MU-SSIRB the report copy sent to scholarship givers. After considering the adverse event report, MU-SSIRB would send the researcher a letter with consideration date.
- 4) If the researcher completely did the research within a year, the researcher had to send MU-SSIRB the research project progress report called “Annual Research Report Form”. After receiving the report, MU-SSIRB would send the researcher an acceptance letter with closure of the project.
- 5) If the research project was done for more than a year, the researcher had to send MU-SSIRB the research project progress report called “Annual Research Report Form for renewal of the research project. After receiving the report, MU-SSIRB would send the researcher the acceptance letter with renewal of the research project (**according to The Announcement of The Faculty of Social Sciences and Humanities, Mahidol University on Fee Collection Criteria and Rate for Consideration of the Research Project Requesting Research Ethics Certification of MU-SSIRB, 2014 dated 17th November 2014, Article 1.2 (1) renewal of certification of research project having to pay fees at the amount of 1,000 baht **).



มหาวิทยาลัยมหิดล
Mahidol University

Faculty of Graduate Studies, Mahidol University

It is hereby certified that

Miss Renuka Tupwech

has attended the required classes on GRID 521 RESEARCH ETHICS
1st Semester, Academic Year 2012
at The Faculty of Graduate Studies Building, Mahidol University (Salaya)

Handwritten signature of Sukumal Chongthammakun in blue ink.

(Assoc. Prof. Dr. Sukumal Chongthammakun)
Deputy Dean for Research
Faculty of Graduate Studies

Handwritten signature of Banchong Mahaisavariya in blue ink.

(Prof. Banchong Mahaisavariya)
Dean
Faculty of Graduate Studies

เอกสารชี้แจงผู้เข้าร่วมการวิจัย (สำหรับการตอบแบบสอบถาม) (ผู้ที่มีอายุ 13-15 ปี)
(Participant Information Sheet)

คำชี้แจง

ในเอกสารนี้อาจมีข้อมูลที่ท่านอ่านแล้วยังไม่เข้าใจ โปรดสอบถามหัวหน้าโครงการวิจัย หรือผู้แทนให้ช่วยอธิบายจนกว่าจะเข้าใจดี นักเรียนจะได้รับเอกสารนี้ 1 ฉบับ นำกลับไปอ่านที่บ้านเพื่อปรึกษาหรือกับญาติพี่น้อง เพื่อนสนิทของท่าน หรือผู้ที่ท่านต้องการปรึกษา เพื่อช่วยในการตัดสินใจเข้าร่วมการวิจัย

ชื่อโครงการ	การเปิดรับสื่อและผลกระทบต่อพฤติกรรมการสูบบุหรี่ของนักเรียนมัธยมศึกษาตอนต้นในสังกัดกรุงเทพมหานคร ประเทศไทย
ชื่อผู้วิจัย	นางสาวเรณูกา ทัพเวช
สถานที่ทำงาน	หลักสูตรวิทยาการเสพติด สถาบันพัฒนาสุขภาพอาเซียน มหาวิทยาลัยมหิดล
หมายเลขโทรศัพท์	08 6346 5966
สถานที่วิจัย	โรงเรียนวิสุทธิศ., โรงเรียนลอยสายอนุสรณ์, โรงเรียนคลองกุ่ม, โรงเรียนวัดอ่างแก้ว จังหวัดกรุงเทพมหานคร
ผู้ให้ทุน	ไม่มี

ข้อมูล โครงการวิจัยโดยย่อ

โครงการวิจัยนี้ทำขึ้นเพื่อศึกษาการเปิดรับสื่อและผลกระทบต่อพฤติกรรมการสูบบุหรี่ของนักเรียนที่มีอายุระหว่าง 13-15 ปี ในโรงเรียนสังกัดกรุงเทพมหานคร ประเทศไทย

