THESIS

FACTORS AFFECTING THE UNIVERSITY STUDENTS' ATTITUDE TOWARDS THE CIGARETTE WARNING LABELS

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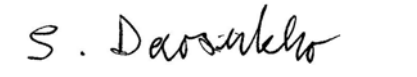
This research was conducted mainly to determine the social and demographic factors, media exposure factors and health risk perception as well as the effects of these factors to students' attitude towards cigarette warning labels. The data were collected from 370 sampled first year Bachelor degree students of Kasetsart University, Bangkhen Campus using survey questionnaire, were analyzed using statistical software and were presented using descriptive and inferential statistics.

The research results revealed that majority of the sampled students were female and were mostly19 years old. Majority of these students were non-smokers, coming from non smoking families which did not allow them to smoke. Most of them were aware of the statement or picture on the cigarette warning labels and that smoking have negative health effects.
The socio and demographic factors such as gender, family smoking status and smoking behavior as well as media exposure factors did not affect students' attitude towards cigarette warning labels. On the other hand, the health risk perception had significantly affected students' attitude towards cigarette warning labels at 0.05 level.

Most of the pictures and statement on cigarette warning label were found to be perfect and realistic because they partly raised students' awareness on the negative effect of smoking. However, some of these pictures and statement should be more frightening. It is therefore recommended that the government and the anti-smoking organizations should promote not only the cigarettes warning labels but also the other anti-smoking campaigns or advocacies to achieve maximum beneficial effects.

Student's signature



Thesis Advisor's signature

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Kanpirom Wiboonpanich

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CHAPTER I

INTRODUCTION

The Ministry of Public Health's Announcement (No.8) B.E.2547 on Rules, Procedures and Conditions of Cigarette Labeling and Label Content According to the Tobacco Product Control Act B.E.2535, a new regulation of the Ministry of Public Health, requires tobacco manufacturers to display health hazard caused by smoking covering at least 50 percent of the front and back of tobacco packs. The color pictures represent the dangers of smoking, including a patient suffering from bronchitis, a woman with a wrinkled face, a father holding a baby in his arms while smoking, the corpse of a lung-cancer patient, the yellowed teeth, and a picture of a smoker accompanied by two skull icons. Each picture is matched with a warning message in Thai, including "Smoking is the cause of fatal emphysema", "Smoking accelerates aging", "Cigarette smoke will harm your children", "Cigarette smoke is the cause of lung cancer", "Smoking makes your breath smell" and "Cigarette smoke may kill people". This anti-smoking law approved by the cabinet is strictly enforced, the cigarette manufacturers who fail to comply with the law will face a 100,000 baht fine and retailers who sell cigarette packs without the picture and statement warning the dangers of cigarettes will be fine 20,000 baht (Ministry of Public Health, 2005).

The action is one of the strategies engineered by the World Health Organization's Framework Convention on Tobacco Control (FCTC), requiring bigger health warnings, including graphic on cigarette packs along with information on the ingredients and how to quit smoking. These strategies were presented to the World Health Assembly in 2003. It called for dramatically improved tobacco warnings worldwide reflects growing interest in tobacco package labeling or warning systems. Canada has been one of the pioneering countries in developing and implementing innovative labeling requirements for tobacco products. Thailand ratified the treaty on 8 November 2004. Thailand is the fourth country in the world after Canada, Brazil and Singapore which adopted picture warning the dangers of cigarettes (World Health Organization, 2003).

The Ministry of Public Health and other anti-smoking advocates believed that the picture and statement warning the dangers of cigarettes on cigarette label will make more smokers afraid of smoking, encouraging them to quit and also discourage non-smokers from taking up the habit. Moreover, the Thailand Tobacco Monopoly estimates new anti-smoking measures will cause about a 15 percent drop in sales (Treerutkuarkul, 2005).

However, statistics show that there are still 1,100 million smokers or 18 percent of the world's total population. Eighty percents of smokers are in the low income countries. There are 5 million smokers who die every year, indicating that nearby 1 smoker die every 6.5 seconds. The World Health Organization estimates that within the next 25 years, people who die from the tobacco consumption will be 10 million per year and 2 out of 3 are in the developing countries. The tobacco consumption is an outbreak which is enhanced by attitude (Mackay and Eriksen, 2002).

According to official public-health statistics in year 2004, smoking and the consumption of alcoholic beverages are now the two biggest health problems for all Thai youths aged 15 and older. The Action on Smoking and Health Foundation showed that about 125 people in Thailand die each day due to smoking-related diseases. More than five million Thais suffer from lung cancer, heart disease, and the after-effects of strokes (Bangkok Post, 2005).

Problem Statement

The National Statistics Bureau in 2003 declared that about 21.6 million Thais aged ranking 11 years and up smoke cigarettes. The major group of smokers is aged between 25-59 years which are 25 percent of all smokers, 22 percents are found in people aged 60 years and up. Thai youths aged 15-24 years are 15 percent. Male youths smoke more than female at 15 times estimated to be 81 percents of all youths who smoke. The male youths start smoking at the averaged age of 22 years old and smoke half of a package of cigarette per day. The female youths begin to smoke at the averaged age of 21 years old and usually smoke 7 cigarettes per day. The

number of smokers, especially teenagers, has also risen rapidly over the past few years (Bangkok Post, 2005).

The Ministry of Public Health and anti-smoking advocacies are developing rules to regulate enforcement of the smoking ban. Also, anti-smoking advocates are planning a public awareness campaign about the law, showing the color pictures on the cigarette packages representing the dangers of smoking. Moreover, the anti-smoking advocates also joined forces with television stations and the national media to help and support people who want to give up smoking and also provided all this information in the 'Call it Quits!' hotline. In Thailand, there are several campaigns used by health advocates such as printed material, art murals and organized community events to convey their anti-smoking message.

The one of the most important target groups of the anti-smoking campaigns are the Thai youth. Today there are more youth smokers. Current youth smoking prevalence is double what it should be had previous trends merely continued.

The university period is a time of experimentation, both good and bad. Students might find themselves trying things they never had the opportunity or desire to in high school, such as smoking. Freshmen taking up smoking may be an issue, because they have more freedom in the university. The freshmen smoking are a trend that is growing.

The above data has prompted the researcher in studying the factors affecting the attitude of the students towards the cigarette warning labels. The first year bachelor degree students, who were 17-25 years old, of Bangkhen Campus, Kasetsart University were selected to be the target group and representative of this study. The students were considered to be one of the important target groups which could indicate success of the government's effort to promote anti-smoking campaigns. This is because students are considered smart, reliable and knowledgeable group.

The Kasetsart University is one of the state universities with various faculties offering multiple courses. Graduates of Kasetsart University are accepted in several organizations,

companies and institutions, both public and private. The researcher believes that the result of this research can apply to other groups of Thai youths.

Objectives

The study is intended to attain the following objectives:

1. To determine the social and demographic factors of the sampled students.

2. To determine the media exposure factors.

3. To determine the health risk perception.

4. To determine the university students' attitude towards smoking and cigarette warning labels.

5. To define the social and demographic factors which affected the students' attitude towards the cigarette warning labels.

6. To determine the media exposure factors which affected the students' attitude towards the cigarette warning labels.

7. To determine the health risk perception which affected the students' attitude towards the cigarette warning labels.

Expected Results

The results of the study could be used as a reference when drawing out guidelines for development or improvement of the rules, procedures and conditions of cigarette labeling and label content and other related regulations. Furthermore, the results could also serve as a strategic

reference for government and non-government organizations policy makers responsible for anti-smoking advocacy.

Scope of the Study

This research was focused specifically on the factors affecting the university students' attitude towards the cigarette warning labels. The target group was limited to only the first year bachelor degree students in Bangkhen Campus of Kasetsart University in academic year 2005. The population for the research was 5,727 students and the sample size was 370 students. The pictures and statements warning of the danger of cigarette on label were based on the Ministry of Public Health's Announcement (No.8) B.E.2547 on Rules, Procedures and Conditions of Cigarette Labeling and Label Content According to the Tobacco Product Control Act B.E.2535.

Definitions of Terms

Students refer to first year bachelor degree students in academic year 2005 in Bangkhen Campus of the Kasetsart University, Bangkok, Thailand.

Factors refer to the social and demographic factors of the students, the media exposure factors and the health risk perception of the students.

Social and demographic factors refer to sex, smoking status in family and smoking behavior of students.

Family smoking status refers to non-smoking or smoking habit of each member in the student's family.

Smoking behavior refers to the personal smoking statuses which are smoker and non-smoker.

Media exposure factors refer to information received by the students through the warning picture and statement on cigarette labels, television, radio, newspaper, magazine, internet or other media.

Cigarette warning label refers to the printed of details of cigarette warning label based on the original CD provided only by the Department of Disease Control, Ministry of Public Health on material used to wrap cigarette packs or cigarette containers and cigarette boxes or cigarette paper wrap or cigarette carton where the picture and warning statement on the cigarette pack or container and box or paper wrap or carton can be seen clearly.

Cigarette refers to dried leaf in the form of manufactured cigarette both domestic and imported cigarette. This did not include the bidis, cigars, kreteks, pipes, sticks, chewed tobacco, oral snuff and nasal snuff carry.

Message warning the dangers of cigarette refers to six warning statements in Thai annexed to the Ministry's announcement which are following:

1. "Smoking accelerates aging"
2. "Cigarette smoke will harm your children"
3. "Smoking makes your breath smell"
4. "Smoking is the cause of fatal emphysema"
5. "Cigarette smoke may kill people"
6. "Cigarette smoke is the cause of lung cancer"

Picture warning the dangers of cigarette refers to 4 color printing picture representing six types of the dangers of smoking and warning message in Thai on the top of both front and back of the cigarette pack or container. The size of label is 5.2 x 4.25 centimeters which is at least 50 percent of the container. The warning picture on cigarette pack both domestic and imported cigarettes is based on the Ministry of Public Health's Announcement (No.8) B.E.2547 on Rules, Procedures and Conditions of Cigarette Labeling and Label Content According to the Tobacco Product Control Act B.E.2535. The six types of picture are showed in Figure 1.

Figure 1 Picture warning the dangers of cigarettes on cigarette label

Source: Action on Smoking and Health Foundation (2005)

Health risk perception refers to the sensory interpretation of the health risks or diseases from smoking.

Attitude refers to the favorable or unfavorable feeling or emotion expressed by the university students towards the cigarette warning labels.

CHAPTER II

REVIEW OF LITERATURE

This research was a study on factors affecting the university students' attitude towards the cigarette warning labels. The research includes the following issues:

1. The knowledge on smoking

    A. Meaning of cigarette
    B. Health and smoking
    C. Advantage from quitting smoking
    D. Youth and smoking

2. Regulations or rule on cigarette label and label content in Thailand

3. Theories and strategies

    A. Concept of attitude
    B. Media exposure
    C. Concept of effect
    D. Health risk perception
    E. Persuasive communication
    F. Fear appeals
    G. Role of image

4. Related Researches

5. Hypotheses

6. Conceptual framework

The Knowledge on Smoking

Meaning of Cigarette

A cigarette is a small paper-wrapped cylinder (generally less than 10cm in length and 10mm in diameter) of cured and shredded or cut tobacco leaves which is ignited at one end and allowed to smolder for the purpose of allowing inhalation of its smoke from the other end, inserted in the mouth (Answer.Com Fast Facts, 2005).

Mackay and Eriksen (2002) stated that manufactured cigarettes consist of shredded and reconstituted tobacco processes with hundreds of chemicals. Often with filter, they are manufactured by machine and the predominant form of tobacco worldwide. Cigarettes are available throughout the world. Filter-tipped cigarettes are usually more popular than unfiltered cigarettes. Hand-rolled cigarettes are also widely smoked in many countries.

Health and Smoking

Every 6.5 seconds someone dies from tobacco use, says the World Health Organization (WHO) in 2004. WHO research suggests that people who start smoking in their teens (as more than 70 percent do) and continue for two decades or more will die 20 to 25 years earlier than those who never light up. It is not just lung cancer or heart disease that causes serious health problems and death. Some diseases caused by smoking are psoriasis, cataracts, wrinkling, hearing loss, cancer, tooth decay, emphysema, osteoporosis, heart disease, stomach ulcers, discolored fingers, cervical cancer and miscarriage, deformed sperm and Buerger's disease (World Health Organization, 2004).

Advantage from Quitting Smoking

There are a lot of ways to quit smoking, and many resources to help smokers. Family members, friends, and co-workers may be supportive or encouraging, but the desire and commitment to quit must be smokers themselves. Most people who have been able to successfully quit smoking made at least one unsuccessful attempt in the past. So the smokers may need help from family, friends and co-workers for support or health care provider for help. The smokers have to understand why they want to quit including both short and long term benefits. Like any addiction, quitting tobacco is difficult, particularly if you are acting alone. If you join smoking cessation programs, you have a much better chance of success. Such programs are offered by hospitals, health departments, community centers, and work sites. Medline Plus Medical Encyclopedia (2005) stated that the benefits of quitting are as follows:

Within 24 hours of quitting, your risk of a sudden heart attack decreases. Within 48 hours of quitting, nerve endings begin to regenerate and your senses of smell and taste begin to return to normal. Within 2 weeks to 3 months of quitting, your circulation improves and walking becomes easier; even your lung function increases up to 30%. Within 1 to 9 months of quitting, your overall energy typically increases and symptoms like coughing, nasal congestion, fatigue, and shortness of breath diminish; also, the small hairlike projections lining your lower airways begin to function normally. This increases your lungs' ability to handle mucus, clean the airways, and reduce infections. Within 1 year of quitting, your risk of coronary heart disease is half that of someone still using tobacco. Within 5 years of quitting, the lung cancer death rate decreases by nearly 50% compared to one pack/day smokers; the risk of cancer of the mouth is half that of a tobacco user. Within 10 years of quitting, your lung cancer death rate becomes similar to that of someone who never smoked; precancerous cells are replaced with normal cells; your risk of stroke is lowered, possibly to that of a nonuser; your risk of cancer of the mouth, throat, esophagus, bladder, kidney, and pancreas all go down.

US Department of Health and Human Services (1990) concluded that stopping smoking has major and immediate health benefits for men and women of all ages and that the benefits

apply to persons with and without smoking related diseases. Former smokers live longer than continuing smokers. For example, persons who quit smoking before 50 years of ages have one-half the risk of dying in the next 15 years compared with continuing smokers. Lower mortality rate upon stop smoking have been demonstrated even through the elder smokers who are in the age group 70-74 years at the time they stop. Women who stop smoking in the first 3-4 months of pregnancy reduce their chance of having underweight baby to the same risk levels as that of women who have never smoked (Table 1).

Table 1 Risk reduction of smoke cessation

Disease Category	Short-term effects (1-5 years)	Long-term effects (+5 years)
Coronary heart disease	50% less risk of one year	Non-smoker rates at 10 years
Peripheral vascular disease	Halts progression	
Cerebrovascular disease	Quick decline in risk	Non-smoker rates at 5 years
Lung cancer	60% less risk at 5 years	Non-smoker rates at 10 years
Oral cavity cancer	Risk decreases with cessation	Non-smoker rates at 16 years
Respiratory disease	Slow decline	50% less risk at 50 years

Source: US Department of Health and Human Services (1989)

Youth and Smoking

The overwhelming majority of smokers begin tobacco use before they reach adulthood. Among those young people who smoke, nearly one-quarter smoked their first cigarette before they reached the age of ten. Several factors increase the risk of youth smoking. These include tobacco industry advertising and promotion, easy access to tobacco products, and low prices. Peer pressure plays an important role through friends' and siblings' smoking. Other risk factors associated with youth smoking include having a lower self-image than peers, and perceiving that tobacco use is normal or "cool". Many studies show that parental smoking is associated with higher youth smoking. While the most serious effects of tobacco use normally occur after decades of smoking, there are also immediate negative health effects for young smokers. Most teenage

smokers are already addicted while in adolescence. The younger a person begins to smoke, the greater the risk of eventually contracting smoking caused diseases such as cancer or heart disease. The highest youth smoking rates can be found in Central and Eastern Europe, sections of India, and some of the Western Pacific islands (Mackay and Eriksen, 2002).

World Health Organization (2001) explains that in many countries the average age at which people begin to smoke is under 15 years. The greatest increase in prevalence of regular smoking occurs between the age of 12 and 15 years and 90% of smokers report starting to smoke regularly before the age of 21. Initiation of smoking at younger ages not only increases the risk of dying from a smoking-related cause and advances the age at which such risks will occur, but also makes it difficult to quit. Clearly then, adolescents and young adults are among major targets for prevention intervention and doctors can play an important role in discouraging young people from taking up smoking. While young people begin to use tobacco for social and psychological reasons, the physical effects of the drug nicotine soon initiate an addiction process. Many young people, including experimental smokers, are unaware of, or underestimate, the addictive nature of smoking. It is a process that usually takes about three years. During the period when young people begin using tobacco as well as before, doctors, especially family physicians and pediatricians can play a key role in informing them and their families about the addictive nature and other harmful effects of tobacco use. Cigarette smoking during childhood produces significant health problems among young people, including cough and phlegm production, an increase in the number and severity of respiratory illnesses, decreased physical fitness and potential retardation of lung growth and function.

