IMPACT OF FEAR LEVELS OF FEELING TOWARDS FEAR-APPEAL HEALTH WARNINGS ON CANADIAN CIGARETTE PACKAGING AMONG CHINESE SMOKERS' ATTITUDE TOWARD SMOKING AND SMOKING BEHAVIOR

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ABSTRACT

The purpose of this study is to explore whether fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging are negatively correlated with attitude toward smoking and smoking behavior among Chinese smokers. 184 Chinese smokers in China were selected to participate in the survey by purposive sampling. The data collected were analyzed using Chi-Square and Cross tabulation. The research results show that: (1) Most of respondents showed higher level of fear towards fear-appeal health warning on Canadian cigarette packaging. (2) Fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging are negatively correlated with attitude toward smoking among Chinese smokers. This means that the higher the level of fear caused by the fear appeal, the more negative the attitude toward smoking of the health warning can be. (3) Fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging are partially negatively correlated with smoking behavior among Chinese smokers. This means that the higher the level of fear caused by the fear appeal may partially make the more negative smoking behavior of the health warning. Smoking addictiveness may cause

smokers to continue smoking behavior in order to relieve their inner anxiety, and will not be affected by fear-appeal health warning on cigarette packaging.

Keywords: Chinese Smoker, Fear-Appeal Health Warning, Canadian Cigarette Packaging, Attitude toward Smoking, Smoking Behavior

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CHAPTER 1

INTRODUCTION

This chapter provides a set of reasons as a logical basis justifying the research. The logical basis will consist of established theoretical concepts related to the topic. In addition, a problem statement of the issue, the research question, and significance of the research are provided.

1.1 Rationale and Problem Statement

With the development of the times, according to the data of the essay in the 20th century, smoking has caused 100 million deaths, and the number of deaths caused by smoking in the 21st century is expected to augment to 1 billion (Jha et al., 2006). Based on this background, the International Treaty on Tobacco Control framework established by the WHO explicitly requires that tobacco packaging must be warned against tobacco damage, making tobacco control more and more powerful, and the advertising space for cigarette packaging is becoming limited (World Health Organization, 2008). And, in the lack of other market information, cigarette packaging has already become the crucial and unique key of the tobacco industries' channel and carrier for information dissemination, whereas, tobacco has gigantic injuries on human health, and the impact of smoking on infants and juveniles is more severe than adults. Therefore, all countries are vigorously promoting smoking cessation.

Fear-appeal is a persuasive communication action that attempts to arouse the audience's fear to stimulate the audience's defensive motivation or self-protection behavior (Guo, 2011). At present, most scholars believe that the fear-appeal refers to

the use of the "ringing the alarm bell" to arouse people's nervousness and crisis awareness, thereby prompting their behavior and attitude to change in a certain direction.

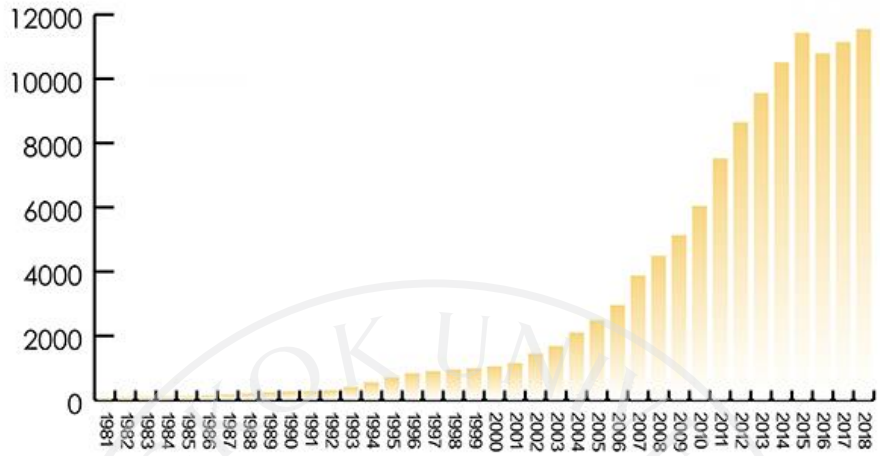
Because of its own characteristics, the method of spreading fear-appeal is more used in public service advertising and packaging design. For products that are harmful to the body, the main purpose of the country and society in their packaging design is to try to change the audience's concepts and behavior patterns. Therefore, it is often difficult to change people's thoughts and behaviors in accordance with traditional emotional appeal methods, such as mild, persuasive packaging and advertising (Luo, 2008). Therefore, by intimidating means to warn and persuade the audience, the audience is often able to perceive the threat (Struckman-Johnson & Struckman-Johnson, C., 1996). For instance, the cigarette packaging is reflected in a large area of bloody and violent pictures attached to the packaging. And in the packaging design of cigarette packs, there are a variety of warning pictures due to the different levels and types of fear, which are roughly classified into four categories: 1) Other-oriented threats (low fear) 2) Other-oriented threats (high fear) 3) Self-directed threat (low fear) 4) Self-directed threat (high fear) (Miller, Foubert, Reardon & Vida, 2007). And, the manifestation of high fear on cigarette packaging is not only bloody, and violent image attachments, but also direct and intuitive text warnings, for example, smoking causes pneumonia, etc., while low fear is gentle, mild image attachments and indirect, summarized text warnings, for example, smoking is harmful to health, and the pure text warning is the typical representative.

In 2012, Chinese scholars used eye trackers to study the effect of fear-appeal in cigarette packaging. The study found that there was a significant difference in the

attention of the fear pictures and non-fear pictures, and threatening information was more likely to be individualized. At the same time, the subjects had a better memory of the fear of quitting smoking ad copy, and the gaze time for cigarette packaging with large area image warnings was significantly shorter than for cigarette packaging with text only (Wang, 2012a). In subsequent countries, the use of large-scale violence and bloody cigarette packaging design has also produced great results.

At present time, there are warning pictures printed on cigarette packaging in 118 countries and regions around the world, among them, 105 countries and regions stipulate at least 50% of cigarette packaging, and 15 countries require at least 75%. But China, as the world's number one tobacco producer and the number one in terms of smoking, has not printed warning pictures on the packaging used in China. The data of the WHO in 2014 expressed that the number of smokers in China was more than 300 million, and the number of non-smokers exposed to second-hand smoke was as high as 740 million which is the highest in the world, besides, about 1.4 million people died each year from various diseases caused by smoking, which accounts for about 1/3 of the global total (World Health Organization, 2015). Although China had already become the member of the WHO in 2003, China still has not much improvement in the development of smoking cessation. According to the date from China Tobacco.com, the tobacco industry has turned over fiscal revenues for more than one trillion US dollars on and on between the 2014 to 2018, nevertheless, such data is beneficial for economic development, but it is opposite to the national health (Figure 1.1).

Figure 1.1: Total Revenue of the Tobacco Industry in China



Source: Chinese Tobacco. (2019). *"Speaking of numbers" 70 years of development of the tobacco industry*. Retrieved from http://www.etmoc.com/look/Statslist?Id=40796.

Senior tobacco control expert Xin said that fabulous cigarette packaging design is more likely to increase the purchase intention. Since the reform and opening up, China Tobacco's packaging has achieved rapid development, especially in recent years, its speed of replacement is even faster. In the case of paper cigarette packaging, its packaging from soft bag to the high-grade matte process using PET composite cardboard. The tobacco packaging of China has always been at the forefront of the world, its design materials are getting better and better, the cost is getting higher and higher, even every time whist China participates in the World Packaging Organization "World Star" Design Grand Prix, tobacco packaging will always be the protagonist of China. Therefore, the beautiful cigarette packaging is an important thing to tempt the

adolescents to smoke, at present, the beautiful cigarette packaging vastly conceals the harm of tobacco.

Also, according to the symbolic interaction, it expresses that the image as an important symbol could flexibly and graphically disseminate the information to audience, and the audience will effect diverse opinions and sentiments to same symbol depending on mind and society that we live in. And, the packaging design is the crucial part of the sale, therefore, the packaging designers often say that the motif design is the crucial factor in packaging design. For example, Australia required the use of light brown color tone and a warning group on the cigarette packaging in order to reduce the sales of cigarettes and make cigarettes being the representation of the poor quality, after that, countries around the world are initiating to emulate this strategy. And, according to the Southeast Asian Tobacco Control Alliance, tobacco companies have begun to comply with Thailand's standardized packaging regulations for uniform cigarette packaging two weeks before the deadline. Thailand has become the first country in Asia to introduce standardized tobacco packaging, with health warning images occupying 85% of the entire packaging and is currently the largest in ASEAN. Thailand's rapid requirements for tobacco packaging have achieved significant fruition in terms of data, in 1991, nearly 60% of men and 5% of women in Thailand smoked, but by 2007, the proportion had scaled down to 42% and 2% respectively (Table 1.1).

Table 1.1: Thailand's Smoking Population Changes

	Smokers			Smokers Prevalence (%)		
Year	Total	Male	Female	Total	Male	Female
1991	12,257,675	11,304,732	952,943	32.00	59.33	4.95
1996	12,525,254	11,758,171	767,082	28.81	54.46	3.50
2001	11,984,874	11,283,274	701,600	25.47	48.44	2.95
2004	11,358,735	10,700,018	658,717	22.98	43.69	2.64
2006	11,033,031	10,306,855	726,175	21.93	42.19	2.83
2007	10,857,756	10,347,580	510,176	21.22	41.70	1.94

Source: Cheng, Y. (2008). *How strict is the control of cigarettes in Thailand*. Retrieved from https://zhuanlan.zhihu.com/p/67253299.

Tobacco as a harmful product, the starting point of its packaging design should not be aimed at attracting customers, but should also focus on reducing customers' desire to purchase, it should convey the vicious and harmful information to the public.

Same as the influence of fear-appeal on the smokers' attitude toward smoking, article 11 of the "Framework Convention on Tobacco Control" putted forward the following provisions on cigarette packaging: warnings should occupy 30% or more of the main visible parts of cigarette packaging in order to better implement this requirement (World Health Organization, 2008). The World Health Organization adopted this implementation guideline in November 2008, which

provided more detailed regulations on the health warning of cigarette packaging including the following: 1) It is located on the top of the cigarette packaging. 2) It should be as large as possible (accounting for 50% and above of the main visible part). 3) Pictures should be used. 4) It should be colored, and the text and background should be contrasting colors. 5) It should be rotated. 6) A series of information should be involved. 7) Use of one or more languages in the juriS.D.iction. 8) Indicate the source of the information. 9) The composition of tobacco and emissions should be listed, but not the value (World Health Organization, 2008).

After experiment in heterogeneous countries, it has been proven that health warnings that meet the requirements of this regulation have more significant warning effects. It is easier to attract attention and the possibility of careful reading, it can show the health hazards of tobacco in more detail, it can make the warning more credible and persuasive, and it can better encourage smoking cessation and reduce smoking. It can more effectively prevent adolescents from smoking, and it is effective for adolescents and low-educational smokers (Hammond, 2010). A public tobacco hazard awareness survey conducted in the United States, Brazil, Canada, and Australia in 2002 showed that Canadians had the highest awareness of tobacco harm which almost reached 87%, and the lowest in the United States, only 47%. At the time, only Canada used image warnings among these four investigative countries (Hwang & Cho, 2019). Canada has printed pictures of lung and heart diseases caused by smoking on cigarette packaging since 2000. Six months later, the survey results showed that the proportion of smokers willing to quit increased to 41.2% (Tobacco Labelling Resource Centre, 2007). And more than 90% of Canadian youths acknowledged that the graphic warnings on cigarette packaging provided important

health knowledge, and fear-appeal health warnings make smoking less attractive than before (Loyola, 2008). In Brazil, within six months of the widespread implementation of graphic warnings, nearly 67% of smokers said that fear-appeal health warnings made them want to quit smoking, and the number of calls to the quit line increased nearly 9 times (Jiang & Yang, 2009). In Singapore, 28% of smokers said they had reduced their smoking after seeing fear-appeal health warning. Young people in Thailand and Australia have said that the fear-appeal health warnings on cigarette packaging has led them to start thinking seriously about the health risks of tobacco and therefore reduce smoking or simply quit (Stark, Kim, Miller & Borgida, 2008).