ประโยชน์ที่คาดว่าจะได้รับจากการวิจัยนี้คือ ทำให้ทราบถึงการเปิดรับสื่อในรูปแบบต่างๆ ทั้งสื่อในด้านการรณรงค์ป้องกันบุหรี่และสื่อโฆษณาชวนเชื่อให้สูบบุหรี่ รวมถึงความสัมพันธ์ระหว่างการเปิดรับสื่อกับแรงจูงใจ ทศนคติ การรับรู้ และพฤติกรรมการสูบบุหรี่ ทั้งต่อตัวผู้เข้าร่วมวิจัยเอง ที่จะได้ทราบว่าตนเองมีพฤติกรรมการเปิดรับสื่อหรืออย่างไร และสื่อมีความสัมพันธ์กับพฤติกรรมการสูบบุหรี่หรือไม่ อย่างไร เพื่อที่จะได้มีแนวทางในการป้องกันตนเองหรือหลีกเลี่ยงจากการเปิดรับสื่อที่อาจส่งผลให้เกิดการสูบบุหรี่ อีกทั้งหน่วยงานทั้งภาครัฐและเอกชนที่เกี่ยวข้องกับการดำเนินงานด้านการรณรงค์ป้องกันการสูบบุหรี่สามารถนำข้อมูลจากการศึกษาวิจัยในการปรับปรุงหรือวางแผนการพัฒนาการผลิตสื่อให้มีรูปแบบ เนื้อหา และวิธีการนำเสนอให้สอดคล้องกับความต้องการของกลุ่มเป้าหมาย อันจะนำไปสู่การสร้างเกราะคุ้มกันให้กับผู้ร่วมวิจัย

นักเรียน ได้รับเชิญให้เข้าร่วมการวิจัยนี้ เพราะว่าเป็นนักเรียนในระดับชั้นมัธยมศึกษาตอนต้น ที่มีอายุระหว่าง 13 – 15 ปี ในโรงเรียนสังกัดกรุงเทพมหานคร

จำนวนผู้เข้าร่วมการวิจัยทั้งสิ้น 398 คน

ระยะเวลาที่จะทำวิจัยทั้งสิ้น 2 ปี (มิถุนายน 2557 – มิถุนายน 2559)

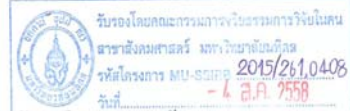
หากท่านตัดสินใจให้นักเรียนของท่านเข้าร่วมการวิจัยแล้ว จะมีขั้นตอนการวิจัยดังต่อไปนี้

ผู้วิจัยจะขอให้นักเรียนของท่านตอบแบบสอบถามในประเด็นเกี่ยวกับ การเปิดรับสื่อบุหรี่ แรงจูงใจ ทศนคติ การรับรู้ และพฤติกรรมการสูบบุหรี่ โดยใช้เวลาในการตอบแบบสอบถามประมาณ 30 นาที ซึ่งคำถามมีทั้งหมด 50 ข้อ แบ่งคำถามออกเป็น 5 ส่วน ดังนี้

ส่วนที่ 1 ข้อมูลส่วนบุคคล

ส่วนที่ 2 แบบสอบถามการเปิดรับข่าวสารเกี่ยวกับบุหรี่

ส่วนที่ 3 แบบสอบถามปัจจัยด้านจิตวิทยา ได้แก่ แรงจูงใจ ทศนคติ และการรับรู้



ส่วนที่ 4 แบบสอบถามพฤติกรรมการสูบบุหรี่

ส่วนที่ 5 แบบสอบถามข้อเสนอแนะ

ข้อมูลเกี่ยวกับการปกป้องสิทธิผู้เข้าร่วมการวิจัย

ข้อมูลที่ได้จากการตอบแบบสอบถาม ผู้วิจัยจะใช้รหัสแทนชื่อและข้อมูลส่วนตัวของนักเรียนของท่านในการบันทึกข้อมูล และจะดำเนินการทำลายข้อมูลตลอดจนข้อมูลอื่นๆ ที่เกี่ยวข้องกับนักเรียนของท่านภายหลังได้รับการเผยแพร่ในที่ประชุมวิชาการหรือตีพิมพ์ลงในวารสารวิชาการอย่างใดอย่างหนึ่ง ด้วยเครื่องทำลายเอกสารและโปรแกรมลบไฟล์ถาวร (Free File Wiper)