The Thai Health Promotion Foundation (2004) points out the following facts in Thai youths and smoking:

Age of the first time smoker is 13-14 years old and the average age of addicted smoker is 18 years old. Yearly, there are 200,000 to 300,000 youths who began to smoke and turn to habitual smokers. This makes number of Thai smoker in the past 20 years till now to 11 million. The average of smoking period of Thai youth is 23 years. Totally 92.5 % of smokers because

addicted to smoking before 24 years old. We can assume that if the youth are not addicted to cigarette before 25 years old, the percentage of smokers will decrease. The cigarette is the first from drug abuse which youth try which lead to other more dangerous type of drugs. Eighty three percent of habitual youth smokers has tried to quit from smoking but are not successful and 11.6 % of this youth intend to stop smoking but never start to stop. Unfortunately, the tobacco company recorded that the younger smoker is the company's future, without them the company has to close the business.

Regulations or Rule on Cigarette Label and Label Content in Thailand

The Action on Smoking and Health Foundation (2004) stated that the policy intervention on labeling and packaging, including health warnings, only involves manufactured cigarettes. This applies equally to both domestic and imported cigarettes. Other tobacco products, e.g. cigars and pipe tobacco, are not included because there are too many varieties of packages and it is difficult to carry out regulatory procedures. In addition, the consumption level of these products is low and small gains in health are not worth the regulatory effort. In Thailand, policy is based on legislative action. Initially, the Medical Association of Thailand pressed for regulatory action and such issues were later taken up by the Announcement of Labeling Committee of the Consumers Protection Board pursuant to the Consumers Protection Act 1979. This announcement became effective on September 1990. Finally, labeling was mandated by successive Ministerial Announcements pursuant to the Tobacco Products Control Act 1992.

The present Rules, Procedures and Conditions of Cigarette Labeling and Label Content According to the Tobacco Products Control Act B.E. 2535 used by the Ministry of Public Health (2005) and announced for enforcement starting March 25, 2005 (Ministry of Public Health Announcement (No. 8) B.E. 2547) stipulated the following provisions on restrictions on rights and freedom of individuals which are permitted under article 29 together with article 50 under the Thai Constitution.

Article 1: The Ministry of Public Health's Announcement (No.6) B.E. 2543 on rules, procedures and condition on cigarette labeling and label content according to the Tobacco Product Control Act B.E. 2535 is hereby terminated.

Article 2: Cigarettes manufactured or imported into the Kingdom must bear labels with warning the dangers of cigarettes. The picture shall be printed in color and bear statements warning the dangers of cigarettes as specified. The picture and statement warning the dangers of cigarettes shall be placed at both sides of the top right edge of the cigarette pack or container and the cigarette box or paper wrap or carton which have the largest area and can be clearly seen.

The picture and statement warning the danger of cigarettes as specified under article, one shall alternatively come from the six types of pictures and warning statements printed with the ratio 1 picture type to 5,000 cigarette packs or containers and with the ratio of 1 picture type of cigarette boxes or paper wrap or carton.

All six types of and warning statements shall be 5.2 cm by 4.25 cm in size appears in the model and warning statement printed in color annexed to the Ministry's Announcement.

The six types of model with warning statements contain the following:

Type 1 picture with warning statement "smoking accelerates aging"

Type 2 picture with warning statement "cigarette smoke will harm your children"

Type 3 picture with warning statement "smoking makes your breath smell"

Type 4 picture with warning statement "smoking is the cause of fatal emphysema"

Type 5 picture with warning statement “cigarette smoke may kill people”

Type 6 picture with warning statement “cigarette smoke is the cause of lung cancer”

Printing the cigarette warning statements, manufacturers and/or import cigarettes shall print from the original CD provided only by the Department of Disease Control, Ministry of Public Health. The size and position of the letter warning statement together with the picture shall appear as in the original.

The provisions of paragraphs 1, 2, 3 and 4 shall not apply with colorless transparent material used to wrap cigarette packs or cigarette containers and cigarette boxes or cigarette paper wrap or cigarette carton where the picture and cigarette warning statement on the cigarette pack or container and box or paper wrap or carton can be seen clearly.

Article 3: The pictures and warning statements on cigarette packs or containers according to Article 2 shall meet the following specifications:

The area size shall be no less than 50 percent of the side which covers the largest area of both sides of the cigarette pack or the cigarette container.

The size of the and warning statements in accordance with paragraph 3 of article above shall apply with cigarette packs or cigarette containers which have area in front or back of the pack or carton between 42-50 square centimeters.

The picture and cigarette warning statements specified in paragraph 3 of article shall be minimized or enlarged for cigarette packs or containers which have areas smaller or lager than 42-50 square centimeters according to the length and width ratio of picture and cigarette warning statement. The area shall be no less than 50 percent of the largest area of both sides of the

cigarette pack or cigarette container. The picture and cigarette warning statement shall be at the top edge and next to the left-side of the cigarette pack or cigarette container.

Article 4: In the case that cigarette pack or cigarette container is not of rectangular shape, the picture and cigarette warning statement shall be printed on the cigarette pack or cigarette container accordance with the original as specified in paragraph 3 of article 2. There shall be at least 2 with cigarette warning statements per 1 cigarette pack or cigarette container and the area size shall be no less than 50 percent of the area of the cigarette pack or cigarette container which is not of rectangular shape with the position next to the top edge.

Article 5: The picture and cigarette warning statement with the size equal to that printed on the cigarette pack or cigarette container shall be printed consecutively next to each other from the top edge of the side with the largest area of both sides with 5 printed on the cigarette box or paper wrap or carton with sizes between 235 to 240 square centimeters by showing the picture and cigarette warning statement on the box or paper wrap or carton which contains cigarette packs or cigarette containers.

For cigarette boxes or cigarette paper wraps or cigarette cartons with area sizes more or less than that stated in paragraph 1, the picture and cigarette warning statement should printed on both sides with the same amount of cigarette packs or cigarette containers in the box or paper wrap or cigarette cartons. The picture and cigarette warning statement shall appear on the top left edge. In case the area on the top left edge is insufficient for the printing of the picture and cigarette warning statement as specified, the warning label shall be printed on the remaining cigarette box or paper wrap or carton to complete number of cigarette packs or cigarette containers in the box or paper wrap or carton.

Article 6: Cigarettes manufactured or imported in the Kingdom shall bear the Thai statement on both side of the cigarette pack showing the date, month and year of manufacture with the “Si Phraya” font or similar fonts of no less than 10 point type in size. The letter should

be printed in black on white within a black frame or if the label is black, white font shall be used without a frame.

Article 7: Announcement shall not apply to cigarettes manufactured for sale outside the Kingdom or imported for sale outside the Kingdom or imported for samples in testing, analyses research with details clearly stating the said purpose of importation.

Article 8: This Announcement shall come into effect after 365 days from the date of the announcement in the Royal Government Gazette.

These articles were announced on 19 January B.E. 2547 by Mrs Sudarat Keyurapanthu, Minister of Public Health.

Theories and Strategies

Concept of Attitude

The concept of attitude was a very important subject in social psychology's formative years and still remains until today. Attitudes are usually defined as a disposition or tendency to respond positively or negatively towards a certain thing (idea, object, person and situation). They include, or are closely related to, our opinions and beliefs and- are based upon our experiences. Since attitudes often relate in some way to interaction with others, they represent an important link between cognitive and social psychology. As far as instruction is concerned, a great deal of learning involves acquiring or changing attitudes.

A common view of attitude is that they have three components: cognitive, affective and behavioral. Originally the term "attitude" referred to a person's bodily position or posture and it is still sometimes used in this way. In social science, however, the term has come to mean a "posture of the mind" rather than of the body. Many definitions with varying emphases and concluded with a comprehensive definition of his own which has been widely adopted. The

aspects stressed in the various definitions include attitude as a mental set or disposition, attitude as a readiness to respond, the physiological basis of attitude, their permanence, their learned nature, and their evaluative character. One common view of attitude is that they have three components (Allport, 1968):

1. A cognitive component, consisting of the ideas and beliefs which the attitude - holder has about the attitude object.

2. An affective (emotional) component refers to the feeling and emotions one has toward the object.

3. A behavioral component, consisting of one's action tendencies towards the object.

Hovland et al. (1953) provided one of the first major theories of attitude change, developed in the framework of Hull's learning theory in 1940, and oriented towards the effects of persuasive communication. According to the Hovland et al's theory, the changes in opinions resulted in attitude change depending upon the presence or absence of rewards. The learning of new attitudes was no different in nature other than any other verbal or motor skill, except that opinions often relate to a single proposition whereas other skills involve a series of propositions. The acceptance of a new opinion (and hence attitude formation) depends upon the incentives that are offered in the communication.

Festinger's theory of cognitive dissonance is one of the best known and most researched frameworks pertaining to attitude change. According to this theory, attitude change was caused by the conflict among beliefs. A number of factors determined the strength of the dissonance and hence how much effort was required to change attitudes. By manipulating these factors, attitude change can be facilitated or inhibited. According to cognitive dissonance theory, there was a tendency for individuals to seek consistency among their cognition (i.e., beliefs, opinions). When there was an inconsistency between attitudes or behaviors (dissonance), something must change to eliminate the dissonance. In the case of a discrepancy between attitudes and behavior, it is most

likely that the attitude will change to accommodate the behavior (Festinger, 1957).

Components of attitudes as shown in Figure 2 generally accept that attitudes are composed of affective (feelings) component, cognitive (beliefs) component and behavioral (actual actions) component (Spooncer, 1992).

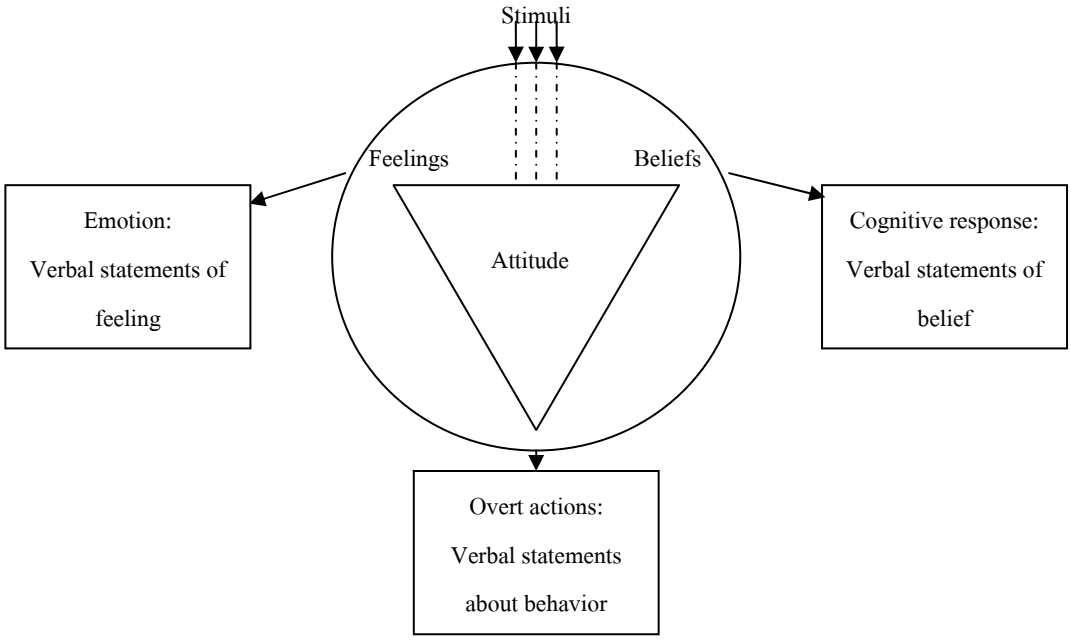

Figure 2 The components of attitude

Source: Spooncer (1992)

The interaction between beliefs and attitudes, as well as the interaction with whatever underlying values, one may give an opinion, one may express an idea, difficult to get a hold on. And, of course, we can't directly observe them; we can only ask people or infer their attitudes from what they do.

Functions of Attitude Katz (1960) stated that there are four major functions which attitudes perform as defined:

1. Understanding: Many attitudes help us to understand our world and to make sense of

occurrences around us. They provide consistency and clarity in our explanation and interpretation of events. This has also been called the knowledge function of attitudes, but that term does not imply that attitudes provide a factually truthful picture of the world-merely one that is meaningful and understandable to particular individual who holds them. For one person, the unfolding story of the Watergate cover-up might be understood in reference to an attitude that "Republicans are no damn good". Another person might relate the same facts to the belief or attitudes provide a context for the new information, aiding in its interpretation and assimilation into the person's belief system.

2. Need satisfaction: Many attitudes are formed as a result of our past rewards and punishments for saying or doing particular things. One form, these attitudes usually continue to be useful in helping us to satisfy our needs or to reach our goals. These attitudes have also been termed adjustive in the sense of helping us to adjust to life situations, or utilitarian in the sense that they are useful in reaching our goals.

3. Ego defense: Attitude can also help to enhance our self-esteem and to defend us against the "thousand slings and arrows" of life All people use defense mechanisms to some extent, but they are used much more by individual who are insecure or feel inferior or who have deep internal conflicts. Prejudiced attitudes are often used as crutch to bolster the self-esteem of the holder, a phenomenon which has been called the "scapegoat view of prejudice" Similarly the employee who shrugs off criticism from the boss by saying "The boss is just always bad tempered" may be using an unrealistic ego-defensive attitude to avoid thinking about his or her own failings.

4. Value expression: A value - expressive attitude is one which helps to establish a person's self-identity, which portrays the sort of person he is, which says in effect "This is the way I am" These four types of needs which attitudes can serve for a person are useful in classifying and understanding attitudes. But they also have other uses. They can also help to explain the types of situations in which different attitudes will be aroused, and the types of influences which will be effective in changing different attitude.

Media Exposure

Definition of Media Exposure Emmert and Donaghy (1940) stated that information is one of the important factors used in decision-making in many activities of people. The demand for information increases when the individual wants details in making decisions or is not sure of something. The individual will not receive all the information that comes through but will choose only some parts that think is beneficial to. The force or drive that helps individuals receives the chosen media results from basic qualities of the receivers in different aspects as follows:

1. Mental components such as choosing information and knowledge according to own views experiences.

2. Social and environment components such as family, culture, tradition, characteristics of populations like ages, sex, place of birth, level of education and until social status.

Mc Combs and Becker (1979) indicated how individuals receive information from the media in order to satisfy their needs. These are divided into 4 categories as follows:

1. Surveillance is following the movement and noticing events from the media in order to be updated and to know what is important.

2. Making decisions concerns daily living. Receiving information enables the individual to set the views towards the situation surrounding.

3. Discussion happens when an individual receives information from the mass media and is able to bring the information into conversation with others.

4. Participation is being aware and involved in the daily events that occur in one's surroundings and the society in general.

Selective Media Exposure In receiving information from the mass media, the audience may receive information through selective process, which consists of different stages (Klapper, 1960):

1. Selective exposure. Individuals choose media and information from many sources depending on interests and needs. The information is perceived to be useful in solving one's problems and satisfying own needs.

2. Selective attention. Besides receiving information, individuals tend to put their interests towards information that relate with attitudes and beliefs, while sometimes trying to avoid information that goes against attitudes and beliefs. This is because when the information goes against feelings, it will cause then to feel unsatisfied and confused.

3. Selective perception and selective interpretation. When individuals receive information from any source, the individuals might choose to perceive and interpret the information according to experiences and will interpret the information or the way of understanding according to the attitudes, experience, beliefs, needs and motivations.

4. Selective retention. An individual will tend to remember information that goes along with attitudes, beliefs, and experiences however; the individual might tend to forget information that does not go along with interests.

Besides, Pearson and Nelson (1997) mentions that selective attention or exposure selective perception, and selective retention are highly interrelated psychological characteristics that explain how people confront and cope with the content of the mass media.

Selective attention or exposure: people tend expose themselves to various messages or stimuli that are in accordance with their existing opinions and interests and avoid communications not in accordance with such opinions and interests.

Selective perception: once individuals have sought out those media messages in line with preferences, selectivity continues as those media users also tend to “read into” the messages whatever suits their needs. This process is called selective perception.

Selective retention: sometimes it is difficult to differentiate between selective perception and selective retention or recall, because people are far more likely to retain those messages they consciously perceived.

Moreover, Schramm (1973) also noted other elements with affect selective exposure. These are as follows:

1. Audience with different experiences will look for different information.

2. Audience will track information to fulfill the objects.

3. Audience with dissimilar backgrounds will care for unrelated details.

4. Education and environment have effects on the selection of the media type as well as the subject matter.

5. Ability to gain information also depends on physical and mental state of the audience.

6. Personality has an impact on the change of attitude, persuasion and behavior of the audience.

7. Emotion and mental condition may be an obstacle to understand the meaning of the message.

8. Attitude defines the way to get and react with the received information.

From the mentioned elements, selective exposure relied on both individuality (internal force) such as experience, education, knowledge and interest, and external force such as the relationship between the audience and the environment and the society, as well.