In 2015, the top three countries with the number of male smokers were China, India, and Indonesia. There were approximately 254 million male smokers in China, and the top three countries with the number of female smokers were 17 million in the United States and 14 million in China, India, 13.5 million, the number of men and women who smoke every day has been continuously increasing: from 721 million in 1980 to 967 million in 2012, the number of male daily smokers increased by 41 %, the number of female daily smokers increased by 7% (Institute for Health Metrics and Evaluation, 2017). Until 2018, according to a household survey of non-collective residents aged 15 and over in China, China The smoking rate among people aged 15 and over is 26.6%. Among them, 50.5% in men, 2.1% in women, 28.9% in rural areas, and 25.1% in urban areas. Compared with previous survey results, the smoking rate shows a downward trend, but this time the scope of the survey is relatively single and not representative (“2018 China adult tobacco survey report”, 2018).

In 2009, Thai government has billed the laws assigning warning student smokers toward the image of the cigarette packaging cover to warn the smokers of

dangers from smoking. As for China with the biggest amount of smokers in the world still lacks of regulation against smoking, Chinese government has been continuing using text warning as only health warning on cigarette packaging. Since Thai government publicized this regulation about cigarette packaging which is attached with 85% of horror images, the amount of Thai smokers did not decrease conspicuously, and Australia which is the first country that carried this regulation still did not achieve the goal letting the number of smokers be decreased, and Australia government insisted the reason that causes this result was the population growth. However, this regulation in Canada has effectively reduced the number of smokers in Canada (it has reduced nearly 60 million smokers in 5 years). Under the restrictions of the regulation, Canadian cigarette packaging must be used to show the fear-appeal health warning that includes image warning and text warning, and any attractive elements must be removed from packaging (ASEAN Tobacco Control Resource Center, 2018). The fear-appeal health warning on cigarette packaging has different applications in these three countries, and the results achieved are different. Canada has achieved conspicuous success, but Thailand and China have not had such significant results. Therefore, the fear-appeal health warning on Canadian cigarette packaging can be used as benchmark for research to test whether it could reach the same goal towards Chinese smokers.

Then this research wants to study about the attitude toward smoking and smoking behavior of Chinese smoker in China after experiencing Canadian cigarette packaging. The information gives an advantage for the people or organizations who want to study about smoking problem and fear persuasion theory, and this information focuses on the right target group and how to apply the fear element in the health

warning to achieve a similar persuasive effect. Luckily, this research can help new generation to keep themselves away from smoking and would remind other frequent smokers to abstain one day.

1.2 Research Question

RQ1: Are fear levels of feeling towards fear-appeal health warnings on Canadian cigarette packaging negatively correlated with attitude toward smoking among Chinese smokers?

RQ2: Are fear levels of feeling towards fear-appeal health warnings on Canadian cigarette packaging negatively correlated with smoking behavior among Chinese smokers?

1.3 Objectives of the Study

1.3.1 To examine whether fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging are negatively correlated with attitude toward smoking among Chinese smokers.

1.3.2 To examine whether fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging are negatively correlated with smoking behavior among Chinese smokers.

1.4 Scope of the Study

This study focuses its investigation on the manifestation and function of the fear-appeal on Canadian cigarette packaging. Questionnaire is used as the main way of research. The target population is Chinese smokers in China, and the researcher

uses purposive sampling to choose 184 Chinese smokers. As for the type of cigarette packaging, this research will choose Canadian packaging for investigation because Canada passed legislation, and all brands of cigarettes must be packaged in the same shape: Image warnings, text warnings, and any attractive elements must be removed from packaging. And, this has effectively reduced the number of smokers in Canada (it has reduced nearly 60 million smokers in 5 years).

1.5 Significance of the Study

This research mainly studies the impact of fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging on Chinese smokers' attitude toward smoking and smoking behavior. For the audience, during the development of the epoch and society, civic quality of life is constantly improving, whereas, our health issues are getting more and more serious, we could know how cigarette packaging can help people to avoid from contacting with cigarettes, and help people who already have smoking habits to reduce or even eliminate smoking behavior through this research. And, we can know whether the results achieved after using the fear-appeal health warning on cigarette packaging in Canada can be replicated in China.

As an effective means of communication to change people's attitudes and behaviors, fear-appeal can be used in the construction of public welfare undertakings, such as public welfare ads. Cigarette packaging, and, for some products, fear-appeal can still be used to stimulate consumers' desire to buy.

1.6 Definition of Terms

1.6.1 Fear-appeal Health warning on cigarette packaging: Referring to image warning and the text health warning on the cover of cigarette packaging.

1.6.2 Chinese Smokers: Referring to the Chinese people who smoke regularly (at least smoking 1 cigarette per day) and live in China.

1.6.3 Attitude toward smoking: Referring to the attitude created in Chinese smokers after seeing fear-appeal health warning on Canadian cigarette packaging, and this research uses five Likert scale to measure: Strongly Agree, Agree, Neutrality, Disagree, Strongly Disagree.

1.6.4 Smoking behavior: Referring to the change in smoking action of Chinese smokers after seeing fear-appeal health warning on Canadian cigarette packaging, and this research uses five Likert scale to measure: Strongly Agree, Agree, Neutrality, Disagree, Strongly Disagree.

1.6.5 Text health warning on cigarette packaging: Referring to text that prompts the health effects of smoking.

1.6.6 Image warning on cigarette packaging: Referring to image showing the harm caused by smoking.

1.6.7 Fear levels of feeling: Referring to the smoker's psychological fear after seeing the fear-appeal health warning on cigarette packaging, and it could be quantified into three levels: Higher, Medium and Lower

CHAPTER 2

LITERATURE REVIEW

2.1 Synthesis of Past Studies

2.1.1 Fear-appeal health warnings on cigarette packaging

Through continuous research by scholars, it is found that increasing the intensity of fear can arouse the audience's protective motivation and thereby change behavior and attitudes, but simply increasing the intensity of fear does not necessarily lead to the success of persuasion. Subsequent studies also proved the correctness of this research, such as the Thai cigarette packaging shown above. The extremely scary image warning is designed to intimidate consumers, but it produced the opposite result. According to a report in 2015 in the Chiang Mai Times, the number of smokers aged 15 and over in Thailand increased by 21 compared to 2013. %, and the average smoking age dropped from 16-18 in 2007 to 15-16 in 2014, and some scholars thought that might be because the too bloody images intrigue the higher level of fear-appeal in consumers mind, so the consumers would persuade themselves that the health warning images are fallacy, then the purpose of creating the health warning images will not be achieved ("The number of smokers in Thailand is on the rise", 2015). However, Canada has achieved good results in rectifying cigarette packaging. It did not use particularly scary image warnings, but chose brown packaging backgrounds, not too bloody image warning and more detailed text health warnings as fear-appeal health warnings. According to the Global Times report, the number of smokers in Canada has dropped by only 17% from 1999 to 2012 (Zang & Schwartz, 2013). This is also related with Witte (1992) in the theory of fear persuasion which

mentioned that when the audience believes that the response measures recommended in the information provided by the communicator can effectively reduce the threat, and the audience has the ability to implement the measures, then the audience will take the response measures provided by the communicator to achieve changes in behavior and attitude, so, the text health warning tells the audience how to solve it, while the image warning tells the audience that the warning is real.

Figure 2.1: The Fear-appeal Health warning on Thai Cigarette Packaging

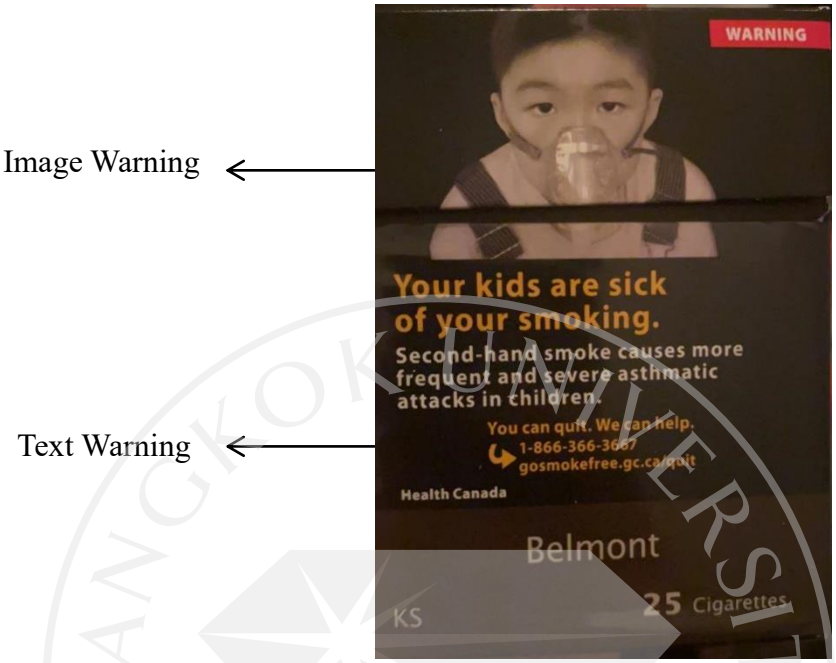
2.1.1.1 Image warning

In Thailand, the government regulated that the cigarette packaging must be attached with 85% of horror images, and there are 9 images to be legally published to display the diseases caused by smoking tobacco, especially cigarettes (“85% cigarette graphic warning law now in force”, 2014). Those images contain Bronchitis, Emphysema, Impotence, Lung Cancer, Mouth diseases, Heart disease, Cervical

Cancer, Halitosis. Research shows that smoking tobacco can lead to respiratory and upper digestive tract cancers, particularly cancer of the mouth, throat (pharynx) and esophagus. Research also indicates that smoking tobacco is a contributing cause of leukemia and cancers of the bladder, stomach, kidney and pancreas. Female smokers are at greater risk for developing cervical cancer.

In year 2000, Canada was the first country to specify that a cigarette packaging must have image warnings. In 2000, this regulation is also being used in Singapore, Venezuela, Uruguay, Australia, Philippines and Brazil. According to the research by Department of Public Health in Canada, it is more than 70 percent of adult smokers and 90 percent of youth smokers agree that the caution phrases and warning images are working effectively to encourage their awareness of the disadvantages of smoking (Chapman, 2007). The image warning is the basis to convince the audience. However, Chinese cigarette still lacks in image warning, it does not have a unified packaging, and mostly uses brighter colors and delicate patterns as the background of the cigarette case, so, the fear-appeal health warning does not fully reflect in Chinese cigarette packaging.