ความเสี่ยงที่อาจจะเกิดขึ้นเมื่อเข้าร่วมการวิจัย นักเรียนของท่านอาจรู้สึกอึดอัด หรืออาจรู้สึกไม่สบายใจอยู่บ้างกับบางคำถาม นักเรียนของท่านมีสิทธิ์ที่จะไม่ตอบคำถามเหล่านั้นได้ รวมถึงนักเรียนของท่านมีสิทธิ์ถอนตัวออกจากโครงการนี้เมื่อใดก็ได้ โดยไม่ต้องแจ้งให้ทราบล่วงหน้า และการไม่เข้าร่วมวิจัยหรือถอนตัวออกจากโครงการวิจัยนี้ จะไม่มีผลกระทบต่อใดๆ ต่อนักเรียนของท่านแต่อย่างใด

ข้อมูลส่วนตัวของนักเรียนจะถูกเก็บรักษาไว้ ไม่เปิดเผยต่อสาธารณะเป็นรายบุคคล และไม่มี การแสดงชื่อหรือที่อยู่ของนักเรียนของท่านแต่อย่างใด แต่จะรายงานผลการวิจัยเป็นข้อมูลส่วนรวม ผู้ที่มีสิทธิ์เข้าถึงข้อมูลของนักเรียนของท่านจะมีเฉพาะผู้ที่เกี่ยวข้องกับการวิจัยนี้ คือ นักวิจัย หรืออาจมีคณะบุคคลบางกลุ่มเข้ามาตรวจสอบความถูกต้อง เช่น ผู้ให้ทุนวิจัย สถาบัน หรือองค์กรของรัฐที่มีหน้าที่ตรวจสอบ คณะกรรมการจริยธรรมฯ เป็นต้น

การวิจัยครั้งนี้ นักเรียนของท่านจะไม่ได้รับค่าตอบแทนและไม่เสียค่าใช้จ่ายใดๆ ทั้งสิ้น

หากมีข้อมูลเพิ่มเติมทั้งด้านประโยชน์และโทษที่เกี่ยวข้องกับการวิจัยนี้ ผู้วิจัยจะแจ้งให้ทราบโดยรวดเร็วไม่ปิดบัง

หากท่านมีข้อข้องใจที่จะสอบถามเกี่ยวข้องกับ การวิจัย ท่านสามารถติดต่อไปยังนางสาวเรณูกา ทัพเวช โทรศัพท์ 086 -3465966 ได้ตลอดเวลา

โครงการวิจัยนี้ได้รับการพิจารณารับรองจากคณะกรรมการจริยธรรมการวิจัยในคน สาขาสังคมศาสตร์ซึ่งมีสำนักงานอยู่ที่คณะสังคมศาสตร์และมนุษยศาสตร์ มหาวิทยาลัยมหิดล ถนนพุทธมณฑลสาย 4 ตำบลศาลายา อำเภอพุทธมณฑล จังหวัดนครปฐม 73170 หมายเลขโทรศัพท์ 0 2441 9180 โทรสาร 0 2441 9181 หากท่านได้รับการปฏิบัติไม่ตรงตามที่ระบุไว้ ท่านสามารถติดต่อกับประธานคณะกรรมการจริยธรรมฯ หรือผู้แทน ได้ตามสถานที่และหมายเลขโทรศัพท์ข้างต้น

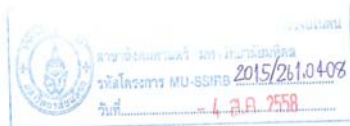
ข้าพเจ้าได้อ่านรายละเอียดในเอกสารชี้แจงผู้เข้าร่วมการวิจัยนี้ ครบถ้วนแล้ว

ลงชื่อ.....อาจารย์
(.....)

วันที่.....

ลงชื่อ.....ผู้เข้าร่วมวิจัย
(.....)

วันที่.....