Concept of Effect

Effects may refer to relationship between encoding and decoding activities within mass communication for example at how media emphasis on particular problem creates a focus for audiences also referred to as agenda setting. Media effects may refer to the media as a whole. Mass media effect is a complicated phenomenon.

Effect of Media on Individual Thepnaronga (2004) stated that media present a multitude of images that blend with other stream of information from personal observation and interpersonal communication to create what in experienced as social reality. The collage of images, fact and belief held at any single point in time. To classify the raw material of direct experience, the objects and events that human being contact by sight, smell, hearing and taste, as object reality. The data from interpersonal communication or from the media are symbolic realities. Media message are abstractions of experience. We could label the image of the world constructed by the individual based on the inputs from objective and symbolic realities. Subject reality guides people's behavior, structures their cognition and influences their attitudes.

Cognitive media effects include a range of dependent variables from knowledge and information recalled, to awareness, different types of beliefs and more complex images. People learn most of what they know about current events through the mass media. In fact, one people complete formal schooling, the mass media are often the sources for updating their knowledge about a host of topics from changes on technology, to scientific discoveries, to economic trend, to foreign affairs.

Hierarchy of Effects Theory for close to a century, the hierarchy of effects theory has been used in communications strategies. It is a practical tool to summarize the communications problems in concrete terms.

The goal of all communication activity is persuasion (motivate attention or learning, change or reinforce attitudes, change or reinforce behavior, act on or use what is said).

The idea of the effects in the context of health warning messages on cigarette packages implies that the message must encourage smokers who receive them to move closer to the ultimate action, which is to quit smoking (Createc and Market studies, 2003).

A message that has been read and understood (accessible) is ineffective if it does not lead to movement on the ladder of effects.

1. The impact of the message depends entirely on its relevance, value, which motivates the individual to read it and take action.

2. At each rung of the ladder, there is a unique group of strategic considerations and tactics.

The following Figure 3 illustrates a simple and intuitive model of a hierarchy of effects in five main steps through which smokers pass, from simple awareness of the risks of smoking to the behavior of no longer smoking.

1. It should be noted that steps one and two are those to which current messages are addressed and that their content is informative - negative (disturbs the comfort of smoking). These steps fall into the cognitive domain (knowledge/awareness).

2. It should be noted that steps 3 and 4 address the affective domain (attitudes), the pre-action step. In these steps, previous messages are integrated into the overall knowledge and

experiences of smokers. The findings of the committee of experts indicates that messages for these steps should probably be positive, in order to motivate action (e.g., you can), especially for less-literate smokers.

3. For individuals at step 1 (awareness of the dangers), it is unclear whether the messages required to move to step 2 (consciousness of the dangers) must be different from current messages or if the current messages simply need to be improved in order that they be better understood. It could be that less literate smokers are still at step 1 because the current messages are just not accessible to them (learning gap).

This type of model (Figure 3) has been validated by many studies since Prochaska and Goldstein (1991) advanced the application of the effects model as a conceptual framework to be used in the campaign against tobacco use. Their research also revealed that for each step of a person's "smoking career", there is a specific intervention.

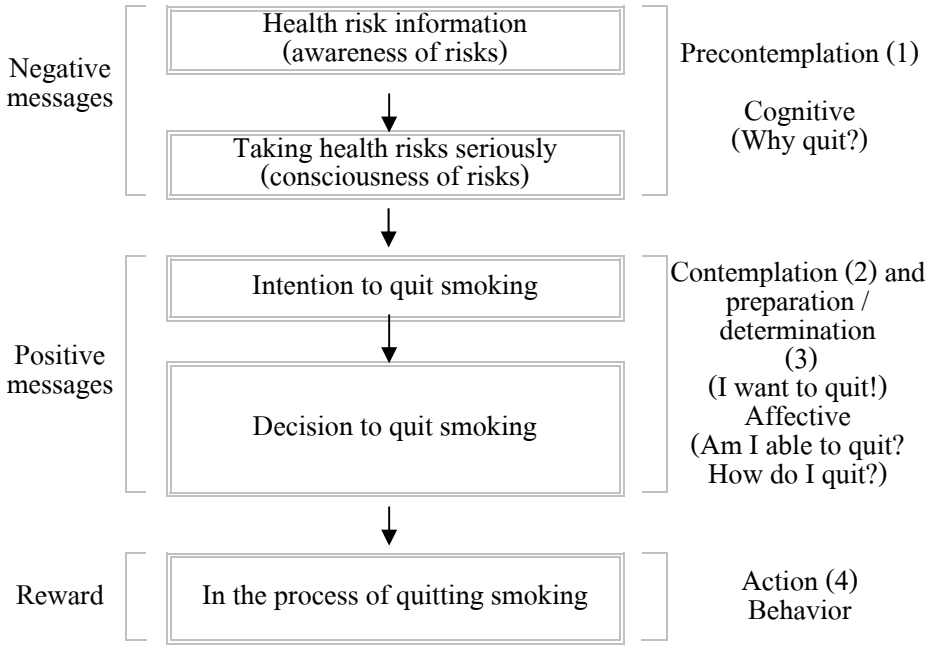

Figure 3 The application of effects model as a conceptual framework to be used in the campaign against tobacco use

Source: Prochaska and Goldstein (1991)

Health Risk Perception

Definition of Perception Perception has been defined as the process by which we interpret sensory data (Lahlry, 1991).

> . . . Sensory data come to us through our five senses. Research has identified two types of influences on our perception: structural and functional.
>
> Structural influences on perception come from the physical aspects of the stimuli to which we are being exposed – for instance, the closer together a series of dots, the more they are seen as forming a line. Functional influences are the psychological factors that influence perception, and therefore, introduce some subjectivity into the process.
>
> Selective perception is the term applied to the tendency for people's perception to be influenced by wants, needs, attitudes, and other psychological factors. Selective perception plays an important role in communication of any sort. Selective perception means that different people can react to the same message in very different ways. No communicator can assume that a message will have the intended meaning for all receivers or even that it will have the same meaning for all receivers. This complicates our models of mass communication. Perhaps mass communication is not just a matter of hitting a target with an arrow, as some models suggest. The message can reach the receiver (hit the target) and still fail to accomplish its purpose because it is subject to the interpretation of the receiver (Severin and Tankard, 2001).

Berelson and Steiner (1964) states that perception is the complex process by which people select, organize, and interpret sensory stimulation into a meaningful and coherent picture of the world.

Scott (1994) has mentioned on perception of that we need a theory of visual rhetoric to help us understand how people process, and has offered some thoughts to move us forward in

developing such a theory. Scott suggests that much research on images in advertising has dealt with either as transparent representation of reality or as conveyors of an emotional appeal. She argues for a third possibility that can act as symbols and can be used to construct rhetorical arguments. She states that visual elements are capable of representing concepts, abstractions, actions, metaphors, and modifiers, and that they can be assembled into complex arguments. Furthermore, this conceptualization of images means that need to be processed cognitively like other forms of information.

Scott's article brings out three ways of thinking about in the mass media-as transparent representations of reality , as conveyors of affective or emotional appeal, and as complex combinations of symbols put together to make up rhetorical arguments. Different types of in the mass media may be used in these three ways to varying degrees.

Devito (1994) offered that perception was the process by which we become aware of the many stimuli impinging on our senses. Perception influences what stimuli or messages you took in and what meanings you give them once they reach awareness. Perception was therefore central to the study of communication in all its forms and functions. Here we look as the process of perception, identifying its three main stages; the processes that influence perception; and how you can make your perception more accurate (Figure 4).

The Perception Process: perception is complex. There is no one-to-one relationship between the messages that occur out there in the world, in the vibration of the air in the black marks on paper and the massages that eventually get to your brain. What occurs out there may differ greatly from what reaches your conscious mind. Examining how and why these messages differ are crucial to understanding communication. We can illustrate how perception works by explaining the three steps involved in the process. Theses stages are not discrete and separated in reality they are continuous and blend into and overlap one another.

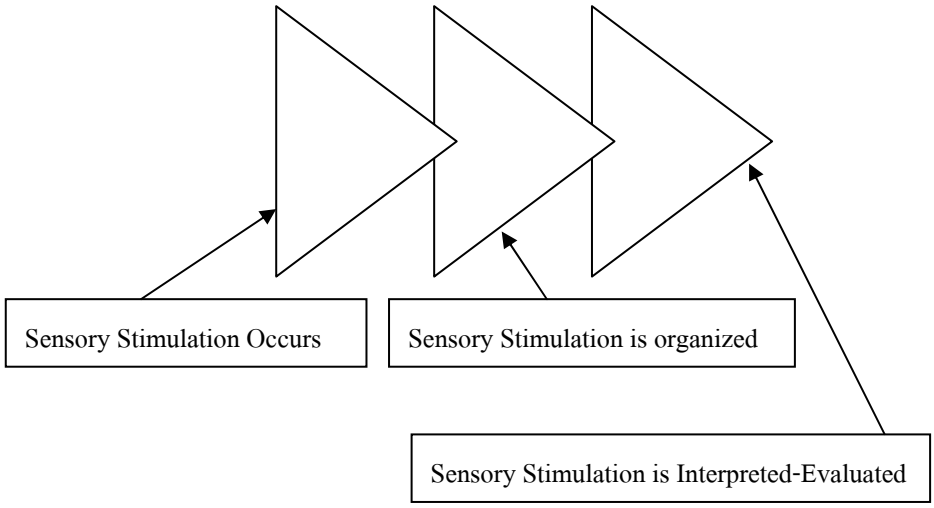

Figure 4 The perception process

Source: Devito (1994)

From Figure 4, according to Devito (1994), three perception processes can be explained as follows:

1. Sensory stimulation occurs: At this first stage the sense organs are stimulated. You hear a recording. You see someone you have not seen for years. You smell perfume on the person next to you. You taste a slice of pizza. You feel a sweaty palm as you shake hands.

2. Sensory stimulation is organized: At the second stage, the sensory stimulation is organized according to various principles. One of the more frequently used principles is that or proximity: people or messages that are physically close to one another are perceived together, or as a unit.

3. Sensory stimulation is interpreted-evaluated: The third step in perceptual process is interpretation-evaluation. This term is hyphenated to emphasize that its two parts cannot be separated. This third step is a subjective process involving evaluations on the part of the perceiver.

Health Risk Perception World Health Organization (2002) stated in the World Health Report 2002 that

> . . . Both risks and benefits have to be considered when seeking to understand what drives some behaviors and why some interventions are more acceptable and successful than others. Social, cultural and economic factors are central to how individuals perceive health risks. Similarly, societal and structural factors can influence which risk control policies are adopted and the impact that interventions can achieve. Preventing risk factors has to be planned within the context of local society, bearing in mind that the success of preventive interventions is only partly a matter of individual circumstances and education. In designing intervention strategies, it cannot automatically be assumed that the diverse groups which make up the general public think in the same way as public health professionals and other risk experts. In addition, estimates of risk and its consequences, presented in scientific terms based on a risk assessment, have to be communicated with particular caution and care. The best way is for well respected professionals, who are seen to be independent and credible, to make the communications. An atmosphere of trust between the government and all interested parties, in both the public and private sectors, is essential if interventions are to be adopted and successfully implemented.

Until recently, risks to health were defined largely from the scientific perspective, even though it has been recognized for some time that risks are commonly understood and interpreted very differently by different groups in society, such as scientists, professionals, managers, the general public and politicians. Assessment and management of risks to health is a relatively new area of study that has been expanding steadily since the early 1970s. It began by focusing on developing scientific methods for identifying and describing hazards and for assessing the probability of associated adverse outcome events and their consequences. Particular attention has been given to the type and scale of the adverse consequences, including any likely mortality. In the early years, risk analysis, as it was then called, was seen mainly as a new scientific activity concerned

with environmental and other external threats to health, such as chemical exposures, road traffic accidents, and radiation and nuclear power disasters.

People's risk perceptions are based on a diverse array of information that they have processed on risk factors (sometimes called hazards) and technologies, as well as on their benefits and contexts. For instance, people receive information and form their values based on their past experience, communications from scientific sources and the media, as well as from family, peers and other familiar groups. This transfer and learning from experience also occurs within the context of a person's society and culture, including references to beliefs and systems of meaning. It is through the organization of all this knowledge, starting in early childhood, that individuals perceive and make sense of their world. In a similar way, perceptions of risks to health are embedded within different economic, social and cultural environments.

Two important factors that influence risk perception are gender and world views, with affiliation, emotional affect and trust also being strongly correlated with the risk judgments of experts as well as lay persons. The influence of gender has been well documented, with men tending to judge risks as smaller and less problematic than do women. Explanations have focused mainly on biological and social factors.

The influence of social, psychological and political factors can also be seen in studies on the impact of world views on risk judgments. World views are general social, cultural and political attitudes that appear to have an influence over people's judgments about complex issues. World views include feelings such as fatalism towards control over risks to health, belief in hierarchy and leaving decisions to the experts, and a conviction that individualism is an important characteristic of a fair society, or that technological developments are important for improving our health and social well-being. These world views have been found to be strongly linked to public perceptions of risk. These views have also been the subject of a few international studies.

> Understanding common risks to health is crucial for the future well-being of many people in all countries, but information on risks, risk factors and uncertainty are inherently difficult to communicate. However, the mass media clearly do have a powerful influence on people's perceptions of risks and, in a global world, information on risks can be disseminated very rapidly through satellite technologies. Although newspapers, magazines, radio and television are often criticized for inaccurate and biased reporting, in industrialized countries they remain the most influential sources for everyday information on risks to health.

Persuasive Communication

Persuasive or behavioral communication includes efforts to persuade specific audiences to adopt an idea or practice. This includes social marketing techniques (Health Communication Unit, 2005).

Persuasive communication is directed toward changing another person's beliefs, attitudes, and, ultimately, behaviors and is essential for leaders who want others to align with their vision for an organization. There are two routes to persuasion. 1) With the peripheral route, the message receiver spends little time processing message content and responds automatically to a decision trigger, usually emotionally driven. 2) With the direct or central route, the message receiver rationally analyzes all of the logic and evidence presented. Both routes are appropriate for the principled persuader to use, but the direct or central route is more powerful for creating long-term attitude change. The persuader builds a logical case that moves the receiver closer to the position of the persuader. Direct, thoughtful persuasion begins with the persuader's credibility, which is built on the persuader's expertise and the receiver's trust of the persuader (ASHP's CareerPharm, 2005).

Fear appeals threatening the individual have been shown to be powerful persuasive devices in the cultures where they have been studied. However, most fear appeal research has been conducted with members of individualist cultures. Individualist cultures place self-needs

above group concerns, while collectivist cultures place group needs above self-concerns. Little is known about the effectiveness of fear appeals (or other persuasive strategies) in collectivist cultures. Two studies assessed the effectiveness of AIDS-prevention fear appeals threatening the self versus fear appeals threatening the group (i.e., family) on members of individualist and collectivist cultures. The first study focuses on African American and Mexican immigrant junior high school youth. The second study focuses on U.S. and Taiwanese college undergraduates. The results indicated that fear appeals should address cultural orientation (i.e., individualist versus collectivist orientation) to achieve maximum effectiveness. The results also indicate that one cannot assume cultural orientation based on ethnicity (Sampson et al., 2001).

Fear Appeals

Fear appeals play on a person's emotions in a negative manner. Like humorous appeals, fear appeals are commonly used. Fear appeals draw attention to common fears and/or risks and then associate them with not using the product or service or with not performing a certain action. Advertising using fear appeals suggest that if the consumer does what the advertisements, then the suggested harm will not occur (O'Guinn et al., 2000).

The Fear appeals theory states that fear motivate individuals to take action to reduce their apprehension about health issues (Witte, 1992).

Hovland et al.'s Drive Reduction Model (1953) operates under the premise that fear functions as a drive. In line with this logic, fear motivates instrumental responding and a reduction in fear is inherently reinforcing. Fear appeals can enhance the likelihood of the ads desired response if the information depicting a threat arouses a level of fear sufficiently intense to constitute a drive state, and if the recipient's silent rehearsal of the communicator's reassuring recommendation were accompanied by a reduction in emotional tension (Eagly and Chaiken, 1993).

Advertisers, however, must be careful in their use of fear appeals. If the level of fear is induced too low, a more careful evaluation of the message can occur. Likewise, if the level of fear in the message is too high, it might induce self-mechanisms preventing the person from further responding to the message or it might produce aggression toward the brand (Eagly and Chaiken, 1993).

The threat cues contained in fear appeals initiates two separate processes: danger control and fear control. Danger control is a cognitive, problem solving activity motivated by the participant's desire to avoid danger. Fear control is motivated by fear arousal and involves the selection and performance of responses that alleviate unpleasant affect. The two processes can occur independently; however, they do influence each other (Eagly and Chaiken, 1993).