Figure 2.2: The Fear-appeal Health Warning on Canadian Cigarette Packaging



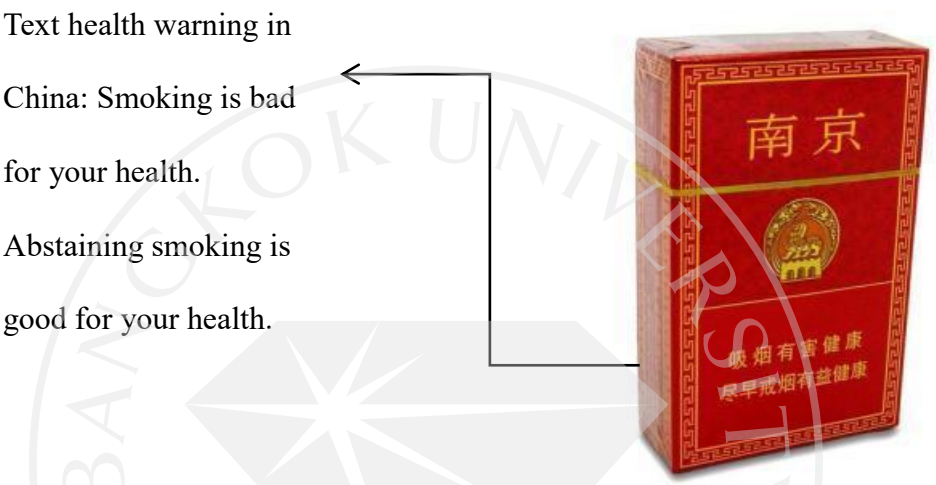
2.1.1.2 Text health warning

Fear-appeal health warning plays a vital role as the most direct and widespread smoking cessation media which could affect civilizations increase or decrease their smoking cessation behavior.

The manifestation of text health warning on the cigarette packaging in Canada and Thailand is to inform a certain disease caused by smoking and how to solve this problem. However, in China, the only plain text health warning is "Smoking is bad for your health. Abstaining smoking is good for your health," Besides, those text health warnings are only printed on the front or side of the cigarette packaging, and covered a little area, hence it turns out that the text health warning does not play a functional role in prohibition of smoking. Li (2009) said that the current health warnings for cigarette packaging has lost their warning effect, thus

most smokers in China will not stop smoking due to the text health warnings, and still not consider smoking hazards or quitting smoking.

Figure 2.3: The Text Health Warning on Chinese Cigarette Packaging



Therefore, on this basis, numerous scholars in China have initiated to focus on the research of cigarette packaging warnings. Comparing with the other warnings, the text health warnings on Chinese cigarette packaging are finite, China should implement the requirements of Article 11 of the Framework Convention on Tobacco Control, and use the health warnings of graphic and text to effectively disseminate the detriment of the smoke to the public (Jiang, 2008). On the other hand, it shows that the combination of text and image can achieve better smoking cessation effect, but firstly, the warning language research of cigarette packaging should change the single form in the past, and turn to the warning wards that directly denote the specific wholesome consequences of tobacco. And cigarette box warnings are key point of health education, at present, most of Chinese cigarette packaging are temptation rather

than alert, especially to the adolescents (Jiang & Yang, 2009). Teenagers are immature, thus they are vulnerable to be influenced by the bad things, so, reducing cigarette smoking among teenagers has become a topic of great concern in society now a days. Then, some Chinese scholars has been gradually initiating the research regarding the warning graphic for cigarette packaging, Ge (2010) denoted that Real photo health warning effect is stronger than abstract picture health warning and has greater impact on smoking population. Then, Zhou (2012) conducted further research on the warning map, He found that the intuitive warning map is stronger than the abstract warning map, and the fear and the threat perception both are related to the intention to quit smoking, therefore, the health warning image with stronger avoidance response caused by the health warning image has higher intention to quit smoking.

Different from China, a lot of cigarette brands in many countries abroad have used warning images with fear-appeal. On this hand, there are myriad data that also demonstrate that the printing of such horrible warning graphics on cigarette packaging significantly reduces the number of smokers. Fear-appeal health warning with higher-level or medium-level of fear can make people better aware of the harmfulness of cigarettes, while at the same time, increasing more emotional arousal and reducing smoking behavior in further life (Jiang, 2008). And, David Hammond thought that comprehensible cigarette warnings are more noticeable than straightforward warnings (Thrasher, Hammond, Fong, & Arillo-Santillán, 2007). Meanwhile, according to the research of Gygax, Bosson, Gay & Ribordy (2010), who said that the people of different ages will be affected distinctly by the warning graphic of the cigarette case.

2.1.2 Research on the effects of fear-appeal

Fear belongs to a psychological concept. It is people's physiological response to a threat that actually exists or can be perceived. When fear is perceived by people, it will produce tension. This emotion will prompt people to seek safety or security. It is a way to get rid of danger (Lu & Zhang, 2007). That is to say, people's need for safety starts out of discomfort with fear, and then emerges an escape from crisis. Therefore, the fear-appeal warning on cigarette packaging means that the packaging of cigarettes takes fear as the appeal point, and shows consumers some worrying or fearful time in a vigilant way, indicating that if consumers choose this product, they will definitely Seriously threaten their safety or health, and the fear they produce increases the audience's attention and interest in the content of fear-appeal, thereby reducing purchases to eliminate fear.

The humanistic psychologist Abraham divides human needs into five stages, in which safety needs are based on the most basic physiological needs, and fear is a manifestation of unsatisfied safety needs. It is a broad and basic psychological commonality, and it is also a psychological response with the strongest spread. Due to human survival instinct, it can make it easier for people to notice threat information among numerous information. Fear stimulus will make people have an instinctive impulse to eliminate fear, and fear emotions induce audiences to have a strong motivation to process information (Lu & Zhang, 2007). Therefore, in the face of consumer anxiety and fear, the need for fear is on cigarette packaging. The strategy is often used to persuade or change the attitude and behavior of consumers. Show the undesirable consequences of smoking and warn consumers to improve the effectiveness of communication.

Scholars affirm that the themes and propaganda methods of individual interests can produce better results in countries where individualism culture prevails, while advertisements that emphasize family or collective interests can produce more positive effects in countries that advocate collectivism culture (Ge, 2010). Later, in the cross-cultural research on anti-tobacco advertising, some scholars found that the lower and medium level of fear-appeal health warning images and advertisements are more effective in countries with individualist cultures, such as Canada, than countries under collectivist cultures, such as China, but it is unexpectedly harmful, the lower level of fear-appeal health warning images and advertisements have no significant effect on Chinese subjects but have a positive effect on Canadian subjects (Laroche, Toffoli, Zhang & Pons, 2001).

In China, some scholars have begun to study the impact of different level of fear-appeal on smokers. In 2015, some scholars found that the different level of fear-appeal and smoking habit had an effect on advertising Interaction. For non-smokers, it is better to present advertising including higher level of fear-appeal, and for smokers, medium level of fear-appeal is better.

2.1.3 Attitude towards smoking

Attitudes toward smoking affect the smoking behavior of smokers. Reflection can help smokers change their attitude toward smoking and emotional disorders. The health warning on cigarette packaging can make smokers believe that quitting smoking can improve one's own image and destiny affect the attitude of smokers to quit smoking (Chapman, 2007).

In this survey, the attitude toward smoking changed mainly in the following process: the smokers saw the health warning on cigarette packaging, and then

according to the fear-appeal theory, the smokers' attitudes began to change and stopped smoking eventually. Mays, Niaura, Evans, Hammond & Tercyak (2015) found that the images can change smokers' attitude toward smoking to believe that there is a link between smoking and hazard, so the fear-appeal health warning on cigarette packaging can reminds smokers of the dangers caused by smoking when they smoke. If the smoker have changed attitude due to this health warning, it will affect their behavior, they will stop smoking because of they understand the serious health hazards. But if the smokers don't change their attitude, then they might be biased and do not care about those health warning and insist their smoking behavior. The factors that enforce smokers changing attitude toward smoking also vary according to smoking history and gender. From the past research in USA, the researchers found that female smokers reported higher scores of changing attitude toward smoking than male smokers when they faced health warning on cigarette packaging. They were more aware of the negative impact and harmful effects of smoking. Male smokers reported higher scores of denying changing attitude toward smoking than female smokers, and, females were more aware of the health hazards of smoking and took notice of the consequences than males (Haddad & Malak, 2002). This may be due to women having greater concern for their own health due to periodic changes in their bodies related to menstruation, childbirth and lactation. Furthermore, they may have more concern for the health of others because they tend to have a nurturing role in families, thus leading to greater concern for health than the male members of their families.

2.1.4 Smoking behavior

The research on the influence of cigarette packaging on smoking behavior in

western countries has a history of more than 40 years. During this period, scholars carried out many theoretical and empirical studies on cigarette packaging. From previous studies, we can divide the impact of cigarette packaging on the desire to smoke: personality variables and information variables. Personality variables refer to the individual characteristics of the information recipient, such as gender, smoking status, cultural status, etc. (Tan, 2006). The researchers believe that these will make different cigarette packaging have varying degrees of influence on smoking desire.

The chemical effects of smoking are directly related to the attitude and emotion of smokers. Nicotine, like cocaine or other soft drugs, is a stimulant that can increase the heart, breathing, and blood pressure rates, cause high levels of alertness, and arouse the emotional feelings of smokers. Another by-product of smoking-acetaldehyde-used as a tranquilizer and carbon monoxide can reduce emotional tension, anger or other strong emotions. All these factors further make smoking addictive and are used to resist feelings of tension or irritability. The psychological impact of smoking behavior on smokers is very powerful. Smoking brings psychological support or supplement to the lives of smokers, making it more difficult to quit smoking. Nicotine-induced emotions subsided after about 20 minutes on average, leaving smokers with more cravings. When this desire is not satisfied, the smoker’s attitude can switch from satisfied to irritable, until the cigarette is re-lit (Guo, 2011).

Chinwong, D., Mookmanee, N., Chongpornchai, J., & Chinwong (2018) found that people with different smoking status and gender have different reactions to different cigarette packaging. Female Smokers hate cigarette packaging attached horror image warning more than male smokers. Later, Tian's research on the impact

of image warning on cigarette packaging found that after viewing the cigarette packaging with horror image warning, the female tester's attitude towards smoking changed a lot compared with male cigarette packaging. However, subsequent studies have shown that dire warnings on cigarette packaging may become incentives for people to smoke. Some scholars conducted an experiment on smoking and psychological dependence among 39 student smokers who have different smoking history. The students were divided into two groups. The image warning on the two groups of cigarette packaging was similar. The results of the experiment were surprising. Those students who smoke more frequently did not feel much uncomfortable compared with other students who have lower smoking history. These smokers can forget their sorrow and find confidence only in smoking. So, maybe smoking makes them look cool, they have already regarded cigarettes as an important part of their lives. To them, the cigarette packaging with health warning was a naked mockery. And, for relieving themselves from depression, they smoked more. Therefore, the impact of cigarette packaging on smokers' behavior has not been finalized. Visual stimulation may not be enough to persuade people to quit smoking.

2.2 Concepts and Assumptions of Related Theories

2.2.1 Fear-appeal theory

2.2.1.1 Early linear correlation

Research on the intensity of fear-appeal began in the 1950s. Early scholars believed that fear-appeal played a positive role in the effects of advertising and product packaging. As the degree of fear increased, its communication effect was significantly strengthened (Wang, 2012a). But after this, there are still other scholars

who have begun to question this argument. They believe that there is a negative correlation rather than a positive correlation between the degree of fear awakening and the effect of persuasion (Zhou, 2012). Unfortunately, in their further research, he did not confirm this point of view, but instead came to the opposite conclusion that there is a positive correlation between fear awakening and persuasive effects (Yuan, 2013).