MU-SSIRB 09

คำอธิบายโครงการวิจัยและการขอความยินยอมสำหรับเด็กอายุ 13-15 ปี

โครงการวิจัยนี้ทำขึ้นเพื่อจะศึกษาว่าเด็กนักเรียนในโรงเรียนนี้ โรงเรียนวิสุทธิศ, โรงเรียนลอยสาย อนุสรณ์, โรงเรียนคลองกุ่ม และโรงเรียนวัดอ่างแก้ว

ที่ชวนน้องเข้าร่วมโครงการนี้เพราะว่าน้องมีอายุระหว่าง 13-15 ปี มีสุขภาพแข็งแรงและเป็นนักเรียนที่กำลังศึกษาในระดับชั้นมัธยมศึกษาตอนต้น ในโรงเรียนสังกัดกรุงเทพมหานคร

ซึ่งพี่อยากจะศึกษาว่าน้องๆ มีการเปิดรับสื่อในรูปแบบต่างๆ ทั้งสื่อในด้านการณรงค์ป้องกันบุหรี่และสื่อโฆษณาชวนเชื่อให้สูบบุหรี่อย่างไร รวมถึงความสัมพันธ์ระหว่างการเปิดรับสื่อกับแรงจูงใจ ทักษะคิด การรับรู้ และพฤติกรรมกรรมการสูบบุหรี่

ถ้าน้องยินดีร่วมโครงการนี้ น้องจะได้รับการปฏิบัติดังนี้

ตอบแบบสอบถาม เกี่ยวกับ การเปิดรับสื่อบุหรี่ทั้งด้านการณรงค์การป้องกันบุหรี่และการโฆษณาชวนเชื่อให้สูบบุหรี่ แบบสอบถามเกี่ยวกับแรงจูงใจ ทักษะคิด และการรับรู้เกี่ยวกับบุหรี่ และแบบสอบถามพฤติกรรมกรรมการสูบบุหรี่ จำนวนทั้งสิ้น 50 ข้อ ซึ่งจะใช้เวลาในการตอบประมาณ 30 นาที

งานวิจัยนี้มีความเสี่ยงน้อย ที่จะคอยดูแลน้องอย่างดี ไม่ให้น้องเหนื่อยเกินไป แต่ถ้าน้องรู้สึกไม่สบายใจ อึดอัด ไม่อยากเข้าร่วมในการวิจัยนี้ น้องสามารถบอกพี่ได้ตลอดเวลา และถ้าน้องหรือผู้ปกครองมีเรื่องสงสัยประการใดสามารถถามได้ พี่ชื่อ นางสาวเรณูภา ทัพเวช โทรศัพท์ 086-3465966

ที่จะเก็บเรื่องส่วนตัวน้องเป็นความลับ ไม่เปิดเผยให้ใครทราบ

น้องอ่านรายละเอียดแล้วเข้าใจหรือไม่

เข้าใจ..... ไม่เข้าใจ

มีข้อสงสัยต้องการซักถามหรือไม่

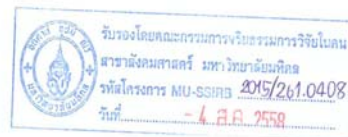
ต้องการถาม..... ไม่ต้องการถาม

น้องได้อ่านและเข้าใจรายละเอียดของโครงการแล้ว

☺ ถ้าน้องเต็มใจ เข้าร่วมในโครงการนี้ลงชื่อ.....

☹ ถ้าน้องไม่เต็มใจเข้าร่วมโครงการนี้ ลงชื่อ.....

Assent form 1 May 2010



BIOGRAPHY

NAME	Renuka Tupwech
DATE OF BIRTH	September 21, 1983
PLACE OF BIRTH	Bangkok, Thailand
INSTITUTION ATTENDED	Thammasart University, 2008 – 2011 Bachelor of social work (Social work) Mahidol University, 2012 – 2016 Master of Arts (Addiction Studies)
HOME ADDRESS	61/37 Soi Wisutijit, Akachai Road Bangkhuntian Sub-district, Jomthong District Bangkok, Thailand 10150 E-mail: rekoh_rekoh@hotmail.com Tel. +668 7426 5469