The theory is very general and simply argues that cognitive processes are sometimes more important than affective processes in understanding and predicting people's attitudinal and behavioral reactions to fear appeals in advertising (Eagly and Chaiken, 1993).

As a theory, fear appeals, explains how fear can be used as a motivator for positive behavior, a reaction, or even lifestyle change. This theory is very useful among those who must persuade others to make a change in their life when they really do not want to. Fear Appeals is a humanistic theory. Epistemologically, the theory holds multiple truths, because what may invoke fear in one individual may not be true for another. A situation may have to be more serious for some than others before fear can become a factor in the decisions they make to protect themselves or prevent negative consequences from occurring due to the threat to their health or well being. Ontologically, fear appeals theory is based on free will. An individual decides when fear has become the motivator for action to protect themselves. This level of fear is not pre-determined and is different for everyone, however, the individual chooses to take action based on the fear they feel. Axiologically, the theory can move from value conscious to value laden, as an individual's values may determine the level of fear they feel as well as the action they take to protect themselves from future harm or danger (Witte, 1992).

Fear appeals also have intuitive credibility because it clearly explains a relevant issue in health communication. This theory can be applied in health communication between physicians and patients and can also be applied in relationships, such as parent/child or teacher/student, which also gives the theory heuristic value (Witte, 1992).

Health risk messages (also known as “scare tactics” or “fear appeals”) generally include information about severity (is it serious or severe?) and susceptibility of the threat (can it happen to me?). The model that undergirds these messages is this: “As long as perceived efficacy is stronger than perceived threat (e.g., it's a serious problem that I'm at-risk for but I know I can do something to effectively avert it), then people will control the danger by accepting your message’s recommendations and make appropriate behavioral changes.” This lecture provides information about fear-based campaigns, while also including results from studies, empirical data, and a risk behavior diagnosis scale (Witte, 1992).

Fear appeals have gotten a bad rap in public health. Practitioners and creative talent often instinctively use fear to motivate behavior change, yet sometimes it is not politically correct to do so. This presentation and the book on which it is based emphasize that nearly all public health campaigns generate either direct or indirect fear (because they may outline risks or negative consequences of not adopting a particular health behavior). Because of this, practitioners need to focus on “Managing Fear” instead of ignoring it and pretending it’s not there if we don’t do explicit fear appeals. This presentation is based on a theory that has been tested in over 50 studies across diverse populations (from the elderly to youth to Africans to Mexicans to juvenile delinquents and so forth) and diverse topics (Witte, 1992).

Clearly, emotion plays a significant role in health promotion campaign. If communicators elicit the correct emotions in receivers, links between the campaign and the character, the character and the viewer, and the viewer and the campaign can all be made. These links all serve to increase campaign preference, create a favorable image toward the campaign, and to encourage the receiver to receive the campaign or health promotion idea. Humor and fear appeals are two emotional appeals that are commonly used in today.

Role of Image

Boulet (2003) stated that a special attention to the specific role of the image in relation to text in a message such as health warning messages on cigarette packages.

The message carried by these health warning messages on cigarette packages uses two kinds of language, verbal (text) and visual (image). Given that less-literate individuals are naturally more at ease with visual language, the author analyzed the specific nature and function of the image in the message.

A visual representation in a message may be used for a variety of both affective and cognitive functions (intentions). However, when it accompanies a verbal representation (text), it has two specific functions:

1. A complementary function to the text in order to encourage better understanding of the message content.

2. An alternative function, visual in relationship to the verbal, which would better meet the reader's learning style.

The visual representation may also be literal (resemble what it is supposed to represent as closely as possible) or symbolic (abstractly or symbolically present what it is supposed to represent).

In addition, codification of information into memory may be accomplished in two ways: as part of a verbal system or as part of a system of images. Material presented in verbal form is encoded solely in the verbal system, whereas visually-presented material is encoded in both systems (verbal and image).

It therefore follows that recall of verbal-visual information is much easier than recall of information that is solely verbal or visual.

When a visual message plays a role in a representational method that is complementary to the verbal and is addressed to less-literate individuals, it is important to ensure that: the visual message (image) does not create a cognitive conflict with (suggest a different meaning from) the verbal message; the verbal and visual messages are laid out according to a pre-established model in order to encourage the desired reading order (visual on left and text on right encourages the intention to read) and; the verbal-visual message must convey a limited number of ideas (themes).

When a visual message is an alternative method of representation, it is preferable to use the most exact realistic visual representation possible, rather than a symbolic representation, easier to process.

We have even observed that among less-literate individuals the image not only is an alternative representation of the text, but also that it predominates. For example, in the case of a cognitive conflict, the image plays the predominant role.

Related Research

The study about the influence of text messages on the cigarette packages to behavior of youths both smokers and non smokers age 15 and 22 year olds, totally 10,458 persons found that:

80 % of youths notice the text messages on the cigarette packages.

90 % of smokers notice the text messages on the cigarette packages.

30 % of smokers would like to stop short smoking.

10 % stated that the text message give the knowledge on the danger of smoking.

42 % of non smoker told that they don't want to start smoking and 31.5 % said that the text message provide the information. (Action on Smoking and Health Foundation, 2004 cited Supakorn, 1997).

Sine Canada was the first country which used the picture on cigarette package in the year 2000, Canada Cancer Society had a survey on the effect of health warning label on cigarette package. After 1 year of launching to the public, they found that the rate of smoking was reduced. (Action on Smoking and Health Foundation, 2004 cited Canada Cancer Society, 2000):

44 % of smokers declared that the health warning label make them feel to quit smoking.

38% of the smokers who would like to quit smoking, confirmed that the picture on the cigarette package is one of the tools make them think of quit.

58 % of the smokers thought about the effect of smoking on health.

27 % of the smokers said that they will not smoke in their home anymore.

35 % of the smokers gain more information on the effect of smoking to health.

Moreover, the survey in March 2002 have shown that 3 from 4 Canadians including smokers supported health warning label on cigarette package. 72 % of smokers supported the information of health and how to quit smoking print on the cigarette package.

Another research on health warning picture on cigarette label effecting factories' worker (Action on Smoking and Health Foundation, 2005 cited Pimpun, 2005) found that:

- 67.6% concerned with the danger of cigarette to their health.
- 56.5% say that the warning make them prefer to stop smoking abruptly.
- When reading the warning statement, 47.1% would like to stop smoking.

- 17.9% have to hide the cigarette container, don't want other people to see it.
- The best warning statement was "Cigarette smoke is the cause of lung cancer".

Carbone et al. (2005) study on smoking, health, risk, and perception found that a description of health-related incentives faced by a rational smoker considered the role of perception in both immediate quality-of-life effects of smoking and future risk of mortality. A person who adapts psychologically to a lowered health state, smokes more early in life and shifts demands for health investments and health-complementary activities later in life. He also smokes more in total. Someone aware of the full mortality consequences of smoking smokes less and demands less medical care than someone who believes that these effects are highly reversible. The impacts of new information on mortality risk are most valuable early in life. Lastly, someone endowed with a longer life expectancy smokes more in the first part of life but conditional on access to medical care.

From 11th World Conference on Tobacco or Health (2000) stated that numerous studies have been done to determine which elements are most important in creating effective labels. Findings include:

- To command attention, warning labels should occupy a minimum of 25% of the top of the front and back of the package. They should be in black and white or other sharply contrasting colors. Type style and size also must be specified to avoid industry efforts to undermine the impact of the warning.

- Messages should be unequivocal, simple, and stark. They should convey both the nature and magnitude of the risks, since studies show smokers underestimate most risks associated with tobacco use. Pictorial warnings may also be appropriate, particularly in countries with low literacy rates or where research shows that smokers are ignoring standard warning labels. In Canada, pictorial warnings with colorful graphics and language are expected to be on all tobacco packages by the early part of 2001.

- Warning labels should include rotating messages on different packs, including such messages as: Smoking Kills; Tobacco is addictive; Smoking causes heart disease; Smoking causes 85% of all lung cancer deaths; Smoking harms your baby; Quitting smoking now could save your life; and Tobacco smoke can harm those around you. Warning labels should be applied to all tobacco products, not just cigarettes.

The study of Elliott and Shanahan Research (2002) found that smokers in their early 20's admitted to being addicted, but still considered it unlikely for the health risks to directly affect them at their age.

As with teenagers, they perceived the serious health effects of smoking to be more likely for older smokers who have smoked heavily for most of their lives. There was the perception that there was still plenty of time for them to give up smoking before they suffered any serious health effects.

Many smokers in this age segment were sensitive to the warnings and in particular, the graphics. Although they were less concerned about the long term effects of smoking, perceiving them as too far in the future, they were concerned about some specific issues such as, ageing of the skin and pregnancy (females), and the emotive messages (living, breathing hell) had considerable impact on both genders.

In general, there was a perception amongst smokers of this age that they were bullet proof, and many claimed they would not be smoking in old age. As a result, some of the warnings did not concern them as they claimed they would quit before they were likely to suffer the health effects described. Few of the study participants aged 18-24 years intended to quit smoking in the near future, instead they claimed they would quit later (e.g. when pregnant), despite some of them having received pressure from family and friends, or their partners, to quit.

The most effective health warnings were both emotive and visual (e.g. living breathing hell), or which quoted statistics/figures (e.g. 4000 chemicals, doubles your risk of stroke). The

warnings about pregnancy and children also had considerable impact on female smokers in this age group.

However, the graphics had by far the most effect on both genders, and many admitted these images made them extremely uncomfortable.

Evidence study from Elliott and Shanahan Research (2003) suggested that the new warning labels particularly in their graphic format will contribute to a growing environment of the unacceptability of smoking for both health and social reasons. They will encourage community discussion about the issues, especially among smokers and prompt many to think about their habit and reconsider their health status. They will, undoubtedly raise the salience of the issue through the inherent controversial nature of the graphics.

Interestingly, very few felt that the labels alone (in graphic or text only forms) would motivate a smoker to quit rather, they were seen as a part of an overall "quit" information strategy, particularly in terms of reinforcing the text message and supporting similar imagery portrayed through other mediums (e.g. TV, posters, etc).

Although it should be noted that the graphic packs did appear to have a more motivating effect on those already contemplating quitting.

Moreover, the research of Hammond et al. (2003) shows that virtually all smokers (91%) reported having read the warning labels and smokers demonstrated a thorough knowledge of their content. A strong positive relation was observed between a measure of cognitive processing - the extent to which smokers reported reading, thinking about, and discussing the new labels - and smokers' intentions to quit (odds ratio (OR) 1.11, 95% confidence interval (CI) 1.07 to 1.16; $p < 0.001$). The most important fact was the cognitive processing predicted cessation behavior at follow up. Smokers who had read, thought about, and discussed the new labels at baseline were more likely to have quit, made a quit attempt, or reduced their smoking three months later, after

adjusting for intentions to quit and smoking status at baseline (OR 1.07, 95% CI 1.03 to 1.12; $p < 0.001$).

Graphic cigarette warning labels serve as an effective population based smoking cessation intervention. The findings add to the growing literature on health warnings and provide strong support for the effectiveness of Canada's tobacco labeling policy.

Another research of Hammond et al. (2004) found that approximately one fifth of participants (total 616 persons) reported smoking less as a result of the labels; only 1% reported smoking more. Although participants reported negative emotional responses to the warnings including fear (44%) and disgust (58%), smokers who reported greater negative emotion were more likely to have quit, attempted to quit, or reduced their smoking 3 months later. Participants who attempted to avoid the warnings (30%) were no less likely to think about the warnings or engage in cessation behavior at follow up. Policymakers should not be reluctant to introduce vivid or graphic warnings for fear of adverse outcomes.

In addition, Koval et al. (2005) studied the potential effectiveness of warning labels on cigarette packages: the perceptions of young adult Canadians and found that 32.8% (n = 1267) of the respondents were smokers, with males (35.6%) being more likely to smoke than females (30.4%). Current smokers were less likely than experimental/ex-smokers to believe that warning labels with stronger messages would make people their age less likely to smoke. Female current smokers were more likely to think about quitting. Koval concluded that despite the efforts taken in developing the labels, some young adults are skeptical about their effects. Warning labels may have to be modified to target issues that are relevant to young adults; gender differences are important in this modification. Warning labels can offer an additional component to a comprehensive tobacco control program, in that they provide health information.

Rogers and Deckner (1975) attempted to replicate conceptually Schachter's theory of the determinants of emotion and to test the feasibility of extending the theory to attitudes and behavior that may be mediated by the emotion of fear. A total of 279 cigarette smokers were

administered either epinephrine or a placebo and then exposed to situational cues suggestive of disparate emotional states (Experiment 1) or different intensities of the same emotion (Experiment 2). Contrary to preictions based upon Schachter's theory, manipulated physiological arousal was not necessary for emotional labeling and under some conditions elicited fear. The situational cues affected emotion and attitudes. Higher levels of fear appeals strengthened intentions to quit smoking, and reassurance of the efficacy of stopping smoking reduced cigarette consumption.

Hypotheses

Hypothesis testing is used to particularly test the effects of the independent variables to the dependent variable. This research aims to test the effects of the social demographic factors, media exposure factors, health risk perception to the university students' attitude towards cigarette warning labels.

Hypothesis 1: The social and demographic factors are affecting the university students' attitude towards cigarette warning labels.

Hypothesis 1.1: There is an effect of sex to the university students' attitude towards cigarette warning labels.

Hypothesis 1.2: There is an effect of smoking status in family to the university students' attitude towards cigarette warning labels.

Hypothesis 1.3: There is an effect of smoking behavior to the university students' attitude towards cigarette warning labels.

Hypothesis 2: The media exposure factors are affecting the university students' attitude towards cigarette warning labels.

Hypothesis 3: The health risk perception are affecting to the university students' attitude towards cigarette warning labels.

Conceptual Framework

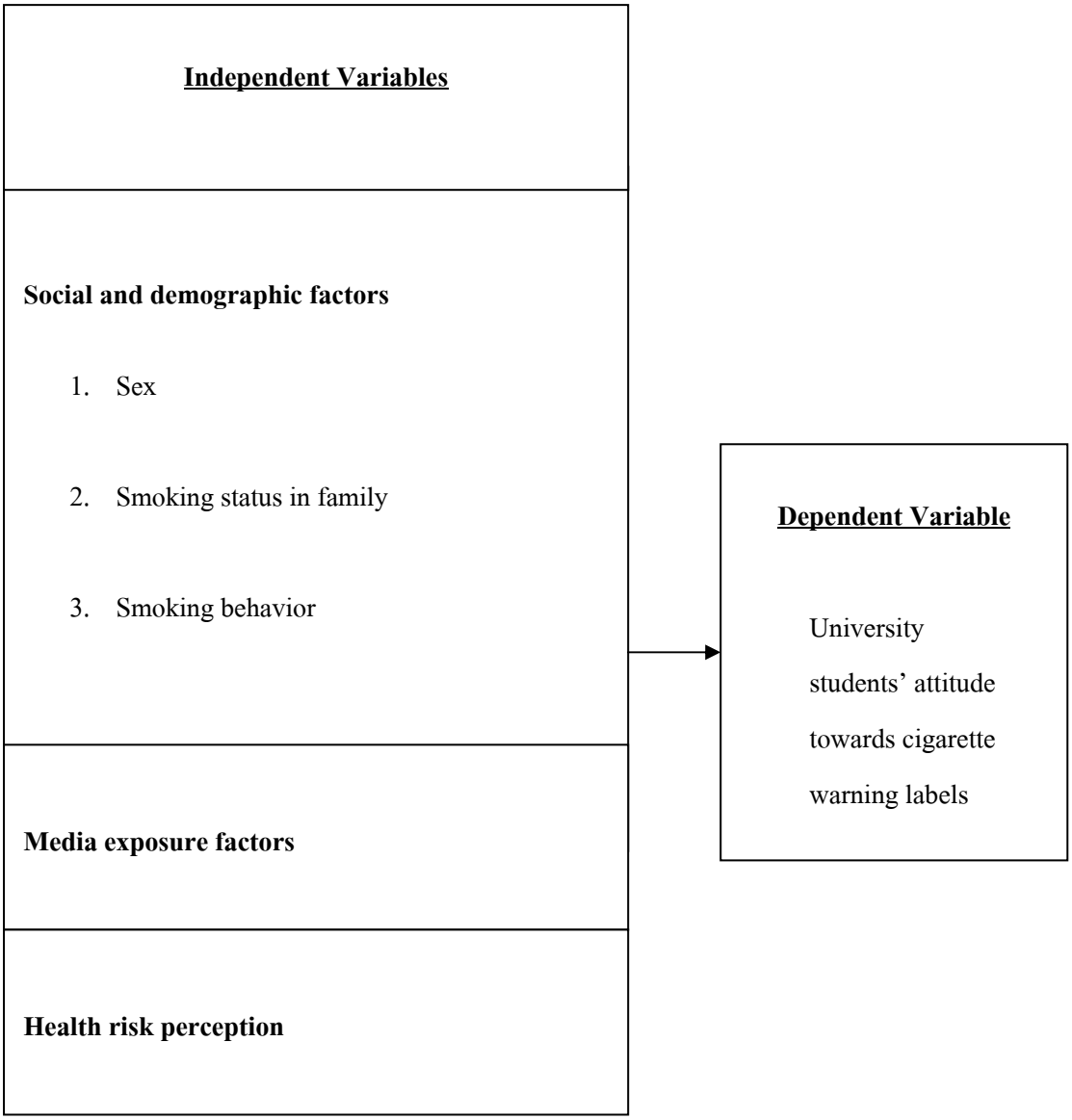

Figure 5 Conceptual framework

CHAPTER III

METHODOLOGY

This research was aimed to determine the social and demographic factors, the media exposure factors, the health risk perception, the university students' attitude and to define the factors which affected the students' attitude towards the cigarette warning labels.