In the subsequent process of fear-appeal, the reaction of fear-appeal was proved in a classic experiment carried out by Janis and Feshbach (1953). They used dental care as the theme and designed three different kinds of dental care information. The experimental results showed that the persuasion effect with the lowest intensity of fear-appeal was the best, and the attitude of the subjects to dental care changed significantly, while the poster with the highest intensity of fear-appeal did not achieve the persuasion effect, so they concluded that The intensity is too large, the stimulation is too strong, but may evoke some form of infection factors, thereby reducing the effect of transmission which is that there is a negative correlation between the two, as the degree of fear increases, the persuasiveness of the advertisement decreases (Smith, 1997).

Although there are two diametrically opposite results in the early research, researchers firmly believe that if it is not a contradiction in itself, then there must be a certain limit that makes the fear-appeal have a partially different effect on the communication effect.

2.2.1.2 Inverted "U" shaped linear correlation

With the further development of related research, some scholars have begun to propose that the fear-appeal is to awaken the individual's emotions to

persuade the individual to generate attitudes and even behavioral changes. Basing on this hypothesis which is that when the fear-appeal evokes the sense of fear of the victim, is the higher-level of fear, the easier it is for the audience to accept the persuasive information in the advertisement and produce corresponding attitude changes (Laroche et al., 2001). Therefore, scholars believe that there is a curve-related relationship between the fear level and the effect of communication. Specifically, higher-level or lower-level of fear will cause slight attitude and behavioral change, while medium-level of fear can achieve the greatest degree of attitude and behavioral change.

2.2.1.3 Protection motivation

For the two opposite results, most scholars have explained that the high-threat fear-appeal will trigger two common reactions in the audience, one is fear control and the other is danger control. Later, another more important argument which is the theoretical model of protection motivation also came into being, and this theory is that when the audience accepts the information of fear, they begin the process of cognitive adjustment. And, they first estimate the severity of the information, then, according to their own situation to anticipate the possibility of negative events. If the audience believes that the threatening and terrifying information of the threat information in the fear-appeal is not credible, or that it is unlikely to happen to them, or that the proposed countermeasures are not effective enough, then the possibility of attitude change is very small (Kline & Mattson, 2000).

2.2.1.4 Parallel processing model

In 1970, based on the derivative of the early fear model, the parallel processing model was proposed. The theory holds that fear-appeal should include

different stimulus information, and the stimulus information will cause different motives and behavioral scopes. And the most important one is the two stimulus messages of fear control and danger control. Fear control is an emotional change and control that will cause the audience to avoid or oppose information. Correspondingly, danger control is a process of cognitive change that occurs in response to threat information, and such control causes the audience to take defensive actions. These two kinds of control reactions can exist independently, but sometimes one party will overwhelm the other (Yuan, 2013).

2.2.1.4 New parallel processing model

Based on the parallel processing model, a new parallel processing model was proposed, which believed that fear-appeal triggered audiences to carry out two types of evaluation of information which are namely threat assessment and effectiveness assessment. It shows that the audience will first conduct a threat assessment. When the threat described in the information is closely related to the audience itself, the audience will be more likely to believe that it will be threatened, thereby inspiring the audience's motivation to conduct effectiveness evaluation. Conversely, if the threat identified in the message is deemed by the audience to be irrelevant or unimportant, the audience will stop evaluating and ignore the fear of requesting information (Tan & Xiao, 2009).

Therefore, when the audience believes that the action recommendations in the information that hinder the threat are effective and easy to implement, it will trigger a dangerous winter, and the audience will accept the recommendation strategy. However, if the audience fears because of the threat, but does not obtain effective advice from the information or thinks that the advice is too difficult, the audience will

instead adopt fear control by denying, defensive avoidance or resistance to reduce fear and anxiety.

2.2.2 Persuasive Message

2.2.2.1 The process of persuasion from the perspective of the communicator

Hovland and Janis (1959) proposed a model of persuasion or attitude change for basic information communication, which believed that the objectivity and selflessness of the communicator and the information source were the basic conditions for persuasion and credibility (Jiang, 2008). In other words, if the persuader is persuading the audience from the perspective of an individual or a small group, then his persuasive role as a persuader will be impaired.

After that, fear and disparity are two important variables for persuading the dissemination of information. Disparity refers to the difference between the opinions disseminated and the original attitudes of the persuasive objects. If this gap is too large, then there is something that leads the persuaded to doubt the credibility of the informant, and it is unlikely to change attitudes to ease tension. Therefore, only if the difference reaches a sufficient tension or psychological imbalance to persuade the object, can it be possible to obtain a persuasive effect (Ding, 2003).

Finally, the recipient is the object of persuasion, and its central issue is belief and personality. The higher the receiver's confidence in the original opinion, the smaller the possible change

2.2.2.2 The process of persuasion from the perspective of the recipient

The consumer response to product packaging and advertising consists of three parts which are namely cognitive response, emotional response and intentional

response. Cognitive response includes knowing and understanding. It is the person who understands the consumer's performance, utility, quality and other aspects of the product. Emotional responses include likes and preferences. Liking is a good attitude of consumers to products, and preference is a good attitude of consumers expanding to other aspects. Intentional responses include persuasion and purchase. Because of preferences, consumers have a desire to buy, and they think that it is wise to buy the product, which is convincing (Jiang, 2008). Before consumers have used the product, their attitude towards the product often depends on packaging and advertising. So how to promote consumers' desire to purchase depends on the persuasive information on packaging and advertising (Fu, 2001).

Therefore, we can know from the above two models: first, product packaging is actually a process of persuasion, and the use of reasonable persuasion communication strategies can largely affect product sales. Second, the persuasive role of product packaging is a reinforcement of consumer attitudes, so consumer psychology research and investigation of consumers is crucial for packaging design and product sales. Third, whether the source of persuasion information is authoritative will also greatly affect the effect of persuasion information.

2.3 Research Hypotheses

By adopting questionnaire analysis research method, this research conducts quantitative research to clarify the relationship among the fear-appeal health warnings, attitude toward smoking and smoking behavior.

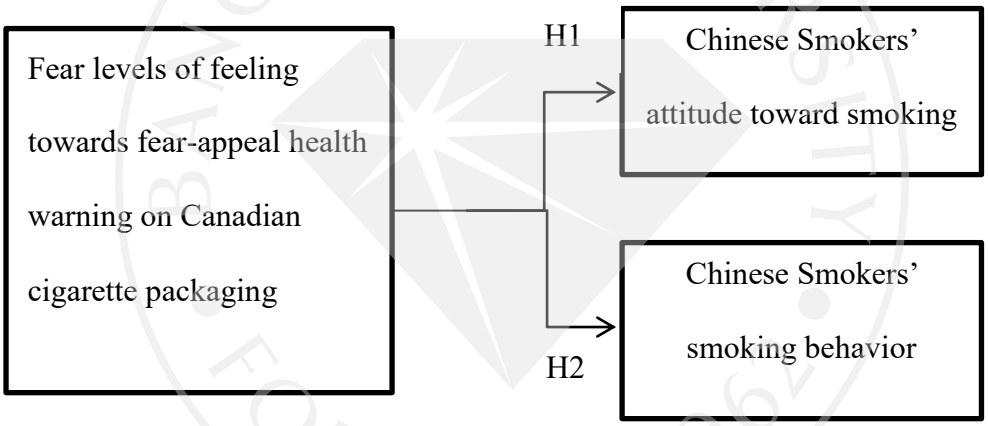
Hypothesis 1: Fear levels of feeling toward fear-appeal health warning on Canadian cigarette packaging are negatively correlated with their attitude toward

smoking among Chinese smokers.

Hypothesis 2: Fear levels of feeling toward fear-appeal health warning on Canadian cigarette packaging are negatively correlated with their smoking behavior among Chinese smokers.

2.4 Conceptual framework

Figure 2.4: Conceptual Framework



CHAPTER 3

METHODOLOGY

This chapter described the procedures and research design using to investigate whether fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging have the relationship with Chinese smokers' attitude toward smoking and smoking behavior.

This quantitative study used survey research to collect data, analyze the collected data, and finally draw conclusions. In order to express the methodology chapter more clearly, the following will be divided into the following points:

3.1 Research Design

Quantitative methods emphasize objective measurements and statistical, mathematical or numerical analysis of data collected through questionnaires, and surveys, or the use of computing techniques to process existing statistical data. The focus of quantitative research is to collect numerical data and summarize or explain specific phenomena in the population (Babbie, 2010). The degree of fear can be quantified into three levels: high, low and medium, therefore, in the questionnaire design, higher-level of fear, lower-level of fear, and medium-level of fear can be used to quantify fear-appeal health warning on cigarette packaging.

In order to understand attitude and behavior of the audience after seeing fear-appeal health warning on Canadian cigarette packaging, a quantitative method can be used to collect data and analyze, and according to the results to analyze the correlation between fear-appeal health warning on cigarette packaging, attitude toward smoking

and smoking behavior. Data are accurate measure, which can help us clearly understand the nature of things, and provide us with some solutions to other problems, such as how to utilize the fear-appeal to reach the goal that the company and even the government wants. Therefore, for this study, quantitative method is applicable.

3.2 Sample Selection

By using purposive sampling to choose 184 Chinese smokers from both male and female.

3.3 Research Instrument

The researcher used WeChat as a way to collect questionnaires. The questionnaire is mainly written in the form of Likert scale. The Likert scale is a psychological measurement scale, invented and named by the American sociologist, Rensis Likert (Allen & Seaman, 2007). And WeChat is currently one of the most used social software in China, This research instrument is a questionnaire designed by the researcher. This questionnaire includes four parts.

3.3.1 Personal information

This part focuses on the interviewees' personal information. There are 6 questions in this part. The first, fourth and sixth questions are used to test the validity of the sample who smoke. The questions are as follows:

1) Do you smoke?

2) Gender

3) What is your educational background?

4) How many cigarettes do you smoke per day?

5) Have you ever read the health warning on packaging before?

6) How long have you been smoking?

Part 2: Fear levels of feeling towards Fear-appeal health warning on Canadian cigarette packaging.

This part has 1 question, and it is used to identify hypothesis 1. And ordinal level will be used in this part, participants answered according to their actual situation, arranging from “higher = 3 to “lower =1”. The question is:

7) Describe your fear levels of feeling towards this fear-appeal health warning.

Part 3: Attitude toward smoking

This part contains 7 questions, and it is used to identify the hypothesis 1, and the researcher chooses Canadian cigarette packaging, and the questions are as follows:

8) I think this health warning appropriately convey the harmful of smoking to me.

9) I will try to prevent from viewing this health warning.

10) I feel uncomfortable after seeing this health warning.

11) I think this health warning is attractive.

12) I don’t feel anything.

13) I think this fear-appeal health warning on cigarette packaging is exaggerated.

14) I think this health warning is not persuasive.

Five-liker scale questions are selected in this part. Participants answered according to their actual situation, arranging from “strongly agree = 5” to “strongly disagree = 1”.

Part 4: Smoking behavior

This part contains 5 questions, and it is used to identify hypothesis 2, and the researcher chooses Canadian cigarette packaging as sample, and the questions are as follows:

15) I want to abstain smoking after seeing this fear-appeal health warning.

16) I want to lessen my times of smoking after seeing this fear-appeal health warning.

17) I don't have any feeling after seeing this fear-appeal health warning.

18) I will try to persuade others to reduce smoking after seeing this fear-appeal health warning.

19) I want to smoke cigarette even more after seeing this fear-appeal health warning.

Five-liker scale questions are selected in this part. Participants answered according to their actual situation, arranging from "strongly agree = 5" to "strongly disagree = 1".

3.4 Data Collection

These data were collected via WeChat in September 2020 because WeChat is the social media with the largest number of users in China. The researcher collected a total of 184 complete questionnaires and analyzed the relevant data through SPSS.

3.5 Reliability Analysis

Because the samples in this study are only Chinese smokers, the researcher translated the questionnaire into Chinese, and then invited a Chinese person who can

speak and write English well to translate the questionnaire back into English to check the accuracy of the translation. Before conducting formal data collection, the researcher conducted a pre-test with a sample size of 50. The researcher hopes to check the reliability of the questionnaire through pre-tests and make corresponding adjustments and modifications based on the results.

According to Table 3.1, all variables are greater than 0.9. This shows that the result is reliable.

Table 3.1: Reliability Test

Variables	Cronbach's Alpha
Fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging, and attitude toward smoking	.971
Fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging, and Smoking behavior	.963

3.6 Data Analysis

To begin the data analysis process, data of the gender, educational background, smoking habit, whether they have read the health warning on packaging, and smoking history were recorded in a spreadsheet and transferred to SPSS for statistical analysis. Data were calculated, and cross tabulation and Chi-square was used to reach conclusions about the attitude toward smoking and smoking behavior towards fear-appeal health warning on Canadian cigarette packaging based on data collected from the sample.

The statistical hypotheses were tested as follows:

Hypothesis 1: Fear levels of feeling toward fear appeal health warning on Canadian cigarette packaging are negatively correlated with their attitude toward smoking among Chinese smokers.

Cross tabulation and Chi square was used to prove the relationship between fear levels of feeling towards fear-appeal health warning on cigarette packaging and smokers' attitude toward smoking.

Hypothesis 2: Fear levels of feeling toward fear appeal health warning on Canadian cigarette packaging are negatively correlated with their smoking behavior among Chinese smoker.

Cross tabulation and Chi square was used to prove relationship between fear levels of feeling towards fear-appeal health warning on cigarette packaging and smoking behavior.

CHAPTER 4

FINDINGS

This chapter explained the data collected, and statistical analysis, and the findings of hypothesis testing using Chi square and Cross tab to testing the hypotheses. The data are divided into two parts.

4.1 Descriptive Statistics of Data Sets

4.2 Hypothesis Testing

4.1 Descriptive Statistics of Data Sets

4.1.1 Basic Information Distribution

In Table 4.1, the descriptive findings revealed that there were 129 (70.1%) male participating in the questionnaire survey, and 55 (29.9%) female. Among them, 95 (51.6%) had undergraduate degree, 46 (25.0%) had postgraduate degree or higher, 43 (23.4%) had less than undergraduate degree. When being asked how many cigarettes they smoke per day, 71 of them (38.6%) stated "less than 3 cigarettes per day." 53 of them (28.8%) stated "3-7 cigarettes per day." And 31 of them (16.8%) stated "8-12 cigarettes per day." Only 29 of them (15.8%) stated "more than 12 cigarettes per day." And when being asked whether they ever read the health warning on packaging before, 122 of them (66.3%) stated "sometimes." And 45 of them (24.5%) stated "usually." Only 17 of them (9.2%) stated "never" read health warning on packaging. And, 91 people have been smoking for more than 5 years, accounting for 49.5%; 38 people have been smoking for less than 1 year, accounting for 20.7%; 32 people have been smoking for 1-2 years, accounting for 17.4% and only 23 people

have been smoking for 2-5 years, accounting for 12.5%, and 165 people showed medium and higher level of fear towards fear-appeal health warning on cigarette packaging, accounting for 89.7%.

Table 4.1: Frequency summary of personal information and fear levels of feeling toward fear-appeal health warning (N = 184)

Basic information	Frequency (*f*)	Percentage (%)
1. Do you smoke?		
- Yes	184	78.3
- No	51	21.7
Total	235	100
2. Gender		
- Male	129	70.1
- Female	55	29.9
-Total	184	100
3.Education level		
- Less than undergraduate degree	43	23.4
- Undergraduate degree	95	51.6
- Postgraduate degree of higher	46	25.0
Total	184	100

(Continued)

Table 4.1 (Continued): Frequency summary of personal information and fear levels of feeling toward fear-appeal health warning (N = 184)

Basic information	Frequency (f)	Percentage (%)
4. How many cigarettes do you smoker per day?		
- Less than 3 cigarettes per day	71	38.6
- 3-7 cigarettes per day	53	28.8
- 8-12 cigarettes per day	31	16.8
- More than 12 cigarettes per day	29	15.8
Total	184	100
5. Have you ever read the health warning on packaging before?		
-Never	17	9.2
-Sometimes	122	66.3
-Usually	45	24.5
Total	184	100
6. How long have you been smoking?		
-Less than 1 year	38	20.7
-1-2 years	32	17.4
-3-5 years	23	12.5
-More than 5 years	91	49.5
-Total	184	100

(Continued)

Table 4.1 (Continued): Frequency summary of personal information and fear levels of feeling toward fear-appeal health warning (N = 184)

*Fear levels of feeling towards fear-appeal health warning	Frequency (f)	Percentage (%)
7. Describe your fear levels of feeling towards this fear-appeal health warning		
- Lower	19	10.3
- Medium	82	44.6
- Higher	83	45.1
Total	184	100

4.1.2 Attitude toward Smoking Distribution

Based on Table 4.2, the descriptive findings revealed that samples have their attitude toward smoking at “agree” level on “This health warning appropriately conveys the harm of smoking to them” (Mean = 3.97, S.D. = 1.142), “I feel uncomfortable after seeing this health warning” (Mean = 3.66, S.D. = 1.213), “This health warning is attractive” (Mean = 3.44, S.D. = 1.266), and at “neutrality” level on “I will try to prevent from viewing this heal warning” (Mean = 2.95, S.D. = 1.334), “This health warning is not persuasive” (Mean = 2.54, S.D. = 1.334), “This fear-appeal health warning on cigarette packaging is exaggerated” (Mean = 2.48, S.D. = 1.280), and “I don’t feeling anything” (Mean=2.34, S.D. = 1.222).

Table 4.2: Means and Standard deviations of fear-appeal health warning on Canadian cigarette packaging on the respondents' attitude toward smoking

Attitude toward smoking	Mean	Std. Deviation	Meaning
8. I think this health warning appropriately convey the harm of smoking to me.	3.97	1.142	Agree
9. I will try to prevent from viewing this health warning.	2.95	1.334	Neutrality
10. I feel uncomfortable after seeing this health warning.	3.66	1.213	Agree
11. I think this health warning is attractive.	3.44	1.266	Agree
12. I don't feel anything.	2.34	1.222	Neutrality
13. I think this fear-appeal health warning on cigarette packaging is exaggerated.	2.48	1.280	Neutrality
14. I think this health warning is not persuasive.	2.54	1.334	Neutrality

4.1.3 Smoking Behavior Distribution

Based on Table 4.3, the descriptive findings revealed that samples have their smoking behavior at "agree" level on "I want to lessen their times of smoking after seeing this fear-appeal health warning (Mean = 4.04, S.D. = 1.060), "I will try to

persuade others to reduce smoking after seeing this fear-appeal health warning (Mean = 3.88, S.D. = 1.117), “I want to abstain smoking after seeing this fear-appeal health warning (Mean = 3.79, S.D. = 1.234), and at “neutrality” level on “I don’t have any feeling after seeing this fear-appeal health warning” (Mean = 2.67, S.D. = 1.356) , and “I want to smoke cigarette even more after seeing this fear-appeal health warning” (Mean = 2.19, S.D. = 1.247) .

Table 4.3: Means and Standard deviations of fear-appeal health warning on Canadian cigarette packaging on the respondents’ smoking behavior (N=184)

Smoking behavior	Mean	Std. Deviation	Meaning
15. I want to abstain smoking after seeing this fear-appeal health warning.	3.79	1.234	Agree
16. I want to lessen my times of smoking after seeing this fear-appeal health warning.	4.04	1.060	Agree
17. I don’t have any feeling after seeing this fear-appeal health warning.	2.67	1.356	Neutrality
18. I will try to persuade others to reduce smoking after seeing this fear-appeal health warning.	3.88	1.117	Agree

(Continued)

Table 4.3 (Continued): Means and Standard deviations of fear-appeal health warning on Canadian cigarette packaging on the respondents' smoking behavior (N=184)

Smoking behavior	Mean	Std. Deviation	Meaning
19. I want to smoke cigarette even more after seeing this fear-appeal health warning.	2.19	1.247	Neutrality

4.2 Hypothesis Testing

4.2.1 Hypothesis 1: Fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging are negatively correlated with their attitude toward smoking among Chinese smokers.

The researcher adopted Cross-tabulation and Chi-Square function from SPSS to test the relationship between fear levels of feeling and attitude toward smoking, the results are demonstrated in Table 4.4, indicating that HP#1 is supported. Fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging are negatively correlated with attitude toward smoking.

The result has also revealed that the majority of respondents with higher fear levels of feeling towards Canadian cigarette packaging show strongly agree (35%), followed by strongly disagree (27%), neutrality (15%), disagree (12%) and agree (10%). Then, the majority of respondents with medium fear levels of feeling towards Canadian cigarette packaging show neutrality (45%), followed by disagree (20%),

agree (19%), strongly agree (8%) and strongly disagree (6%). Finally, the majority of respondents with lower fear levels of feeling towards Canadian cigarette packaging show strongly disagree (28%), followed by strongly agree (27%), neutrality (18%), disagree (15%) and agree (10%).

Based on Table 4.4, in seven attitude toward smoking statements, fear levels of feeling towards Canadian cigarette packaging are negatively correlated with attitude toward smoking among Chinese smokers (strongly agree), X 2 (2, N=184) =119.734, p<.001, fear levels of feeling towards Canadian cigarette packaging are negatively correlated with attitude toward smoking among Chinese smokers (agree), X 2 (2, N=184) =20.920, p<.001, fear levels of feeling towards Canadian cigarette packaging are negatively correlated with attitude toward smoking among Chinese smokers (neutrality) , X 2 (2, N=184) =133.140, p<.001, fear levels of feeling towards Canadian cigarette packaging are negatively correlated with attitude toward smoking among Chinese smokers (disagree), X 2 (2, N=184) =12.567, p<.05, fear levels of feeling towards Canadian cigarette packaging are negatively correlated with attitude toward smoking among Chinese smokers (strongly disagree), X 2 (2, N=184) =89.377, p<.001.

The majority of respondents with higher fear level of feeling towards Canadian cigarette packaging show strongly agree (35%), the majority of respondents with medium fear level of feeling towards Canadian cigarette packaging show neutrality (45%), and, the majority of respondents with lower fear level of feeling towards Canadian cigarette packaging show strongly disagree (28%).