Research Design

This study was conducted as a survey research aimed at determining the factors affecting university students' attitude towards the cigarette warning label. The research was conducted at Kasetsart University, Bangkhen Campus, Bangkok in February 2006.

Population

The population in this research was the first year bachelor degree students in Bangkhen Campus of Kasetsart University, Bangkok, Thailand. The University had a total 5,727 freshmen students as of the end of first semester 2005 (Office of the Registrar, Kasetsart University, 2006).

Sample Size

The sample size in this research was draw by using Table 2 for determining sample size from a given population (Krejcie and Morgan, 1970) as follows:

Table 2 Table for determining sample size from a given population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Remarks: N is population size

S is sample size

Source: Krejcie and Morgan (1970)

From Table 2, the minimum sample size for the population of 5,000-6,000 students was 357-361. Therefore, the researcher decided to draw a sample size of 370 persons from 5,727 students.

Research Instrument

The research instrument used to collect the needed data was survey questionnaire with open-ended and close-ended questions, multiple choice questions and ranking / scaling questions. The questionnaire was originally prepared in English and translated into Thai for survey. The questionnaire was consisted of the following parts:

Part 1: Information on the social and demographic factors of the respondents such as sex, smoking status in family, smoking behavior.

This part comprised of two open questions about age and faculty, together with ten multiple choices questions about sex, smoking behavior and smoking status in family.

Part 2: Information on the media exposure factor of cigarette warning labels.

This part was consisted of three questions: a multiple choice question, scale question and ranking question. The first question was about the awareness of cigarette warning labels. The second question was about ranking of media where respondents received the cigarette warning labels and the third question was about the respondents ranking the perception of statements and pictures on cigarette warning

Part 3: Information of health risk perception.

This part comprised of three questions. There were two multiple choices questions on the health effects caused by smoking. Another question was on the respondents selection of five diseases mostly caused by smoking.

Part 4: Attitude of the respondents towards the cigarette warning labels.

The first section was comprised of three questions. There were two questions on the fear elicited by pictures and statements; the respondents were asked to score. The last question was multiple choices on the improvement of the cigarette warning labels.

The second section was consisted of nineteen statements on the attitude of the respondents towards the cigarette warning labels based on the information in the literature review (Chapter II) comprising of thirteen positive statements: items number 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 36 and 39 (Appendix A) and six negative statements: items number 33, 34, 35, 37, 38 and 40 (Appendix A). In addition the scores for all statements were assigned on the basis of Likert scale method as follows:

Positive question		Negative question	
Strongly Disagree	1	Strongly Disagree	5
Disagree	2	Disagree	4
Neutral	3	Neutral	3
Agree	4	Agree	2
Strongly Agree	5	Strongly Agree	1

Pre-testing the Research Instrument

In order to verify the questionnaire, the researcher had consulted with the committee members to check the reliability, wording and clarity of the content. The questionnaire was pre-tested with 20 students of first year bachelor degree in Bangkhen Campus of Kasetsart University, Bangkok in order to determine its reliability and clarity. The reliability of all parts of the questionnaire was tested by using Coefficient Alpha's Cronbach and found the result value was 0.89, which meant that the questionnaire was reliable and valid.

Data Collection Procedures

Prior to the data collection, the researcher requested for cooperation and permission from the authorities of Kasetsart University, Bangkhen Campus. The questionnaires were distributed to the intended respondents for data collection. The instrument for collection of the primary data was the questionnaire comprised of closed questionnaires as well as open-ended questions, multiple choice questions, ranking / scaling questions. Each student was requested to fill in the self-administrated questionnaire with standby help from the researcher's assistant. The researcher's assistant randomly colleted the questionnaires from the respondents. All needed data/information were collected from the first year bachelor degree students in February 2006.

Data Analysis

The choice of statistical tool in this study was based on the nature of the data obtained. Statistical data obtained included percentages by the use of statistical package. All collected data were statistically analyzed by a computer program on social statistics.

Descriptive analysis: such as frequency, percentage, mean and standard deviation were used to describe the university students' social and demographic factor, media exposure factor, and health risk perception.

Part 1 regarding the university students' social and demographic factor was analyzed with frequency, percentage and mean.

Part 2 was on the media exposure factor of cigarette warning label. The first question on awareness of the warning label was analyzed with frequency and percentage. The second question was on the frequency of recognition of the cigarette warning labels from media, there were six levels of frequency of recognition. The third question in this part also had six levels of frequency of perception on pictures and statements on cigarette warning. Therefore, the scale consisted of six-point scales as follows:

Frequency score

Mostly been seen or heard	=	1
Often been seen or heard	=	2
Regularly been seen or heard	=	3
Used to be seen or heard	=	4
Rarely been seen or heard	=	5
Very rarely/Never been seen or heard	=	6

It referred to six levels of recognition on cigarette warning labels from media or six levels of frequency of perception on pictures and statements on cigarette warning, the interpretation of these responses were calculated by using the following formula:

$$\text{Interval} = \frac{\text{The highest score} - \text{The lowest score}}{\text{The number of Interval}}$$

For this reason, the interval scale in this study was

$$\text{Interval} = \frac{6 - 1}{6}$$

$$= 0.83$$

Therefore, the range of rating scale for the recognition of cigarette warning labels from media was

Mean rating scale

5.16 - 6.00	Very rarely/never been seen or heard
4.33 - 5.15	Rarely been seen or heard
3.50 - 4.32	Used to be seen or heard
2.67 - 3.49	Regularly been seen or heard

1.84 - 2.66	Often been seen or heard
1.01 - 1.83	Mostly been seen or heard

In part 3 regarding health risk perception, the first question on the awareness of negative effects of smoking and the third question on alerting of health effects of smoking were calculated by using percentage and frequency. The second question on the respondents' selection of five diseases which are mostly caused by smoking was analyzed with frequency and mode.

Part 4 of the questionnaire was on the university students' attitude towards cigarette warning labels. The first and second questions in this part were calculated by using the frequency of frightening statements and pictures using six point scales:

Frequency score

Most frightening picture/statement	=	1
Very frightening picture/statement	=	2
Frightening picture/statement	=	3
Somewhat frightening picture/statement	=	4
Less frightening picture/statement	=	5
Least frightening picture/statement	=	6

It referred to six levels of frightening statements and pictures on the cigarette warning label, the interpretation of these responses were calculated by using the following formula:

$$\text{Interval} = \frac{\text{The highest score} - \text{The lowest score}}{\text{The number of Interval}}$$

For this reason, the interval scale in this study was

$$\text{Interval} = \frac{6 - 1}{6}$$

$$= 0.83$$

Therefore, the range of rating for the frightening effect of statements and pictures on the cigarette warning label was as detailed below:

Mean rating scale

5.16 - 6.00	Least frightening picture/statement
4.33 - 5.15	Less frightening picture/statement
3.50 - 4.32	Somewhat frightening picture/statement
2.67 - 3.49	Frightening picture/statement
1.84 - 2.66	Very frightening picture/statement
1.01 - 1.83	Most frightening picture/statement

In this part, the third question on improvement of the cigarette warning labels was analyzed with frequency and percentage.

There were also nineteen questions which referred to five levels of the student's attitude towards the cigarette warning labels, the interpretation of these responses were calculated by using the following formula:

$$\text{Interval} = \frac{\text{The highest score} - \text{The lowest score}}{\text{The number of Interval}}$$

For this reason, the interval scale in this study was

$$\text{Interval} = \frac{5 - 1}{5}$$

= 0.80

Therefore, the range of rating for university students' attitude towards the cigarette warning label was as detailed below:

Mean rating scale

4.21 - 5.00	Strongly Agree
3.41 - 4.20	Agree
2.61 - 3.40	Neutral
1.81 - 2.60	Disagree
1.01 - 1.80	Strongly Disagree

For the university students' attitude measurement, the statements were then adjusted for the purpose of preparing the study report. All the negative statements were adjusted to the positive ones.

The significance level for the testing being investigated was specified at 0.05. The obtained test statistics being less than the specified significance level and the p-value indicates an effect. On the other hand, the p-value being greater than 0.05 indicates absence of effect.

CHAPTER IV

RESEARCH FINDINGS

The results of this study were presented in five parts as follows:

Part 1: Information on the social and demographic factors of the students

Part 2: Information on the media exposure factors of cigarette warning labels

Part 3: Information of health risk perception

Part 4: Attitude of the students towards the cigarette warning labels

Part 5: The hypotheses testing

Part 1: Information on the Social and Demographic Factors of the Students

Social and demographic factors of the students were presented by descriptive statistical techniques; percentage, mean and frequency. Results are presented in Tables 3 – 6.

Table 3 Demographic factors of the students including sex, age, faculty, smoking behavior and smoking status in family

(n=370)

Items	Frequency	Percent
Sex		
Male	150	40.5
Female	220	59.5
Age (years)		
17	1	0.3
18	78	21.1
19	155	41.9
20	82	22.2
21	36	9.7
22	12	3.2
23	2	0.5
25	2	0.5
Not specified	2	0.5
Mean	19.78	
Faculty		
Faculty of Architecture	3	0.8
Faculty of Agro-Industry	27	7.3
Faculty of Economics	37	10.0
Faculty of Education	9	2.4

Table 3 (Continued)

(n=370)

Items	Frequency	Percent
Faculty of Veterinary Medicine	10	2.7
Faculty of Social Sciences	32	8.6
Faculty of Engineering	41	11.1
Faculty of Science	8	2.2
Faculty of Forestry	5	1.4
Faculty of Humanities	53	14.3
Faculty of Fisheries	27	7.3
Faculty of Business Administration	86	23.2
Faculty of Agriculture	21	5.7
Not specified	11	3.0
Smoking behavior		
Non-smokers	322	87.0
Smokers	48	13.0
Do the family members smoke?		
Yes	139	37.6
No	230	62.2
N/A	1	0.3
Allowed to smoke by the family		
Yes	32	8.6
No	337	91.1
N/A	1	0.3

As presented in Table 3, more than half of the sampled students at 59.5 % were female and most of them were 19 years old (41.9%).

The majority of the students at 23.2 % were from the Faculty of Business Administration, the Faculty of Humanities accounted for 14.3%, followed by the Faculty of Engineering (11.1%) and the Faculty of Economics (10%).

The survey found that 87% of the students were non-smokers whereas 13% were smokers.

Of 370 students, 62.2% have no one smoking in their households while 37.6% have at least one family member who smokes.

Only 8.6% of the respondents were allowed to smoke by the family and 91.1% was not allowed to smoke.

Table 4 Number of smoker in the household

(n=139)

No. of family member	Frequency	Percent
1-2 person (s)	129	92.8
3-4 persons	6	4.3
>5 persons	4	2.9

The survey results show that about 92.8% of 139 respondents' families have 1-2 persons smoking, 4.3% have 3-4 persons smoking, and 2.9% have more than 5 persons smoking in the household (Table 4).

Table 5 Future smoking behavior of non-smokers

(n=322)

Items	Frequency	Percent
Continue not smoking	315	97.8
Will start smoking	7	2.2

As shown in Table 5, on the non smokers' side, 97.8% indicated that they will continue not smoking and only 2.2% said that they will start smoking in the future.

Table 6 Smoking behavior of the smokers

(n=48)

Items	Frequency	Percent
Frequency of smoke		
Smoke regularly, everyday or almost everyday	13	27.1
Smoke occasionally, not everyday but at least once a week	10	20.8
Smoke occasionally on special events	25	52.1
Numbers of cigarettes smoked a day		
1-5 cigarettes	39	81.3
6-10 cigarettes	5	10.4
11-15 cigarettes	3	6.3
16 to above cigarettes	1	2.0
Age of the students when started smoking		
Age 5-10	4	8.3
Age 11-15	9	18.8
Age 16-20	31	64.6
Age 21-25	4	8.3
Influenced of start smoking by		
Friends	34	70.8
Family member	3	6.3
Other reasons	11	22.9
In the last 12 months, the smokers		
Tried to give up and been successful for at least one month	6	12.5
Tried to give up and successful for less than one month	6	12.5

Table 6 (Continued)

(n=48)

Items	Frequency	Percent
Reduced the amount of cigarette you smoke in a day	9	18.8
Increased the amount of cigarettes you smoke a day	2	4.2
Quitted smoking	15	31.2
Done nothing different	10	20.8
Future smoking behavior of smokers		
Would smoke just as much as now	7	14.6
Try to ease up smoking	19	39.6
Make definite attempt to quit	22	45.8

Among the 48 students who smoked, 52.1% smoked occasionally with special events, 27.1% smoked regularly and 20.8% smoked occasionally, not everyday but at least once a week (Table 6).

The survey results show that most of the students 81.3% who smoked had 1-5 cigarettes per day, 10.4% had 6-10 cigarettes per day, 6.3% had 11-15 cigarettes per day and only 2% had more than 16 cigarettes per day.

Of those who smoked, 64.6% started at age 16-20, 18.8% started at age 11-15, started at age 5-10 and 21-25 were both accounted for 8.3% each.

About 70.8% were influenced to smoke by friends, 22.9% were influenced by other factors such as self-influence and 6.3% by family member.

In the last 12 months, 31.2% of smokers quitted smoking, 18.8% reduced the daily amount of cigarette they smoke, 12.5 % tried to give up smoking and had been successful for at

least one month and also 12.5% tried to give up and was successful for less than one month and, 20.8% did nothing different in the last twelve months. However, the survey shows that 4.2% increased the daily amount of cigarette they smoke.

In terms of future smoking behavior of smokers, 45.8 % will make a definite attempt to quit , 39.6% % would try to ease up their smoking and, 14.6% thought they would smoke just as much as the present.

Part 2: Information on the Media Exposure Factor of Cigarette Warning Labels

Table 7 Awareness on the warning label

(n=370)

Awareness on the warning label	Frequency	Percent
Aware	336	90.8
Not aware	34	9.2

The survey results show that 90.8% of the respondents were aware of the warning labels while 9.2% were not aware (Table 7).

Table 8 Information on the type media exposure factor of cigarette warning labels

(n=336)

Type of media	1	2	3	4	5	6	N/A	$\bar{X}$	Exposure Level
1. On cigarette package	203 (60.4)	65 (19.3)	35 (10.4)	13 (3.9)	14 (4.2)	6 (1.8)	-	1.77	Mostly seen/heard
2. Television	114 (33.9)	154 (45.8)	43 (12.8)	13 (3.9)	7 (2.1)	3 (0.9)	2 (0.6)	1.95	Often seen/heard

Table 8 (Continued)

(n=336)

Type of media	1	2	3	4	5	6	N/A	$\bar{X}$	Exposure Level
3. Newspaper or magazine	7 (2.1)	78 (23.2)	150 (44.6)	70 (20.8)	22 (6.5)	7 (2.1)	2 (0.6)	3.11	Regularly seen/heard
4. Other media	7 (2.1)	5 (1.5)	6 (1.8)	8 (2.4)	26 (7.7)	160 (47.6)	124 (36.9)	3.44	Regularly seen/heard
5. Radio	2 (0.6)	20 (6.01)	57 (17.0)	123 (36.6)	115 (34.2)	16 (4.8)	3 (0.9)	4.10	Used to be seen/heard
6. Internet	3 (0.9)	13 (3.9)	39 (11.6)	107 (31.8)	150 (44.6)	20 (6.0)	4 (1.6)	4.30	Used to be seen/heard

Remarks: - Number in ( ) refers to percentage value

- 1, 2, 3, 4, 5 and 6 refer to mostly been seen heard, often been seen or heard, regularly been seen or heard, used to be seen or heard, been seen or heard and, very rarely/never been seen or heard, respectively

The results in Table 8 indicate that in terms of the type of media exposure, cigarette warning label were mostly seen on the cigarette package (mean = 1.77), often seen or heard on television (mean 1.95), regular seen on newspaper or magazine (mean = 3.11), were regularly seen or heard from other media (3.44) and were used to hear from radio (4.10). The respondents were least exposed to the label from the internet (4.30).