Table 4.4: Frequency, Percentage and Chi-square results of fear levels of feeling towards fear-appeal health warning on cigarette packaging and attitude toward smoking

Attitude toward smoking	Fear levels of feeling towards Canadian cigarette packaging			
	Lower	Medium	Higher	Chi-Square
Strongly agree	36 (27%)	48 (8%)	203 (35%)	119.734***
Agree	14 (10%)	109 (19%)	58 (10%)	20.920***
Neutrality	25 (18%)	262 (45%)	91 (15%)	133.140***
Strongly disagree	38 (28%)	39 (6%)	156 (27%)	89.377***

4.2.2 Hypothesis 2:

Hypothesis 2: Fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging are negatively correlated with their smoking behavior among Chinese smokers.

The researcher adopted Cross-tabulation and Chi-Square function from SPSS to test the relationship between fear levels of feeling and smoking behavior, the results are demonstrated in Table 4.5, indicating that HP#2 is partially supported. Fear

levels of feeling towards Canadian cigarette packaging are partially negatively correlated with smoking behavior.

The result revealed that the majority of respondents with higher fear levels of feeling towards Canadian cigarette packaging show strongly agree (50%), followed by strongly disagree (22%), agree (10%), disagree (9%) and neutrality (7%). Then, the majority of respondents with medium fear level of feeling towards Canadian cigarette packaging show neutrality (50%), followed by agree (21%), disagree (12%), strongly agree (11%) and strongly disagree (5%). Finally, the majority of respondents with lower fear level of feeling towards Canadian cigarette packaging show strongly disagree (38%), followed by neutrality (23%), strongly agree (17%), disagree (11%) and agree (10%).

Based on Table 4.5, in five smoking behavior statements, fear levels of feeling towards Canadian cigarette packaging are negatively correlated with smoking behavior (strongly agree), X^2 (2, N=184) =163.966, p<.001, fear levels of feeling towards Canadian cigarette packaging are negatively correlated with smoking behavior (agree), X^2 (2, N=184) =22.374, p<.001, fear levels of feeling towards Canadian cigarette packaging are negatively correlated with smoking behavior (neutrality) , X^2 (2, N=184) =183.658, p<.001, fear levels of feeling towards Canadian cigarette packaging are not negatively correlated with smoking behavior (disagree), X^2 (2, N=184) =2.057, p>.05, fear levels of feeling towards Canadian cigarette packaging are negatively correlated with smoking behavior (strongly disagree), X^2 (2, N=184) =81.824, p<.001.

The majority of respondents with higher fear level of feeling towards Canadian cigarette packaging show strongly agree (50%), the majority of respondents

with medium fear level of feeling towards Canadian cigarette packaging show neutrality (50%), and, the majority of respondents with lower fear level of feeling towards Canadian cigarette packaging show strongly disagree (38%).

Table 4.5: Frequency, Percentage, and Chi-square results of fear levels of feeling towards fear-appeal health warning on cigarette packaging and smoking behavior

Smoking behavior	Fear levels of feeling towards Canadian cigarette packaging			
	Lower	Medium	Higher	Chi-Square
Strongly agree	16 (17%)	45 (11%)	210 (50%)	163.966***
Agree	10 (10%)	88 (21%)	42 (10%)	22.374***
Neutrality	22 (23%)	205 (50%)	32 (7%)	183.658***
Disagree	11 (11%)	50 (12%)	38 (9%)	2.057
Strongly disagree	36 (38%)	21 (5%)	94 (22%)	81.824***

CHAPTER 5

DISCUSSION

This chapter summarized and discussed the research results. The aims of this chapter are to summarize and discuss the implications of the quantitative research findings of the research hypotheses, to summarize the limitations of this study, also to offer recommendations for the future application and research. The summary of the chapter is as follows:

5.1 Summary of descriptive statistics of data sets

5.2 Summary of hypothesis testing and discussion

5.3 Conclusion of the study

5.4 Limitations of the study

5.5 Recommendations for future application

5.6 Recommendations for future research

5.1 Summary of Descriptive Statistics of Data Sets

The descriptive findings revealed that most of respondents smoke less than 3 cigarettes per day (38.6%) and read the health warning on packaging sometimes (66.3%), and most of respondents have been smoking for more than 5 years (49.5%). The study pointed that for Chinese smokers, skipping from reading health warning on cigarette packaging is already a habit. The results coincided with Wang (2012b), who found that Chinese cigarette packaging cannot attract smokers' attention with simple text health warning, and text warning on cigarette packaging containing only lower

level of fear-appeal plays a minor role in abstaining smoking, so it cannot attract the visual attention of consumers and the damage of smoking is unknown.

The study has shown that the majority of Chinese respondents to Canadian cigarette packaging has higher fear level of feeling (45.1%). The study pointed that Canadian cigarette packaging meets the fear-appeal theory in terms of visual design, which is coincided with Jiang & Yang (2009) health warnings, combined with images and text warnings that can produce a higher level of fear. Then, on questions related to attitude toward smoking, fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging are negatively correlated with attitude toward smoking. This is coincided with Ding (2003) who emphasized that fear and disparity are two important variables for persuading the dissemination of information, when the disparity reaches a sufficient tension or psychological imbalance to persuade the object, it can be possible to obtain a persuasive effect. Based on the fear-appeal theory, when the audience is persuaded due to psychological imbalance, their attitude will be greatly changed. And, most audiences will not avoid watching the fear-appeal health warning because they think that the health warning is close to reality, which is coincided with Hammond (2009) and Smith (1997), who found that the appropriate application of fear-appeal is rather more persuasive, and excessively bloody and violent pictures may instigate the distrust of smokers, and cigarette packaging design using a reasonable fear-appeal will not cause a visual objection to the public, so it can make people notice the image warning and smoking cessation methods on the packaging, so as to better convey the message of the danger of smoking and the way to quit smoking.

Then, on questions related to smoking behavior, fear level of feeling toward fear-appeal health warning on Canadian cigarette packaging are negatively correlated with smoking behavior, and fear-appeal health warning on Canadian cigarette packaging does not intrigue more smoking behavior. The study pointed that the design of Canadian cigarette packaging would be of great help in helping smokers reduce their smoking behavior and persuade others to abstain smoking, and it won't intrigue the more severe smoking behavior. The results coincided with Hammond, Fong, McDonald, Brown & Cameron (2004), who found that the Canadian cigarette packaging with fear-appeal health warning can reduce smokers' smoking frequency and promote smoking cessation, in addition, based on fear-appeal theory, Kline & Mattson (2000) indicated that the fear-appeal contains different stimulus information. The stimulus information will cause different behaviors. The two most important stimulus information to control the audience's behavior are fear control and danger control. Danger control will prompt the audience to take defensive behaviors when responding to threat information, and that is to reduce smoking behavior.

5.2 Summary of Hypothesis Testing and Discussion

Hypothesis 1: Fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging are negatively correlated with their attitude toward smoking among Chinese smokers.

As shown in Table 4.4, in seven attitude toward smoking statements, fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging are negatively correlated with attitude toward smoking among Chinese smokers (strongly agree), $X2$ (2, N=184) =119.734, p<.001, (agree), $X2$ (2, N=184) =20.920,

p<.001, (neutrality), *X2* (2, N=184) =133.140, p<.001, (disagree), *X2* (2, N=184) =12.567, p<.05, and (strongly disagree), *X2* (2, N=184) =89.377, p<.001.

Also, the majority of respondents with higher fear level of feeling towards Canadian cigarette packaging show strongly agree (35%), with medium fear level of feeling towards Canadian cigarette packaging show neutrality (45%), and with lower fear level of feeling towards Canadian cigarette packaging show strongly disagree (28%).

Hypothesis 1 results pointed out that the fear-appeal of feeling towards fear-appeal health warning on Canadian cigarette packaging are negatively correlated with attitude toward smoking among Chinese smokers. Those findings coincided with the Chapman (2007), who said that reflection can help smokers change their attitude toward smoking and emotional disorders. The use of appropriate fear-appeal in the design of cigarette packaging can convince smokers that quitting smoking can improve their feature and destiny, thereby affecting their attitude toward smoking. Moreover, according to Wong & Cappella (2009), if smokers agree to the image warnings and text warnings on the cigarette packaging, they would know the serious health risks and quit smoking, thus, cigarette packaging covered with persuasive text warning and image warning can change smokers' attitude toward smoking, and based on Li (2009), cigarette packaging that can cause a high level of fear can effectively make smokers aware of the dangers of smoking and change smoker’s attitude toward smoking.

Hypothesis 2: Fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging packaging are negatively correlated with their smoking behavior among Chinese smokers.

As shown in Table 4.5, the Chi-Square analysis revealed that in five smoking behavior statements, fear levels of feeling towards Canadian cigarette packaging are negatively correlated with smoking behavior among Chinese smokers (strongly agree), X^2 =163.966, p<.001, (agree), X^2 =22.374, p<.001, (neutrality), X^2 =183.658, p<.001, and (strongly disagree), X^2=81.824, p<.001, but fear levels of feeling towards Canadian cigarette packaging are not negatively correlated with smoking behavior (disagree), X^2=2.057, p>.05. Also, the majority of respondents with higher fear level of feeling towards Canadian cigarette packaging show strongly agree (50%), with medium fear level of feeling towards Canadian cigarette packaging show neutrality (50%), and with lower fear level of feeling towards Canadian cigarette packaging show strongly disagree (38%).

Hypothesis 2 results showed that fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging packaging are partially negatively correlated with smoking behavior among Chinese smokers. Smoking behavior may be influenced by gender and smoking history based on Guo (2011); the nicotine contained in cigarettes can affect the brain. Smoking behavior is more affected by nicotine, and stopping smoking behavior will arouse smokers' irritability and anxiety. Therefore, Canadian cigarette packaging can only partially affect smoking behavior for Chinese smokers. In addition, gender also differs in smoking behavior. Compared with men, female smokers have more intention to quit smoking towards cigarette packaging that cause a high level of fear. Finally, this result is also coincided with

"The number of smokers in Thailand" (2015), chemicals contained in cigarettes determine that smoking behavior cannot be influenced only by the visual stimulus of cigarette packaging design, especially for the smokers who have been smoking for over 3 years; the fear caused by health warning is easily disappeared by smoking behavior. Based on Table 4.4, the majority of smokers with higher fear of Canadian cigarette packaging expressed strongly agree, the majority of smokers with medium fear expressed neutrality, and the majority of smokers with lower fear expressed strong disagree, which is coincided with Jiang &Yang (2009). Cigarette packaging that can cause a high level of fear can inhibit smoking behavior, while cigarette packaging that can cause medium level of fear is not as effective as it is, and the cigarette packaging that can only cause lower level of fear is negligible, which is coincided with Li (2009), cigarette packaging that can only cause low level of fear does not make smokers feel afraid of smoking behavior psychologically, which leads them not to quit and reduce smoking behavior.

5.3 Conclusion of the Study

This study aims to examine whether fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging are negatively correlated with attitude toward smoking and smoking behavior among Chinese smokers. Through data analysis, hypotheses 1 is supported, and hypotheses 2 is partially supported. The results from 184 Chinese smokers of the study showed that the majority of respondents (n=83, 45.1%) has higher fear of feeling toward fear-appeal health warning on Canadian cigarette packaging. The findings supported the assumption of fear-appeal theory, according to Kline & Mattson (2000), when the audience receives

fearful information, they first estimate the severity of the information, and then predict the possibility of negative events based on their own situation. The higher the possibility, the higher the level of fear occurs. As a result, cigarette packaging that causes a higher level of fear has a great influence on both attitude toward smoking and smoking behavior, and cigarette packaging that causes a lower level of fear has only a negligible effect on both attitude toward smoking and smoking behavior, and the cigarette packaging that causes medium level of fear has certain limitations on the impact of attitude toward smoking and smoking behavior. Also, based on Kline & Mattson (2000), when the audience accepts the fear message, they begin the process of cognitive adjustment. They first estimate the severity of the information, and then predict the possibility of negative events based on their own circumstances. If the audience believes that the threatening and horrific nature of the threat information in the fear-appeal is not credible, or is unlikely to happen to them, or the countermeasures proposed are not effective enough, then the possibility of attitude and behavior change is negligible.