Table 9 Information on the media exposure factor of cigarette warning labels

(n=336)

	Labels	1	2	3	4	5	6	$\bar{X}$	Perception Level
1.		113 (33.6)	74 (22.0)	49 (14.6)	29 (8.6)	30 (8.9)	41 (12.2)	2.74	Regularly been seen
2.		79 (23.5)	72 (21.4)	63 (18.8)	55 (16.4)	35 (10.4)	32 (9.5)	2.97	Regularly been seen
3.		38 (11.3)	73 (21.7)	83 (24.7)	66 (19.6)	49 (14.6)	27 (8.0)	3.29	Regularly been seen
4.		74 (22.0)	59 (17.6)	52 (15.5)	54 (16.1)	40 (11.9)	57 (17.0)	3.29	Regularly been seen
5.		25 (7.4)	28 (8.3)	44 (13.1)	53 (15.8)	91 (27.1)	95 (28.3)	4.32	Used to be seen
6.		8 (2.4)	26 (7.7)	44 (13.1)	78 (23.2)	90 (26.8)	90 (26.8)	4.45	Rarely been seen

Remarks: - Number in ( ) refers to percentage value

- 1, 2, 3, 4, 5 and 6 refer to mostly been seen heard, often been seen or heard, regularly been seen or heard, used to be seen or heard, been seen or heard and, very rarely/never been seen or heard

Table 9 presents the mean of the information on the perception of pictures and statements on the cigarette warning labels, ranking the mean score which were grouped into six scale “mostly been seen”, “often been seen”, “regularly been seen”, “used to be seen”, “rarely been seen”, and “never been seen”. Four out of six labels fell into regularly been seen these label of

"Smoking makes your breath smell" (mean = 2.74), label of "Cigarette smoke is the cause of lung cancer" (mean = 2.97), label of "Smoking is the cause of fatal emphysema" and label of "Smoking accelerates aging" (mean = 3.29). Label of "Cigarette smoke will harm your children" was used to be seen (mean = 4.32). Lastly, label of "Cigarette smoke may kill people" collapsed in the rarely been seen category (mean = 4.45).

Part 3: Information of Health Risk Perception

Table 10 Students' awareness of the negative effects of smoking on health

(n=370)

Awareness on smoking negative effects on health	Frequency	Percent
Aware	356	96.2
Not aware	14	3.8

The result shows that majority of the respondents or 96.2 % were aware that smoking has negative effects on health whereas only 4 % were not aware (Table 10).

Table 11 Diseases caused by smoking

(n=370)

Diseases	Not selected as five diseases caused by smoking	Selected as five diseases caused by smoking
1. Peripheral vascular disease	279 (75.4)	91 (24.6)
2. Miscarriage	315 (85.1)	55 (14.9)
3. Coronary heart disease	220 (59.5)	150 (40.5)

Table 11 (Continued)

(n=370)

Diseases	Not selected as five diseases caused by smoking	Selected as five diseases caused by smoking
4. Deformed sperms and reproduction	289 (78.1)	81 (21.9)
5. Emphysema	24 (6.5)	346 (93.5)
6. Hearing loss	357 (96.5)	13 (3.5)
7. Lung cancer	21 (5.7)	349 (94.3)
8. Oral cavity and cervical cancer	147 (39.7)	223 (60.3)
9. Osteoporosis	347 (93.8)	23 (6.2)
10. Psoriasis	350 (94.6)	20 (5.4)
11. Respiratory disease	84 (22.7)	286 (77.3)

Table 11 (Continued)

(n=370)

Diseases	Not selected as five diseases caused by smoking	Selected as five diseases caused by smoking
12. Stomach ulcers	363 (98.1)	7 (1.9)
13. Tooth decay	300 (81.1)	70 (18.9)
14. Wrinkling	236 (63.8)	134 (36.2)

Remarks: - Number in ( ) refers to percentage value

As shown in Table 11, the most selected five diseases were lung cancer (frequency = 349), emphysema (frequency = 346), respiratory disease (frequency = 286), oral cavity & cervical cancer (frequency = 223), and coronary heart disease (frequency =150).

Table 12 Situations which the respondents concerned of the health effects of smoking

(n=370)

Situation	Frequency	Percent
I or people buy cigarettes	94	25.4
I or people take cigarettes from the pack	34	9.2
I or people smoke	215	58.1
After I or people finish smoking	12	3.2
Never think about it	14	3.8
N/A	1	0.3

From Table 12, about 58.1% of the respondents were concerned about the effects of cigarette on health when they or others smoke, 25.4% were concerned when they or others buy cigarette, 9.2% were concerned when they or others take out a cigarette from the pack, 3.8% said they never been concerned and, 3.2% were concerned after they or others finish smoking.

Part 4: Attitude of the Students towards the Cigarette Warning Labels

Table 13 Students' attitude towards the pictures on cigarette warning labels

(n=370)

	Pictures	1	2	3	4	5	6	N/A	$\overline{X}$	Opinion Level
1.		240 (64.9)	81 (21.9)	26 (7.0)	12 (3.2)	8 (2.2)	2 (0.5)	1 (0.3)	1.5	Most frightening
2.		63 (17.0)	174 (47.0)	97 (26.2)	21 (5.7)	11 (3.0)	3 (0.8)	1 (0.3)	2.3	Very frightening
3.		46 (12.4)	72 (19.5)	114 (30.8)	60 (16.2)	36 (9.7)	41 (11.1)	1 (0.3)	3.2	Frightening
4.		11 (3.0)	26 (7.0)	61 (16.5)	124 (33.5)	84 (22.7)	63 (17.0)	1 (0.3)	4.1	Somewhat frightening
5.		5 (0.3)	10 (2.7)	35 (9.5)	91 (24.6)	141 (38.1)	87 (23.5)	1 (0.3)	4.6	Less frightening
6.		6 (1.6)	11 (3.0)	36 (9.7)	61 (16.5)	86 (23.2)	169 (45.7)	1 (0.3)	4.9	Less frightening

Remarks: - Number in ( ) refers to percentage value

- 1, 2, 3, 4, 5 and 6 refer to most frightening picture, very frightening picture, frightening picture, somewhat frightening picture, less frightening picture and, least frightening picture respectively.

Table 13 presents the mean of the information on the fright elicited by pictures on the cigarette warning labels, ranking the mean score grouped into six scale such as “most frightening picture”, “very frightening picture”, “frightening picture”, “somewhat frightening picture”, “less frightening picture”, and “least frightening picture”. The picture of lung cancer had the lowest mean (mean = 1.5), representing the most frightening picture on the cigarette warning label. Followed by the picture of a patient suffering from bronchitis was very frightening picture (mean = 2.3). Then, the picture of the yellowed teeth was frightening picture (mean = 3.2). The icture of a smoker accompanied by two skull icons was somewhat frightening picture with mean of 4.1. Lastly, two out of six pictures were perceived to be less frightening picture, the pictures of a father holding a baby in his arms while smoking (mean = 4.6) and of a woman with a wrinkled face (mean = 4.9).

Table 14 Students’ attitude towards the statements on cigarette warning labels

(n=370)

Statements	**1**	**2**	**3**	**4**	**5**	**6**	**N/A**	$\overline{\mathbf{X}}$	**Opinion Level**
Cigarette smoke is the cause of lung cancer	165 (44.6)	86 (23.2)	70 (18.9)	36 (9.7)	10 (2.7)	3 (0.8)	-	2.0	Very frightening
Smoking is the cause of fatal emphysema	83 (22.4)	159 (43.0)	76 (20.5)	28 (7.6)	19 (5.1)	4 (1.1)	1 (0.3)	2.3	Very frightening

Table 14 (Continued)

(n=370)

Statements	1	2	3	4	5	6	N/A	$\overline{X}$	Opinion Level
Cigarette smoke may kill people	74 (20.0)	72 (19.5)	104 (28.1)	49 (13.2)	39 (10.5)	31 (8.4)	1 (0.3)	2.9	Frightening
Cigarette smoke will harm your children	17 (4.6)	18 (4.9)	53 (14.3)	137 (37.0)	78 (21.1)	66 (17.8)	1 (0.3)	4.1	Somewhat frightening
Smoking accelerates aging	16 (4.3)	20 (5.4)	31 (8.4)	64 (17.3)	136 (36.8)	103 (27.8)	-	4.6	Less frightening
Smoking makes your breath smell	11 (3.0)	16 (4.3)	38 (10.3)	55 (14.9)	88 (23.8)	161 (43.5)	1 (0.3)	4.8	Less frightening

Remarks: - Number in ( ) refers to percentage value

- 1, 2, 3, 4, 5 and 6 refer to most frightening statement, very frightening statement, frightening statement, somewhat frightening statement, less frightening statement and, least frightening statement respectively.

Table 14 shows the mean of the information on the fright elicited by statements on the cigarette warning labels, ranking the mean score grouped into six scale “most frightening statement”, “very frightening statement”, “frightening statement”, “somewhat frightening statement”, “less frightening statement”, and “least frightening statement”. The statements of “Cigarette smoke is the cause of lung cancer” and of “Smoking is the cause of fatal emphysema” had the lowest means which were 2.0 and 2.3, respectively, representing very frightening statement on the cigarette warning label. They were followed by the picture of “Cigarette smoke may kill people” which was perceived as a frightening statement (mean = 2.9). The statement of

"Cigarette smoke will harm your children" was perceived as somewhat frightening statement with mean 4.1. Lastly, two out of six statements fell into less frightening statement, statements of "Smoking accelerates aging" (mean = 4.6) and of "Smoking makes your breath smell" (mean = 4.8).

Table 15 Students' attitude towards government's action on improvement of cigarette warning labels

(n=370)

Attitudes	Frequency	Percent
It is important that the government improve the cigarette warning labels	335	90.5
It is not important that the government improve the cigarette warning labels	35	9.5

The results in Table 15 show that majority of the respondents or 90.5% thought that it is important for the government to improve the cigarette warning labels but 4 % did not think so.

Table 16 Student's attitudes towards cigarette warning labels and smoking

(n=370)

Statements	1	2	3	4	5	$\overline{X}$	S.D.	Attitude Level
1. I believe smoking is definitely addictive	0 (0)	11 (3.0)	8 (2.2)	127 (34.3)	224 (60.5)	4.52	0.69	Strongly agree
2. I think smoking has a real negative effect on health	2 (0.5)	3 (0.8)	7 (1.9)	66 (17.8)	292 (78.9)	4.47	0.59	Strongly agree
3. I believe most people take a notice of the health warnings on cigarette packs	4 (0.5)	26 (7.0)	45 (12.2)	201 (54.3)	94 (25.4)	3.96	0.87	Agree

Table 16 (Continued)

(n=370)

Statements	1	2	3	4	5	$\overline{X}$	S.D.	Attitude Level
4. The cigarette warning labels strike me and catch my attention	8 (2.2)	45 (12.2)	93 (25.1)	173 (46.8)	51 (13.8)	3.58	0.95	Agree
5. The cigarette warning labels have raised awareness about negative effect from smoking	11 (3.0)	65 (17.6)	71 (19.2)	173 (46.8)	50 (13.5)	3.50	1.03	Agree
6. The pictures and statement on cigarette warning labels make well-enough informed about the health risks of smoking cigarettes	8 (2.2)	40 (10.8)	50 (13.5)	219 (59.2)	53 (14.3)	3.73	0.91	Agree
7. I worried more about the effects of smoking on health since cigarette warning labels	7 (1.9)	45 (12.2)	99 (26.8)	165 (44.6)	54 (14.6)	3.58	0.95	Agree
8. I feel the health warnings on packs of cigarettes helped people smoke less	43 (11.6)	111 (30.0)	114 (30.8)	87 (23.5)	15 (4.1)	2.78	1.06	Neutral
9. I think seeing the health warnings on packs would make people think about quitting	83 (22.4)	129 (34.9)	97 (26.2)	49 (13.2)	12 (3.2)	2.40	1.07	Disagree

Table 16 (Continued)

(n=370)

Statements	1	2	3	4	5	$\overline{X}$	S.D.	Attitude Level
10. I think the cigarette warning labels saying things which are realistic	5 (1.4)	10 (2.7)	38 (10.3)	207 (55.9)	110 (29.7)	4.10	0.79	Agree
11. The size, statements and pictures on cigarette warning labels are perfect	14 (3.8)	31 (8.4)	98 (26.5)	154 (41.6)	73 (19.7)	3.65	1.01	Agree
12. The pictures on cigarette warning labels should be more frightening	12 (3.2)	26 (7.0)	76 (20.5)	113 (30.5)	143 (38.6)	2.94	1.08	Neutral
13. The cigarette warning labels should be stronger	11 (3.0)	24 (6.5)	84 (22.7)	115 (31.1)	136 (36.8)	2.92	1.06	Neutral
14. I think both statements and pictures on cigarette warning labels should be bigger	15 (4.1)	32 (8.6)	87 (23.5)	109 (29.5)	127 (34.3)	2.81	1.12	Neutral
15. I think the color warning pictures are more effective than black & white pictures	8 (2.2)	12 (3.2)	60 (16.2)	142 (38.4)	148 (40.0)	4.11	0.94	Agree
16. I think the ingredients of the cigarette should be added to the cigarette packages	5 (1.4)	21 (5.7)	73 (19.7)	179 (48.4)	92 (24.9)	2.90	0.89	Neutral

Table 16 (Continued)

(n=370)

Statements	1	2	3	4	5	$\overline{X}$	S.D.	Attitude Level
17. The health warnings statements on cigarette warning labels should be described in details of health risks from smoking	5 (1.4)	15 (4.1)	62 (16.8)	167 (45.1)	121 (32.7)	3.04	0.88	Neutral
18. I have a negative attitude to smoker	13 (3.5)	14 (3.8)	72 (19.5)	111 (30.0)	160 (43.2)	4.06	1.05	Agree
19. I'd like to know more or to be told more about the cigarette warning label from various media	94 (25.4)	201 (54.3)	45 (12.2)	26 (7.0)	4 (1.1)	1.04	0.87	Strongly Disagree

Remarks: - Number in ( ) refers to percentage value

- 1, 2, 3, 4 and 5 refer to strongly disagree, disagree, neutral, agree, and strongly agree respectively.

Table 16 shows the mean and standard deviation of students' attitudes towards cigarette warning labels and smoking, ranking the mean scores grouped into five scale "strongly disagree", "disagree", "neutral", "agree" and "strongly agree" highest means indicating that the students strongly agreed with the statements of "I believe smoking is definitely addictive" (mean = 4.52) , and "I think smoking has a real negative effect on health" (mean = 4.47). Most of the students agreed with nine statements of "I think the color warning pictures are more effective than black & white pictures" (mean = 4.11), "I think the cigarette warning labels saying things which are realistic" (mean = 4.10), "I have a negative attitude to smoker" (mean = 4.06), "I believe most

people take a notice of the health warnings on cigarette packs" (mean = 3.96), "The pictures and statement on cigarette warning labels make well-enough informed about the health risks of smoking cigarettes" (mean = 3.73), "The size, statements and pictures on cigarette warning labels are perfect" (mean = 3.65), followed by "The cigarette warning labels strike me and catch my attention" (mean = 3.58) as well as "I worried more about the effects of smoking on health since cigarette warning labels" (mean = 3.58), lastly, "The cigarette warning labels have raised awareness about negative effect from smoking" (mean = 3.50).

The student's had a neutral attitude with the statements of "The health warnings statements on cigarette warning labels should described in details health risks from smoking" (mean = 3.04), then "The pictures on cigarette warning labels should be more frightening" (mean = 2.94), "The cigarette warning labels should be stronger" (mean = 2.92), followed by "I think the ingredients of the cigarette should be added to the cigarette packages" (mean = 2.90), "I think both statements and pictures on cigarette warning labels should be bigger" (mean = 2.81), lastly, "I feel the health warnings on packs of cigarettes helped people smoke less" (mean = 2.78).

However, the students disagreed with the statement of "I think seeing the health warnings on packs would make people think about quitting" (mean = 2.40). The students strongly disagreed with the statement of "I would like to know more or to be told more about the cigarette warning label from various media" (mean = 1.04).

Part 5: Hypothesis Testing

Hypothesis 1: The social and demographic factors are affecting the university students' attitude towards cigarette warning labels.

Hypothesis 1.1: There is an effect of sex to the university students' attitude towards cigarette warning labels.

Table 17 The difference of means of the attitude towards cigarette warning labels by sex

(n=370)

Sex	n	$\overline{X}$	S.D.	t	df	p
Male	150	3.31	0.36	-0.549	368	0.583
Female	220	3.33	0.34			

The results in Table 17 show that there was no effect of sex to the student's attitude towards cigarette warning labels at 0.05 significant level.

Hypothesis 1.2: There is an effect of smoking status in family to the university students' attitude towards cigarette warning labels at 0.05 significant level.

Table 18 The difference of means of the attitude towards cigarette warning labels by smoking status in the students' family

(n=369)

Smoking status in the family	n	$\overline{X}$	S.D.	t	df	p
Smoker(s) within the family	139	3.36	0.32	1.7	367	0.09
No smoker in the family	230	3.30	0.36			

Table 18 shows that there was no effect of smoking status in the students' family to the student's attitude towards cigarette warning labels at 0.05 significant level.

Hypothesis 1.3: There is an effect of smoking behavior to the university students' attitude towards cigarette warning labels.

Table 19 The difference of means of the attitude towards cigarette warning labels by smoking behavior

(n=370)

Smoking behavior	n	$\overline{X}$	S.D.	t	df	p
Non-smokers	322	3.32	0.34	0.508	368	0.612

Table 19 (Continued)

(n=370)

Smoking behavior	n	$\overline{X}$	S.D.	t	df	p
Smokers	48	3.30	0.41			

Table 19 shows that there was no effect of smoking behavior to the students' attitude towards cigarette warning labels at 0.05 significant level.

Hypothesis 2: The media exposure factors are affecting to the university students' attitude towards cigarette warning labels.

Table 20 The difference of means of the attitude towards cigarette warning labels by media exposure factors

(n=370)

Media exposure	n	$\overline{X}$	S.D.	t	df	p
Aware of the warning label	336	3.32	0.019	1.009	368	0.314
Not aware of the warning label	34	3.26	0.053			

As shown in Table 20, the media exposure factors was not affecting the university students' attitude towards cigarette warning labels at 0.05 significant level.

Hypothesis 3: The health risk perception is affecting to the university students' attitude towards cigarette warning labels.

Table 21 The difference of means of the attitude towards cigarette warning labels by health risk perception

(n=370)

Health risk perception	n	$\overline{X}$	S.D.	t	df	p
Realize negative effects on health	356	3.33	0.34	2.353	368	0.015*
Do not realize negative effects on health	14	3.01	0.36			

The results in Table 21 show the health risk perception was affecting the university students' attitude towards cigarette warning labels at 0.05 significant level.

CHAPTER V

CONCLUSIONS AND RECOMMENDAIONS

This study focused on the "factors affecting the university students' attitude towards the cigarette warning labels". Specifically, the researcher tried to find the effects of the university students' social and demographic factors, media exposure factors and health risk perception to university students' attitude on the cigarette warning labels.

The study was a survey research using questionnaire to collect data from university students in Bangkhen Campus, Kasetsart University. The data were collected from 370 respondents who were sampled from the target population of 5,727 first year students using the formulated table for determining sample size from a given population. All of the collected data were analyzed by using descriptive and inferential statistics and results were presented in terms of means and percentages.

Conclusion of Findings

Social and Demographic Factors of the University Students

The majority of the students were female (59.5%). Most of the students were 19 years old (41.9%). A great number were studying in the Faculty of Business Administration (23.2%) and majority of the students were non-smoker (87%).

There were only 13 % of the total students who were smokers, and the majority of these smokers smoke occasionally on special events (52.1%). Most of them smoked an average of 1-5 cigarettes a day (81.3%). The majority of these smokers started smoking at 16-20 years old (64.6%) and most of them started smoking because of from the influence of their friends (70.8%). The majority tried to quit smoking in the last 12 months (31.2%).

In the future, the largest proportion of the smokers will make definite attempt to quit (45.8 %) and nearly 97.8 %of non-smokers will continue not smoking.

The majority of the students' families did not have member who smoke (62.2%). Most members of their families were not allowing the students to smoke (91.1%).

Media Exposure Factor of Cigarette Warning Labels

When considering the result of the study, the researcher found that the media exposure factor of cigarette warning labels could be described as follows:

The majority of the students 90.8 % were aware of the statement or picture on the cigarette warning labels with most of them recognizing the cigarette warning labels from the cigarette package itself.

The cigarette warning labels of "Smoking makes your breath smell" was regularly perceived by the students (Figure 6).

Figure 6 Yellowed teeth and statement on "Smoking makes your breath smell"
Source: Action on Smoking and Health Foundation (2005)

Health Risk Perception

The majority of the students were aware that the smoking has the negative effects to their health and other people's health (96.2%).

The students had selected the five diseases mostly caused by smoking such as lung cancer, emphysema, respiratory disease, oral cavity & cervical cancer and coronary heart disease.

Most of the students thought about the health effects of smoking when they or other people smoke (58.1%).

Attitude of the Students towards the Cigarette Warning Labels

Nearly all of the students agreed that it is important that the government has to improve the cigarette warning labels (90.5%).

The statement of "Cigarette smoke is the cause of lung cancer" on cigarette warning labels was very frightening statement to the students. Moreover, the picture of lung cancer on cigarette warning labels was the most frightening picture for the students (Figure 7).

Figure 7 Corpse of a lung cancer patient
Source: Action on Smoking and Health Foundation (2005)

In contrast, the statement of "Smoking makes your breath smell" on cigarette warning labels was less frightening for the students. In addition, the picture of aging woman on cigarette warning labels was less frightening for the students (Figure 8).

Figure 8 Woman with a wrinkled face

Source: Action on Smoking and Health Foundation (2005)

The results of the study on attitude of the students towards the cigarette warning labels show that the students strongly agreed with the statements of "I believe smoking is definitely addictive.", and "I think smoking has a real negative effect on health". On the other hand, the students strongly disagreed with the statement of "I would like to know more or to be told more about the cigarette warning label from various media".

Conclusions

The students' social and demographic factors such as gender, smoking status in family and smoking behavior had no effect to their attitude towards cigarette warning labels at 0.05 significant level.

The media exposure factors of the students also had not affected their attitude towards cigarette warning label at 0.05 significant level.

The health risk perception factors had affected the university students' attitude towards cigarette warning labels, at 0.05 significant level.

Recommendations

Based on the results, the researcher found that most of students were mostly exposed to cigarette pack as a medium for receiving information on cigarette warning labels. The information

is one of the important factors used in decision-making in many activities of people; therefore the government or other organizations concerned with the anti-smoking advocates should consider using these informations regularly on the cigarette pack/container as a tool to represent the dangers of smoking, in order to increase the individual perception of the danger. This is because when the students see warning label on the cigarette package, the students will tend to remember information on the dangers of smoking.

Results also indicated that students were aware that smoking has negative effects to their and also other people's health especially when they saw someone smoke. Moreover, the researcher found that most of smokers have attempted to quit smoking and non-smokers are firmed not smoking. The effects in the context of cigarette warning label imply that the message and the picture must encourage smokers who receive them to move closer to the ultimate action, which is to decreases or quit smoking. Therefore, it will be without difficulty for the Ministry of Public Health and other anti-smoking advocates to vigorously promote the quit smoking projects or the project on disseminating the knowledge on danger of smoking.

Most of students agreed that the cigarette warning labels are realistic and perfect. From this result, the researcher agrees that the anti-smoking campaign by using the picture and statement on cigarette warning label is successful. However, some of the students commented on the picture of a father holding a baby in his arms while smoking and the picture of a woman with a wrinkled face are less frightening and need to be improved. They also observed that the statement of "Smoking accelerates aging" and the statement of "Smoking makes your breath smell" should be more frightening. Therefore, the government and the anti-smoking organizations should concentrate more on improving the proper content of the cigarette warning labels according to the fear appeal strategy. The researcher would like to recommend that the government and the anti-smoking organizations may consider using the statements or pictures related to respiratory disease, oral cavity and cervical cancer and coronary heart disease which are the three from the most selected five diseases instead of the less frightening pictures and statements as mentioned above.

In addition, most of the students strongly agreed that smoking has a real negative effect on health. Moreover, the result of the research found that the health risk perception was significantly affecting to the university students' attitude towards cigarette warning labels. Therefore, the researcher would suggest that the government and the anti-smoking organizations should promote the anti-smoking activities to raise the awareness of people on health risk from smoking making them more aware of the negative effect of smoking or cigarette.

Recommendations for Further Study

The following are recommended for further study:

1. A study should be conducted among older groups of students such as those who are graduating. Graduate students as respondents would also give interesting data as these students have more life experience, more income and additional influence from their co-workers.

2. A further study should explore other social-demographic factors such as income factor, occupation factor and etc affecting the university students' attitude towards the cigarette warning labels.

3. It could be possible to explore the attitude of other groups of people such as workers, government officers or health care worker, etc.

4. A study in other quit-smoking on non-smoking campaigns which should also conducted.

REFERENCES

Action on Smoking and Health Foundation. 2004. **Warning label on cigarette package B. C. 2517 – 2547**. Bangkok: Action on Smoking and Health Foundation.

_____. 2005. Opinion Survey. **Smart**. 6 (62): 7.

Allport, G. W. 1968. **The Historical Background of Modern Social Psychology**. Addison: Wesley.

Answer.Com Fast Facts. 2005. **Cigarette** (Online). Available: www.answers.com/topic/cigarette.

ASHP's CareerPharm. 2005. **The Art of Persuasive Communication** (Online). Available: www.careerpharm.com/seeker/resources/persuasive-comm.cfm.

Bangkok Post. 2005. Bangkok: March 9, 2005.

Berelson, B. and , G. A. Steiner. 1964. **Human Behavior: An Inventory of Scientific Finding**. New York: Harcourt Brace and Jovanovich.

Boulet, A. 2003. **Déterminants psycho-cognitifs d'une communication efficace adressée aux personnes faiblement alphabétisées**. n. p. (in English)

Carbone, J. C., S. Kverndokk and O. J. Rogeberg. 2005. Smoking, health, risk, and perception. **Journal Health Economic**. 24 (4): 631-653.

Createc and Market studies. 2003. **Final Report: Effectives of Health Warning Messages on Cigarette Packages in Informing Less-literate Smokers**. Montreal: Communication Canada.

Devito, J. A. 1994. **Human Communication: The Basic Course**. New York: Harper Collins College Publishers.

Eagly A. H. and S. Chaiken. 1993. **The Psychology of Attitudes**. New York: McGraw-Hill.

Elliott and Shanahan Research. 2002. **Research Report: Developmental Research for New Australian Health Warnings on Tobacco Products Stage 1**. Sydney: Australian Department of Health and Ageing.

_____. 2003. **Research Report: Developmental Research for New Australian Health Warnings on Tobacco Products Stage 2**. Sydney: Australian Department of Health and Ageing.

Emmert, P. and W. C. Donaghy. 1940. **Human Communication Element and Contexts**. Reading: Addison-Wesley Publish Company.

Festinger, L. 1957. **A Theory of Cognitive Dissonance**. Stanford: Stanford University Press.

Hammond, D., G. T. Fong, P. W. McDonald, R. Cameron and K. S. Brown. 2003. Impact of the graphic Canadian warning labels on adult smoking behaviour. **Tobacco Control**. 12: 391-395.

_____. 2004. Graphic Canadian Cigarette Warning Labels and Adverse Outcomes: Evidence from Canadian Smokers. **American Journal of Public Health**. 94: 1442-1445.

Health Communication Unit. 2005. **Persuasive or behavioural communication** (Online). Available: www.thcu.ca/infoandresources/persuasive_communication.htm#itpobc.

Hovland, C., I. Janis, and H. Kelly. 1953. **Communication and Persuasion**. New Haven: Yale University Press.

Katz, D. 1960. The functional approach to the studies of attitudes. **Public Opinion Quarterly**. 24: 163-204

Klapper, J. T. 1960. **The Effect of Mass Communication**. New York: The Free Press.

Koval, J. J., J. A. Aubut, L. L. Pederson., M. O'Hegarty, and S. S. Chan. 2005. The potential effectiveness of warning labels on cigarette packages: the perceptions of young adult Canadians. **Canadian Journal of Public Health**. 96 (5): 353-6.

Krejcie, R. V., and D. W. Morgan. 1970. Determining sample size for research activities. **Educational and Psychological Measurement**. 30: 607-610.

Lahlry, S. 1991. A blueprint for perception training. **Journal of Training and Development.** 45 (8): 21-25.

Mackay, J. and M. Eriksen. 2002. **The Tobacco Atlas**. 1st ed. Geneva: World Health Organization.

McCombs, M. and L. Becker. 1979. **Using Mass Communication Theory.** Englewood Cliffs: Prentice-Hall.

Medline Plus Medical Encyclopedia. 2005. **Smoking and smokeless tobacco** (Online). Available: www.nlm.nih.gov/medlineplus/ency/article/002032.htm.

Ministry of Public Health. 2005. **Ministry of Public Health's Announcement (No.8) B.E. 2547 on Rules, Procedures and Conditions of Cigarette Labelling and Label Content According to tile Tobacco Products Control Act B.E. 2535**. Nonthaburi: Ministry of Public Health (in Thai).

Office of the Registrar, Kasetsart University. 2006. Interview, May 2, 2006.

O'Guinn, T. C., T. A. Chris, and J. S. Richard. 2000. **Advertising**. Cincinnati: South Western College Publishing.

Pearson, J. C. and P. E. Nelson. 1997. **An introduction to human communication**. Iowa: A Time Mirror Higher Education Group, Inc.

Prochaska, J. O. and M. G. Goldstein. 1991. Process of smoking cessation. Implications for clinicians. **Clinical Chest Medicine**. 12: 727-735.

Roger, R. W. and C. W. Deckner. 1975. Effects of fear appeals and physiological arousal upon emotion, attitudes, and cigarette smoking. **Journal of Personality and Social Psychology**. 32(2): 222-30

Sampson, J., K. Witte, K. Morrison, W. Y. Liu, A. P. Hubbell, L. Murray-Johnson. 2001. Addressing cultural orientations in fear appeals: promoting AIDS-protective behaviors among Mexican immigrant and African American adolescents and American and Taiwanese college students. **Journal of Health Communication** (Online). Available: www.gwu.edu/~cih/journal/contents/V6/N4/abstracts_v6n4.htm.

Schramm, W. 1973. **Handbook of Communication**. Chicago: Ran Mc Nally College Publishing Company.

Scott, L. M. 1994. The need for a theory of visual rhetoric. **Journal of Consumer Research**. 21 (2): 252-273.

Severin, W. J. and J. W. Tankard Jr. 2001. **Communication theories: Origins, Methods and Uses in the Mass Media**. 5th ed. New York: Longman.

Spooncer, F. 1992. **Behavioral Studies for Marketing and Business**. Leckhampton: Stanley Thorns Publisher.

Thai Health Promotion Foundation. 2000. **Tobacco Control Milestones in Thailand**. Bangkok: Thai Health Promotion Foundation.

_____. 2004. **Thai youths and Smoking: Fact**. Bangkok: Thai Health Promotion Foundation. (in Thai)

Thepnaronga, A. 2004. **Attitude of Kasetsart University's Students towards the Advertises on Television Concerning Social Marketing Activities**. Bangkok: Kasetsart University.

Treerutkuarkul, A. 2005. New warnings may be postponed 4 months. **Bangkok Post** (March 24, 2005).

US Department of Health and Human Services. 1989. **A Report of the Surgeon General**. Rockville: Office on Smoking and Health.

_____. 1990. **A Report of the Surgeon General**. Rockville: Office on Smoking and Health.

Witte, K. 1992. Preventing AIDS through persuasive communications: A framework for constructing effective, culturally-specific, preventive health messages. **Intercultural Community**. 16: 67.

World Health Organization. 2001. **Behavioural Science Learning Modules: Encouraging Stopping Smoking**. Geneva: World Health Organization.

_____. 2002. **The World Health Report 2002: Reducing Risk, Promoting Healthy Life**. Geneva: World Health Organization.

_____. 2003. **WHO Framework Convention on Tobacco Control**. Geneva: World Health Organization.

World Health Organization. 2004. **The Smoker's Body**. Geneva: World Health Organization.

11th World Conference on Tobacco or Health. 2000. **Tobacco Warning Labels and Packaging**. n.p.

APENDIXES

APENDIX A

ENGLISH QUESTIONNAIRE

QUESTIONAIRE

Factors affecting the university students' attitude towards the cigarette warning labels

Part 1: Information on the social and demographic factors of the respondents.

1. Age _____

2. Sex ☐ Male ☐ Female

3. Faculty of _____

4. Please indicate your personal smoking status

   ☐ Non Smoker (Go to question no. 10)

   ☐ Smoker

5. Which of the following statements describes your use of cigarettes?

   ☐ Smoke regularly, everyday or almost everyday

   ☐ Smoke occasionally not everyday but at least once a week

   ☐ Smoke occasionally with special events

6. On one day, how many cigarettes would or did you smoke a day?

   ☐ 1-5 cigarettes ☐ 6-10 cigarettes

   ☐ 11-15 cigarettes ☐ 16 – above cigarettes

7. When did you start smoking (year old)?

   ☐ Age 5-10 ☐ Age 11-15 ☐ Age 16-20 ☐ Age 21-25 ☐ Age above 26

8. Who or what make you start smoking?

☐ Friends ☐ Family ☐ Relatives

☐ Media ☐ Other……..…..

9. In the last 12 months have you...

☐ Tried to give up and been successful for at least one month

☐ Tried to give up and successful for less than one month

☐ Reduced the amount of cigarette you smoke in a day

☐ Increased the amount of cigarette you smoke a day

☐ Quit smoking

☐ Done nothing different

10. Thinking about your future smoking do you think you will....

For smoker	For non-smoker
☐ Increase my smoking	☐ Continue not smoking
☐ Smoke just as much as I do now	☐ Try to start smoking
☐ Try and ease up on my smoking	☐ Make a definite attempt to quit

11. Does anyone in your household smoke? ☐ Yes ☐ No

If yes, how many persons? _____ person (s)

12. Is anyone in your family member allow you to smoke? ☐ Yes ☐ No

Part 2: Information on the media exposure factor of cigarette warning labels.