According to the findings of the study, fear levels of feeling towards fear-appeal health warning on Canadian cigarette packaging are negatively correlated with attitude toward smoking among Chinese smokers, but are partially negatively correlated with smoking behavior among Chinese smokers. Based on Chapman (2007), changing in attitude toward smoking can potentially change smoking behaviors of smokers, for example, lowering the amount of smoking or even quitting smoking, but according to Chinwong et al. (2018), attitude toward smoking and smoking behaviors of female smokers and male smokers are different depending on different fear-appeal health warning, In this study, the questionnaire includes more

men (70.1%) than women (29.9%), and this may be also reason why fear levels of feeling toward fear-appeal health warning on Canadian packaging are only partially correlated with smoking behavior. Also, the addictiveness caused by chemical components has to be taken into consideration, and it is not effectively affected by the health warning on cigarette packaging, and according to “The number of smokers in Thailand” (2015), it appears that this addictiveness affects the smoker's emotions. In addition, based on Tan & Xiao (2009), if the threat identified in the stimulus information is considered by the audience to be irrelevant or unimportant, the audience will ignore the stimulus information, and the addictive nature of smoking also prompts smokers to think that the threat in the image warning is not important, so smokers will continue smoking behavior.

According to the Erni (2014), for smokers with a smoking history for 3 years or more, the health warning are not negatively correlated with the smoker's smoking behavior, even if the health warning caused a change in their attitude toward smoking, they are more likely to enjoy comfort that smoking brings to them, and based on descriptive statistics, most smokers (49.5%) in this study had an effect on smoking behavior for more than 5 years, therefore, the effect of health warning on the smoking behavior of Chinese smokers is limited

5.4 Limitation of the Study

There are some limitations of this research as follows:

First, the study used a quantitative research method. There are only 184 smokers. The sample size is limited which may affect the results of the study, the

participants come from the different cities in China, and they all have different backgrounds. This helps reduce the deviation of this limitation.

Second, the methodology of this research is quantitative analysis, this method uses methodologically controlled and rule-based approach in order to measure the abstract concept and gradually reduce the complexity. But this research method could not directly reflect the individual's opinions. It is different from interview, focus group or content analysis method which the researcher can meet in person with the individuals to attain the emotion of the respondents.

5.5 Recommendations for Future Application

In the future, the Chinese tobacco department should control tobacco packaging like Canadian cigarette packaging, with image warning and text warning that can cause high or medium fear, and attach solutions to quit smoking to help Chinese smokers. In addition, cigarette packaging must be packaged differently according to gender. For female smokers, we can use warning related to the skin and beauty, for example, using smoke will cause skin aging as text warning, and image warning should also relate to skin and beauty effects, so as to better arouse higher or medium fear of female smokers. For male smokers, the use of more realistic text warning and image warning can achieve better results, for example, smoking will affect the health of children. In addition, since the time of smoking history can affect the smoking behavior of smokers, and the delivery of product information not only depends on its packaging and brand, but also achieves its own dissemination purpose by relying on social environment and national policy, there is a need to legally

regulate smoking, such as making smoking inconvenient by forbidding smoking in public places and setting fewer smoking areas.

The premise of using the fear-appeal theory is to understand the consumer itself. According to Kline & Mattson (2006), consumers will first calculate the possibility of appearing on themselves after seeing the text warning and image warning, Then, the higher the possibility, the higher fear generated. Therefore, the closer the design and text of the product to reality, the more fearful it may be in consumers.

Also, presenting the harm on the packaging or text can prompt consumers to reduce product purchases. But, excessive use of bloody and violent images and texts does not lead to good results. Instead, it will intrigue consumers' aversion and distrust due to the unreality.

5.6 Recommendations for Future Research

5.6.1 Gender and age may respond differently to the same cigarette packaging with fear-appeal health warning, which may be considered in future studies.

5.6.2 Researchers can conduct a more in-depth study on impact of fear levels of feeling towards fear-appeal health warning on cigarette packaging on smokers' attitude toward smoking and smoking behavior because qualitative research methods can help analyze more detailed information.

5.6.3 Researchers can use different types of cigarette packaging as the tool to explore which cigarette packaging design elements are the most effective in changing smokers' attitude toward smoking and smoking behavior.

BIBLIOGRAPHY

2018 China adult tobacco survey report. (2018). Retrieved from https://cdn.who.int/media/docs/default-source/ncds/ncd-surveillance/data-reporting/china/2018-china-adult-tobacco-survey-report_eng.pdf?sfvrsn=f5dc70c5_1&download=true.

85% cigarette graphic warning law now in force. (2014). Retrieved from https://www.bangkokpost.com/thailand/politics/417699/thai-law-now-requires-largest-graphic-warning-on-cigarette-packages.

Allen, I. E., & Seaman, C. A. (2007). Likert scales and data analyses. *Quality progress*, *40*(7), 64-65.

ASEAN Tobacco Control Resource Center. (2018). *Thailand is first in Asia to usher in standardized tobacco packaging*. Retrieved from https://seatca.org/thailand-is-first-in-asia-to-usher-in-standardized-tobacco-packaging/.

Babbie, E. R. (2010). *The practice of social research* (12th ed.). Belmont, CA: Wadsworth.

Chapman, S. (2007). *Public health advocacy and tobacco control*. USA: Black-well.

Cheng, Y. (2008). *How strict is the control of cigarettes in Thailand*. Retrieved from https://zhuanlan.zhihu.com/p/67253299.

Chinese Tobacco. (2019). *"Speaking of numbers" 70 years of development of the tobacco industry*. Retrieved from http://www.etmoc.com/look/Statslist?Id=40796.

Chinwong, D., Mookmanee, N., Chongpornchai, J., & Chinwong, S. (2018). *A comparison of gender differences in smoking behaviors, intention to quit, and nicotine dependence among Thai university students*. Retrieved from https://www.hindawi.com/journals/jad/2018/8081670/.

Ding, B. (2003). *Advertising creative*. Hunan: Central South University.

Erni, P. (2014). *The warning signs on the cigarette packs make people want to smoke more?*. Retrieved from https://zhidao.baidu.com/daily/view?id=3003.

Fu, G. (2001). *Consumer behavior*. Beijing: Higher Education.

Ge, Z. (2010). *Evaluation and comparison of different forms of graphic warning effects on cigarette packs*. Beijing: Chinese Center for Disease Control and Prevention.

Guo, Q. (2011). *Communication course*. Beijing: China Renmin University.

Gygax, P., Bosson, M., Gay, C., & Ribordy, F. (2010). Relevance of health warnings on cigarette packages: A psycholinguistic investigation. *Health Communication*, *25*, 397-409.

Haddad, L. G., & Malak, M. Z. (2002). Smoking habits and attitudes towards smoking among university students in Jordan. *International Journal of Nursing Studies*, *39*(8), 793-802.

Hammond, D., Fong, G. T., McDonald, P. W., Brown, K. S., & Cameron, R. (2004). Graphic Canadian cigarette warning labels and adverse outcomes: Evidence from Canadian smokers. *American journal of public health*, *94*(8), 1442–1445.

Hammond, R. (2010). *ITC project key findings*. Retrieved from http://www.itcproject.org/keyfindi.

Hovland, C. I., & Janis, I. L. (1959). *Personality and persuasibility*. New Haven: Yale University.

Hwang, J., & Cho, S. (2019). Tobacco packaging strategies aimed at undermining graphic health warnings. *Tobacco Induced Diseases*, *17,* 159-172.

Institute for Health Metrics and Evaluation. (2017). *Nearly 1 billion people still smoke daily*. Retrieved from http://www.healthdata.org/news-release/nearly-1-billion-people-still-smoke-daily.

Janis, I., & Feshbach, S. (1953). Effects of fear arousal. *Journal of Abnormal and Social Psychology*, *48*, 78–92.

Jha, P., Chaloupka, F. J., Moore. J., Gajalakshmi, V., Gupta, P. C., Peck, R., Asma, S., & Zatonski, W. (2006). Tobacco Addiction. In D. T. Jamison, et al. (Eds.). *Disease control priorities in developing countries* (2nd ed., Chapter 46). Washington (DC): The World Bank.

Jiang, H., & Yang, H. (2009). Status of smokers' awareness of tobacco harm in six cities. *China Health Education*, (09), 23-25.

Jiang, Z. (2008). *Advertising psychology*. Shanghai: Shanghai People's Fine Arts Publishing House.

Kline, K., & Mattson, M. (2000). Breast self-examination pamphlets: A content analysis grounded in fear appeal research. *Health Communication*, *12*(1), 1-21.

Laroche, M., Toffoli, R., Zhang, Q., & Pons, F. (2001). A cross-cultural study of the persuasive effect of fear appeal messages in cigarette advertising: China and Canada. *International Journal of Advertising*, *20*(3), 297-317.

Li, X. (2009). Analysis of warning effects of cigarette pack health warnings on smokers in 6 cities. *The public hygiene in China*, *41*(10-12), 621-640.

Loyola, E. (2008). Linking global youth tobacco survey data to the WHO framework convention on tobacco control. *Journalism*, *47*(12), 1608-1627.

Lu, C., & Zhang, H. (2007). *Mass communication*. Beijing: Beijing Normal University.

Luo, Z. (2008). *Consumer psychology*. Beijing: Tsinghua University.

Mays, D., Niaura, R. S., Evans, W. D., Hammond, D., Luta, G., & Tercyak, K. P. (2015). Cigarette packaging and health warnings: the impact of plain packaging and message framing on young smokers. *Tobacco control*, *24*(e1), e87–e92.

Miller, C., Foubert, B., Reardon, J., & Vida, I. (2007). Teenagers' response to self- and other-directed antismoking messages: A cross-cultural study. *International Journal of Market Research*, *49*(4), 515-520.

Smith, S. (1997). The effective use of fear appeals in persuasive immunization: An analysis of national immunization intervention messages. *Journal of Applied Communication Research*, *25*(4), 264-292.

Stark, E., Kim, A., Miller, C., & Borgida, E. (2008). Effects of including a graphic warning label in advertisements for reduced-exposure products: Implications for persuasion and policy. *Journal of Applied Social Psychology*, *38*(2), 281–293.

Struckman-Johnson, D., & Struckman-Johnson, C. (1996). Can you say condom?: It makes a difference in fear-arousing AIDS prevention public service announcements. *Journal of Applied Social Psychology*, *26*(12), 1068-1083.

Tan, H. (2006). *Fear appeal theory and its application in advertising*. Sichuan: Sichuan University.

Tan, Z., & Xiao, B. (2009). Research on the effect of fear appeal on advertising and its application enlightenment. *The Press*, *40*(20), 31-36.

The number of smokers in Thailand is on the rise. (2015). Retrieved from http://www.etmoc.com/world/Newslist?Id=27625.