13. Are you aware of any statement or picture on the cigarette warning labels?

☐ Yes ☐ No (please go no. 16)

14. Please indicate which of the following factors that you have recognize the cigarette warning labels from. Please ranking; 1 is mostly often been seen or hear and 6 is rarely or never been seen or never hear.

_____ On cigarette package

_____ Television

_____ Newspaper or magazine

_____ Internet

_____ Radio

_____ Other; please specify _____

15. Please indicate which following pictures and statements on cigarette warning labels that you are mostly **perceive**, please ranking (1 is mostly often been seen and 6 is rarely or never been seen)

_____ _____ _____ _____ _____ _____

Part 3: Information of health risk perception.

16. Do you aware that smoking has negative effects on your and other people's health?

☐ Yes ☐ No

17. Please see below diseases caused by smoking, please select five diseases that you think are mostly caused by smoking?

_____ Peripheral vascular disease
_____ Miscarriage
_____ Coronary heart disease
_____ Deformed sperms& reproduction
_____ Emphysema
_____ Hearing loss
_____ Lung cancer
_____ Oral cavity & cervical cancer
_____ Osteoporosis
_____ Psoriasis
_____ Respiratory disease
_____ Stomach ulcers
_____ Tooth decay
_____ Wrinkling

18. You think about the health effects of smoking when....

☐ You or someone buy cigarettes
☐ You or someone take a cigarette from the pack
☐ You or someone smoke a cigarette
☐ After You or someone finish a cigarette
☐ Never think about it

Part 4: Attitude of the students towards the cigarette warning labels.

19. Please indicate which following **pictures** that frightening you? Please ranking (1 is the most frightening and 6 is the lowest frightening)?

_____ _____ _____ _____ _____ _____

20. Please indicate which following **statements** that frightening you? Please ranking (1 is the most frightening and 6 is the lowest frightening)?

_____ Cigarette smoke will harm your children

_____ Smoking accelerates aging

_____ Cigarette smoke is the cause of lung cancer

_____ Cigarette smoke may kill people

_____ Smoking is the cause of fatal emphysema

_____ Smoking makes your breath smell

21. Do you agree that it is important that the government has to improve the cigarette warning labels?

☐ Agree ☐ Not agree

Please see the below statements and give your attitude towards the cigarette warning labels

Description	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
22. I believe smoking is definitely addictive					
23. I think smoking has a real negative effect on health					
24. I believe most people take a notice of the health warnings on cigarette packs					
25. The cigarette warning labels strike me and catch my attention					
26. The cigarette warning labels have raised awareness about negative effect from smoking					
27. The pictures and statement on cigarette warning labels make well-enough informed about the health risks of smoking cigarettes					
28. I worried more about the effects of smoking on health since cigarette warning labels					
29. You feel the health warnings on packs of cigarettes helped people smoke less					
30. I think seeing the health warnings on packs would make people think about quitting					

Description	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
31. I think the cigarette warning labels saying things which are realistic					
32. The size, statements and pictures on cigarette warning labels are perfect					
33. The pictures on cigarette warning labels should be more frightening					
34. The cigarette warning labels should be stronger					
35. I think both statements and pictures on cigarette warning labels should be bigger					
36. I think the color warning pictures are more effective than black & white pictures					
37. I think the ingredients of the cigarette should be added to the cigarette packages					
38. The health warnings statements on cigarette warning labels should be described in details of health risks from smoking					
39. I have a negative attitude to smoker					

Description	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
40. You like to know more or to be told more about the cigarette warning label from various media					

- Thank you for your cooperation -

APENDIX B

THAI QUESTIONNAIRE

แบบสอบถาม

"ปัจจัยที่มีผลต่อทัศนคติของนิสิตมหาวิทยาลัย ต่อฉลากคำเตือนบนซองบุหรี่"

<u>คำชี้แจง</u>

การศึกษานี้มีวัตถุประสงค์ที่จะใช้แบบสอบถาม เพื่อศึกษาปัจจัยที่มีผลต่อทัศนคติของนิสิตปีหนึ่งมหาวิทยาลัยเกษตรศาสตร์ วิทยาเขตบางเขน ต่อฉลากคำเตือนบนซองบุหรี่ จึงขอให้นิสิตอ่านคำชี้แจงให้เข้าใจและตอบแบบสอบถามตามความเป็นจริงให้ครบทุกข้อ ผู้วิจัยขอขอบคุณที่ให้ความร่วมมือมา ณ โอกาสนี้ด้วย

แบบสอบถามฉบับนี้ประกอบด้วย 5 ส่วน ได้แก่

ส่วนที่ 1 ข้อมูลส่วนบุคคล

ส่วนที่ 2 ข้อมูลเกี่ยวกับการรับสื่อ

ส่วนที่ 3 ข้อมูลเกี่ยวกับความเสี่ยงด้านสุขภาพ

ส่วนที่ 4 ทัศนคติของผู้ตอบแบบสอบถามต่อฉลากคำเตือนบนซองบุหรี่

โปรดทำเครื่องหมาย ✓ ลงใน ☐ และ / หรือเติมข้อความในช่องว่างที่กำหนดให้

<u>ส่วนที่1</u>: ข้อมูลส่วนบุคคล

1. อายุ _____

2. เพศ ☐ ชาย ☐ หญิง

3. คณะ _____

4. โปรดระบุสถานภาพการสูบบุหรี่ของคุณ
   ☐ ไม่เคยสูบบุหรี่ (กรุณาตอบคำถามข้อ 10)
   ☐ ปัจจุบันสูบบุหรี่อยู่

5. จากข้อความด้านล่าง โปรดระบุความถี่การสูบบุหรี่ของคุณ
   ☐ สูบเป็นประจำทุกวันหรือเกือบทุกวัน
   ☐ สูบเป็นบางโอกาส ไม่สูบทุกวันแต่สูบอย่างน้อยหนึ่งวันต่ออาทิตย์
   ☐ สูบน้อยมาก หรือสูบเฉพาะโอกาสสำคัญ

6. ในหนึ่งวัน คุณสูบบุหรี่โดยเฉลี่ยกี่มวน?
   ☐ 1-5 มวน ☐ 6-10 มวน
   ☐ 11-15 มวน ☐ 16 มวน หรือ มากกว่านั้น

7. คุณเริ่มสูบบบุหรี่เมื่ออายุเท่าไร?
   ☐ 5-10 ปี ☐ 11-15 ปี ☐ 16-20 ปี ☐ 21-25 ปี ☐ อายุมากกว่า 26 ปี

8. ใคร หรือ อะไรจูงใจให้คุณเริ่มสูบบุหรี่?
   ☐ เพื่อน ☐ ครอบครัว ☐ ญาติ
   ☐ สื่อต่าง ๆ ☐ อื่นๆ โปรดระบุ……..…..

9. ใน 1 ปีที่ผ่านมา คุณ เคย...
   ☐ พยายามที่จะเลิกบุหรี่ และสำเร็จเป็นเวลาอย่างน้อยหนึ่งเดือน
   ☐ พยายามที่จะเลิกบุหรี่ แต่สำเร็จเป็นเวลาน้อยกว่าหนึ่งเดือน
   ☐ ลดปริมาณบุหรี่ที่สูบในแต่ละวัน
   ☐ เพิ่มปริมาณบุหรี่ที่สูบในแต่ละวัน
   ☐ เลิกสูบบุหรี่ได้สำเร็จ
   ☐ ไม่เคยมีการเปลี่ยนพฤติกรรมการสูบบุหรี่

10. หากคาดถึงพฤติกรรมการสูบบุหรี่ของคุณในอนาคต คุณคิดว่า....

สำหรับผู้ที่สูบบุหรี่	*สำหรับผู้ไม่สูบบุหรี่*
☐ เพิ่มปริมาณการสูบบุหรี่	☐ ไม่สูบบุหรี่ต่อไป
☐ สูบปริมาณเดิมเหมือนปัจจุบัน	☐ เริ่มสูบบุหรี่
☐ พยายามลดปริมาณการสูบบุหรี่	
☐ มุ่งมั่นในการเลิกสูบบุหรี่	

11. ในครอบครัวของคุณมีผู้สูบบุหรี่หรือไม่? ☐ มี ☐ ไม่มี
ถ้ามี และมีเป็นจำนวนเท่าไร _____ คน

12. ครอบครัวของคุณ อนุญาตให้คุณสูบบุหรี่หรือไม่? ☐ อนุญาต ☐ ไม่อนุญาต

<u>ส่วนที่ 2</u>: ข้อมูลเกี่ยวกับการรับสื่อ

13. ท่านตระหนักหรือรับรู้เกี่ยวกับฉลากคำเตือนบนซองบุหรี่หรือไม่?
☐ ทราบ ☐ ไม่ทราบ (กรุณาตอบคำถามข้อ 16)

14. สื่อด้านล่างต่อไปนี้ สื่อใดที่ทำให้คุณได้รับทราบเกี่ยวกับคำเตือนบนซองบุหรี่, โปรดเรียงลำดับโดย 1 คือที่ได้เห็นหรือได้ยินบ่อยมากที่สุด และ 6 คือที่ไม่เคยได้เห็นหรือไม่เคยได้ยิน
_____ ฉลากคำเตือนบนซองบุหรี่
_____ โทรทัศน์
_____ หนังสือพิมพ์ หรือนิตยสาร
_____ อินเตอร์เน็ต
_____ วิทยุ
_____ สื่ออื่นๆ โปรดระบุ _____

15. ข้อความและรูปภาพบนฉลากคำเตือนบนซองบุหรี่ด้านล่างอันใด ที่คุณพบเห็นบ่อยที่สุด โปรดเรียงลำดับโดย 1 คือที่ได้เห็นบ่อยมากที่สุด และ 6 คือที่ไม่เคยเห็น

_____ _____ _____ _____ _____ _____

<u>ส่วนที่ 3</u>: ข้อมูลเกี่ยวกับความเสี่ยงด้านสุขภาพ

16. คุณตระหนักถึงผลด้านลบของบุหรี่ที่มีผลต่อสุขภาพคุณและผู้อื่นหรือไม่?

☐ ตระหนัก ☐ ไม่ตระหนัก

17. โรคต่างๆ ด้านล่างเป็นโรคที่เกิดจากการสูบบุหรี่ โปรดเลือกโรคที่คุณคิดว่ามีโอกาสเกิดได้มากที่สุดจากการสูบบุหรี่ 5 โรค โดยทำเครื่องหมาย ✓ ลงใน ช่องว่างที่กำหนดให้

_____ โรคระบบไหลเวียนโลหิต
_____ ทำให้เกิดการแท้งบุตร
_____ โรคหัวใจ
_____ โรคระบบการสืบพันธุ์
_____ โรคถุงลมโป่งพอง
_____ สูญเสียการได้ยิน
_____ โรคมะเร็งปอด
_____ โรคมะเร็งในช่องปาก
_____ โรคกระดูกพรุน
_____ โรคผิวหนังเรื้อรัง
_____ โรคระบบทางเดินหายใจ
_____ โรคนิ่วในกระเพาะอาหาร
_____ โรคฟันผุ
_____ ทำให้เกิดริ้วรอยก่อนวัย

18. คุณตระหนักว่าบุหรี่มีผลต่อสุขภาพเมื่อ....

☐ คุณหรือคนอื่นซื้อบุหรี่
☐ คุณหรือคนอื่นหยิบบุหรี่ออกจากซองบุหรี่
☐ คุณหรือคนอื่นสูบบุหรี่
☐ หลังจากคุณหรือคนอื่นสูบบุหรี่เสร็จแล้ว
☐ ไม่เคยคิดถึงผลกระทบดังกล่าว

<u>ส่วนที่ 4</u>: **ทัศนคติของนิสิตมหาวิทยาลัยต่อคำเตือนบนซองบุหรี่**

19. รูปภาพด้านล่างต่อไปนี้ รูปใดที่ทำให้คุณรู้สึกกลัวมากที่สุด? โปรดเรียงลำดับโดย 1 คือรูปที่ทำให้คุณกลัวมากที่สุด และ 6 คือรูปที่คุณกลัวน้อยที่สุด

_____ _____ _____ _____ _____ _____

20. โปรดระบุข้อความด้านล่างต่อไปนี้ ข้อความใดที่ทำให้คุณรู้สึกกลัวมากที่สุด? โปรดเรียงลำดับโดย 1 คือข้อความที่ทำให้คุณกลัวมากที่สุด และ 6 คือข้อความที่ทำให้คุณกลัวน้อยที่สุด

_____ ควันบุหรี่จะทำร้ายลูก
_____ สูบแล้วแก่เร็ว
_____ ควันบุหรี่ทำให้เกิดมะเร็งปอด
_____ ควันบุหรี่ฆ่าคนตายได้
_____ สูบแล้วถุงลมพองตาย
_____ สูบแล้วจะมีกลิ่นปาก

21. คุณเห็นด้วยหรือไม่ว่า รัฐบาลจะต้องปรับปรุงฉลากคำเตือนบนซองบุหรี่?

☐ เห็นด้วย ☐ ไม่เห็นด้วย

โปรดอ่านข้อความด้านล่างนี้ และระบุทัศนคติของท่านที่มีต่อฉลากคำเตือนบนซองบุหรี่ โดยทำเครื่องหมาย ✓ ลงใน ช่องว่างที่กำหนดให้

รายละเอียด	ไม่เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วย	ไม่มีความคิดเห็น	เห็นด้วย	เห็นด้วยอย่างยิ่ง
22. บุหรี่เป็นสิ่งเสพติด					
23. การสูบบุหรี่มีข้อเสียต่อสุขภาพ					
24. ข้าพเจ้าเชื่อว่าคนอื่นสังเกตเห็นฉลากคำเตือนบนซองบุหรี่					
25. ฉลากคำเตือนบนซองบุหรี่ได้รับความสนใจจากข้าพเจ้าเป็นอย่างมาก					
26. ฉลากคำเตือนบนซองบุหรี่ทำให้คนตระหนักถึงผลด้านลบจากการสูบบุหรี่					
27. รูปภาพและข้อความบนซองบุหรี่ดีพอที่จะให้ความรู้เกี่ยวกับความเสี่ยงด้านสุขภาพที่มีผลจากการสูบบุหรี่					
28. ฉลากคำเตือนบนซองบุหรี่ทำให้ข้าพเจ้ามีความกังวลมากขึ้นเกี่ยวกับผลที่เกิดจากการสูบบุหรี่					
29. ฉลากคำเตือนบนซองบุหรี่ช่วยให้คนสูบบุหรี่น้อยลง					
30. ฉลากคำเตือนบนซองบุหรี่จะช่วยให้คนเลิกสูบบุหรี่ได้					

รายละเอียด	ไม่เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วย	ไม่มีความคิดเห็น	เห็นด้วย	เห็นด้วยอย่างยิ่ง
31. รูปภาพและข้อความบนซองบุหรี่นั้นตรงตามความเป็นจริง					
32. รูปภาพและข้อความบนซองบุหรี่นั้นเหมาะสมดีอยู่แล้ว					
33. รูปภาพบนฉลากซองบุหรี่ควรที่จะน่ากลัวมากกว่านี้					
34. ข้อความบนฉลากซองบุหรี่ควรที่จะรุนแรงมากกว่านี้					
35. รูปภาพและข้อความบนซองบุหรี่ควรจะใหญ่กว่านี้					
36. รูปภาพสีบนซองบุหรี่นั้นมีประสิทธิภาพมากกว่าภาพขาว-ดำ					
37. ข้าพเจ้าคิดว่าควรเพิ่มข้อมูลส่วนประกอบของบุหรี่ลงในฉลากบนซองบุหรี่					
38. ข้าพเจ้าคิดว่าฉลากคำเตือนบนซองบุหรี่ควรให้รายละเอียดเกี่ยวกับความเสี่ยงด้านสุขภาพมากกว่านี้					
39. ข้าพเจ้ามีทัศนคติด้านลบต่อผู้ที่สูบบุหรี่					
40. ข้าพเจ้าอยากที่จะทราบข้อมูลเกี่ยวกับฉลากคำเตือนบนซองบุหรี่มากขึ้นจากสื่อหลาย ๆ ประเภท					

- ขอขอบคุณในความร่วมมือ -

BIOGRAPHICAL DATA

Name-Surname:	Miss Kanpirom Wiboonpanich
Date of Birth:	21 May 1980
Place of Birth:	Bangkok, Thailand
Educational Background:	Library and Information Sciences, Bachelor of Liberal Arts, Thammasat University, 2001
Current Position:	Administrative Clerk (Information)
Organization:	Office of the WHO Representative to Thailand World Health Organization
Honor:	2nd Class Honor in Bachelor of Liberal Arts, Thammasat University