Thrasher, J., Hammond, D., Fong, G., & Arillo-Santillán, E. (2007). Smokers' reactions to cigarette package warnings with graphic imagery and with only text: A comparison between Mexico and Canada. *Salud publica de Mexico*, *2*(2), S233-S240

Tobacco Labelling Resource Centre. (2007). *Tobacco labelling regulations*. Retrieved from https://tobaccolabels.ca/countries/belgium/.

Wang, J. (2012a). *A study on the effect of fear appeal in quit smoking advertisements*. Xian: Southwest jiaotong University.

Wang, X. (2012b). *A study on the effects of threat type and theme status on the effects of fear control tobacco advertising*. Xian: Southwest Jiaotong University.

Witte, K. (1992). Putting the fear back into fear appeals: The extended parallel process model. *Communication Monographs*, *59*(4), 329–349.

World Health Organization. (2008). *Conference of the paries to the WHO framework convention on tobacco control*. Retrieved from https://www.who.int/fctc/guidelines/article_11.pdf.accessed.

World Health Organization. (2015). *Smoke-free policies in China: Evidence of effectiveness and implications for action October 2015*. Retrieved from https://apps.who.int/iris/rest/bitstreams/1147630/retrieve.

Yuan, J. (2013). *The influence of fear appeal method on the spreading effect of tobacco control public service advertisement*. Ningbo: Ningbo University.

Wong, N. C., & Cappella, J. N. (2009). Antismoking threat and efficacy appeals: Effects on smoking cessation intentions for smokers with low and high readiness to quit. *Journal of applied communication research*, *37*(1), 1–20.

Zang, B., & Schwartz, R. (2013). *The effect of tobacco control strategies and interventions on smoking prevalence and tobacco attributable deaths in Ontario, Canada*. Retrieved from https://otru.org/wp-content/uploads/2018/05/special_simsmoke.pdf.

Zhou, H. (2012). *Study on fear appeal and behavior reactions of tobacco control picorial warnings*. Zhejiang: Zhejiang University.

APPENDIX

Questionnaire

Impact of fear levels of feeling towards fear-appeal health warnings on Canadian cigarette packaging among Chinese smokers' attitude toward smoking and smoking behavior

This survey is a partial fulfillment of the ICA 701 Independent Study, Master's Degree Program in Global Communication, Bangkok University. The aim of the research is to examine whether fear levels of feeling towards fear-appeal health warning on cigarette packaging can affect attitude toward smoking and smoking behavior. The survey is divided into the following four parts:

Part 1: Personal information

Part 2: Fear levels of feeling

Part 3: Attitude toward smoking

Part4: Smoking behavior

Your information will be kept confidential and will not use outside of this study. I appreciate your time to answer the question.

Please kindly fill in the following information about yourself by choosing the answer that fits you.

Part 1: Personal Information

Pleas circle or write down the only one answer that best represents you.

1. Do you smoke?

1) Yes 2) No

2. Gender

1) Male 2) Female

3. What is your educational background?

1) Less than undergraduate degree

2) Undergraduate degree

3) Postgraduate degree or higher

4. How many cigarettes do you smoke per day?

1) Less than 3 cigarettes per day

2) 3-7 cigarettes per day

3）8-12 cigarettes per day

4) more than 12 cigarettes per day

5. Have you ever read the health warning on packaging before?

1) Never 2) Sometimes 3) Usually

6. How long have you been smoking?

1) Less than 1 year 2) 1-2years

3) 3-5 years 4) More than 5 years.

Part2: Fear levels of feeling towards Fear-appeal health warning on Canadian cigarette packaging

Please watch the fear-appeal health warning on cigarette packaging below and choose the best answer that fits you.

Image warning

Text warning:

你的孩子们因为你抽烟而生病。二手烟会对儿童引起更严重的肺部疾病。

Statements	Higher	Medium	Lower
	3	2	1
7. Describe your fear levels of feeling towards this fear-appeal health warning			

Part 3: Attitude toward smoking

Please watch the fear-appeal health warning on cigarette packaging below and choose the best answer that fits you.

Image warning

Text warning:

你的孩子们因为你抽烟而生病。

二手烟会对儿童引起更严重的肺部疾病。

Statements	Strongly Agree	Agree	Neutrality	Disagree	Strongly Disagree
	5	4	3	2	1
8. I think this health warning appropriately convey the harm of smoking to me.					

Part 3 (Continued): Attitude toward smoking

Statements	Strongly Agree	Agree	Neutrality	Disagree	Strongly Disagree
	5	4	3	2	1
9. I will try to prevent from viewing this health warning.					
10. I feel uncomfortable after seeing this health warning.					
11. I think this health warning is attractive.					
12. I don't feel anything.					
13. I think this fear-appeal health warning on cigarette packaging is exaggerated.					
14. I think this health warning is not persuasive.					

Part 4: Smoking behavior

Please watch the fear-appeal health warning on cigarette packaging below and choose the best answer that fits you.

Image warning

Text warning:

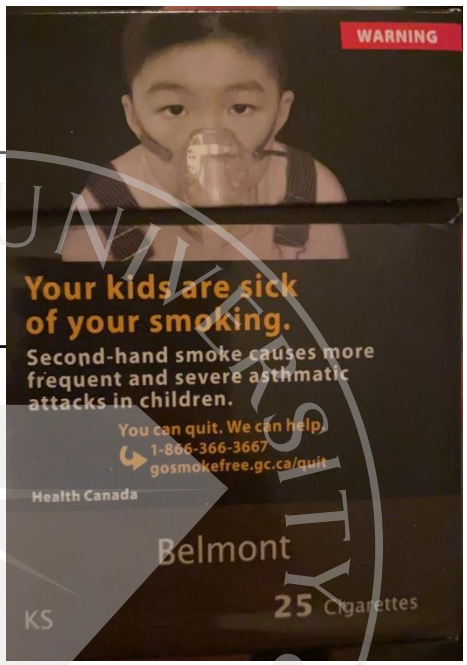
你的孩子们因为

你抽烟而生病。

二手烟会对儿童

引起更严重的肺

部疾病。



Statements	Strongly Agree	Agree	Neutrality	Disagree	Strongly Disagree
	5	4	3	2	1
15. I want to abstain smoking after seeing this fear-appeal health warning.					

Statements	Strongly Agree	Agree	Neutrality	Disagree	Strongly Disagree
	5	4	3	2	1
16. I want to lessen my times of smoking after seeing this fear-appeal health warning.					
17. I don't have any feeling after seeing this fear-appeal health warning.					
18. I will try to persuade others to reduce smoking after seeing this fear-appeal health warning.					
19. I want to smoke cigarette even more after seeing this fear-appeal health warning.					

Thank you very much for your participation.

加拿大烟盒包装上的健康警示对中国吸烟者吸烟行为及吸烟态度的影响

该调查是曼谷大学全球传播硕士学位课程 ICA 701 **独立研究。** 该研究的目的是检查对加拿大香烟**包装上的恐惧感健康警告的恐惧程度是否会影响**中国吸烟者**吸烟行**为和态度。 调查分为以下四个部分：

第一部分: 个人信息

第二部分: 恐惧等级

第三部分: 吸烟行为

第四部分: 吸烟态度

您的信息将保持机密性，并且不会用于其他用途。感谢您参与到此次问卷调查当中。

请耐心的根据以下信息选择最适合您的选项。

第一部分：个人信息

请选择最适合您的选项

1.您是否抽烟？

1)是　　2) 否

2.性别

1)男　　2) 女

3.您的学历是？

1) 本科以下　　2) 本科

3) 本科以上

4.您一天抽几根烟?

1）少于 3 只　　2) 3 到 7 只

3）8 到 12 只　　4)多于 12 只

5.您之前是否有阅读烟草包装上的警示文字的习惯？

1)从不　　2) 有时候

3) 经常

6.您的吸烟历史有多久?

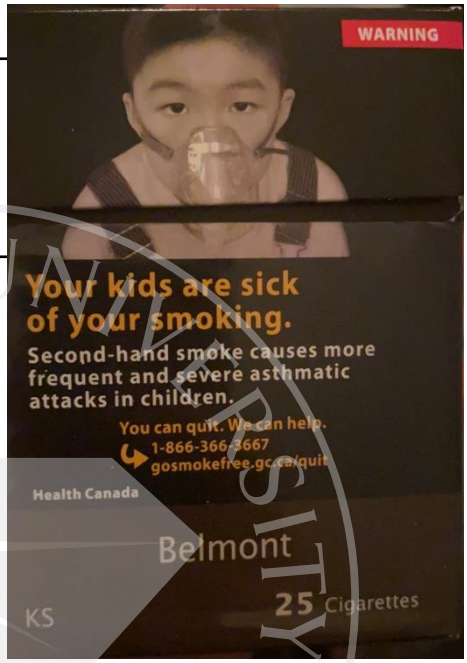
1)少于 1 年　　2) 1-2 年

3) 3-5 年　　4) 多于 5 年

第二部分: 对于加拿大香烟包装的警示图片的恐惧程度

请观看下列图片，并选择最适合您的选项

图像警告



文字警告:

你的孩子们因为你抽烟而生病。

二手烟会对儿童引起更严重的肺部疾病。

问题	高度	中度	低度
	3	2	1
7. **描述您**对该**警示**图**案的恐惧程度**			

第三部分：吸烟态度

请观看下列图片并选择最适合您的选项.

图像警告

文字警告：

你的孩子们因为你抽烟

而生病。

二手烟会对儿童引起更

严重的肺部疾病。

问题	强烈同意	同意	中立	不同意	强烈不同意
	5	4	3	2	1
8. 我认为这个警示图标很正确的向我传达了吸烟的危害					
9. 我会尝试避免观看这个警示图像					

问题	强烈同意	同意	中立	不同意	强烈不同意
	5	4	3	2	1
10. 我在看了这个警示图像之后感觉很不舒服					
11. 我认为这个警示图像很吸引人					
12. 我没有任何感觉					
13. 我认为这个警示图像太过夸张了					
14. 我认为这个警示图像并没有说服力					

第四部分：吸烟行为

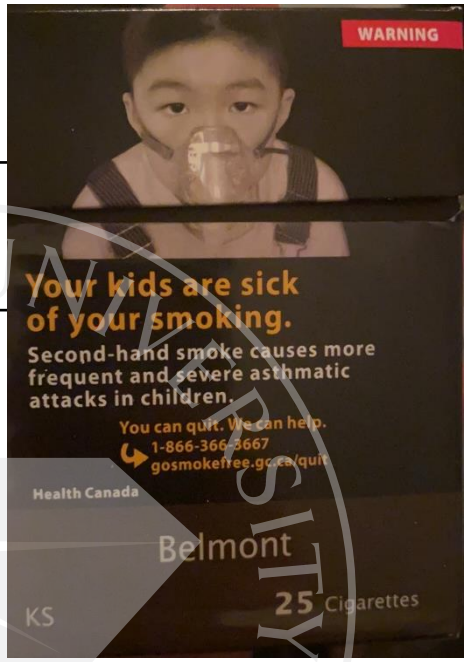
请观看下列图片并选择最适合您的选项。

图像警告

文字警告:

你的孩子们因为你抽烟而生病。

二手烟会对儿童引起更严重的肺部疾病。



问题	强烈同意	同意	中立	不同意	强烈不同意
	5	4	3	2	1
15. 我想要戒烟					
16. 我想要减少吸烟次数					
17. 我没有任何感觉					
18. 我会尝试劝解他人减少吸烟次数					
19.我甚至想抽更多的烟					

非常感谢你们的参与！.

BIODATA

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