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A Cross-Cultural Study on the Persuasive Effectiveness

of Fear Appeals Messages in Advertising:

An Empirical Investigation on Canadian and Chinese Subjects

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ABSTRACT

A Cross-Cultural Study on the Persuasive Effectiveness of Fear Appeals
Messages in Advertising:
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Qiuhong Zhang

This exploratory study investigated the effects of cultural differences on persuasion of fear appeals communication. Based on Rogers' Protection Motivation model, the framework of the study was developed by incorporating type of fear as an independent variable and culture as a moderating variable. An experiment was conducted using 12 anti-smoking ads with three levels of fear appeals (high, moderate, and low) and two types of fear appeals (physical and social) on 173 Canadian and 180 Chinese subjects.

The findings indicated that the Canadian subjects experienced attitude change toward smoking after viewing the anti-smoking ads. For the physical fear ads, the Canadian subjects had more negative attitude toward smoking and higher behavior intention to quit. No significant difference was found for the social fear ads between the two cultural groups. As for the level of fear, findings indicated that increasing fear arousal resulted in an ad attitude change and an increase in behavior intention in the future for both Canadian and Chinese subjects but not in the attitude toward smoking.

Further exploration of the proposed framework found that self-efficacy was an important cognitive variable to change attitude for the two cultural groups. Coping response efficacy was effective in changing attitudes for the Canadian subjects, while severity had more influence for the Chinese subjects. Fear-persuasion models for the Canadians and Chinese were proposed.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1

INTRODUCTION

Fear is an emotional response to a threat that expresses some sort of danger. For most people, fear has a significant effect on behavior, leading them to seek ways of removing or coping with the threat and the danger (Rogers 1975; Tanner *et al.* 1991). Marketers have attempted to take advantage of this relationship by using the threat of danger to evoke the emotional response of fear and thus influence the behavior of consumers. The use of fear appeals in advertisement has become a focal point for much of today's marketing communications; fear communications, particularly, have been used in a variety of public service campaigns.

The effectiveness of fear appeal messages has been studied extensively in the academic area. A wide variety of topics have been discussed by researchers, including cigarette smoking, drug use, dental hygiene, driving and drinking, the use of fallout shelters and AIDS (Leventhal 1970; Rogers 1975, 1983; Hill 1988; King and Reid 1990; and Keller & Block 1996).

Despite some inconsistencies among experimental research findings during the past 40-years, fear appeals have been found to be effective in triggering attitude or behavior change in most studies (Rogers 1983; Shelton & Rogers 1981; Rippetoe & Rogers 1987, Tanner et al. 1991; Roser & Thompson 1995; and Keller & Block 1996). Several models have been developed to explain how individuals process threat-related

information. Those models present the effects of persuasion of a fear appeal through cognitive and affective processes.

However, little research has been done in examining the incidence and effects of fear appeals across cultures. Lavack's research (1997) used a content analysis to examine the use of fear appeals in five nations' television ads, and indicated that country-of-origin has an impact on the use of fear appeals in social marketing advertisements. Another study concluded that Australia used fear appeals in their social marketing ads against AIDS to a greater extent than the United States did (LaTour and Pitts 1989). Unfortunately, these studies did not examine how reactions to fear appeals varied in different cultures, and why the differences occur. As Lavack (1997) mentioned in her Ph.D. dissertation, it is necessary to conduct laboratory studies and experiments to examine the use of fear appeals and alternative message formats across different cultural groups.

Given the increasing globalization of business, there is an important need for cross-cultural persuasion models to provide insight on how consumers from different cultures perceive and react to different communication factors. Some studies have found evidence that advertising in general differs significantly between countries (Han and Shavitt 1994; Zhang and Gelb 1996; and Toffoli 1997). It is unknown, however, if there exist cultural differences when fear appeals are used in the advertisements. The research, which is the subject of this thesis, is intended to fill this gap in the literature by exploring the persuasive effectiveness of fear appeal messages cross-culturally. Therefore, the aim of this study is to explore the effects of cultural differences on persuasion of fear appeal communications through an experimental design between Canadian subjects in the city of

Montreal, Canada and Chinese subjects in the city of Changchun, PR China. More precisely:

1. To develop a framework to examine the moderating effect of culture on cognitive and affective processes of fear appeal communications.

2. To incorporate type of fear into Rogers' Protection Motivation model to examine the effects of culture on physical and social threat communications;

CHAPTER 2

LITERATURE REVIEW

Four major sections will be covered in this chapter. First, a review of the literature that discusses several models which are important in fear appeals research will be examined. This section will address the Drive-Reduction, Inverted-U, Parallel Response, as well as the Protection Motivation Models. The level of fear, which is a key issue and has resulted in many inconsistent findings in the fear research area, will be mainly discussed.

The second section will present an overview of the research on the fear appeals area and analyze the reason for divergent results within the fear appeals research. Studies dealing with personality variables such as self-esteem and locus of control in the fear appeals area are subsequently discussed.

The third section will address the literature about culture and advertising research. Cross-cultural advertising studies will be reviewed. Literature dealing with Hofstede's individualism/collectivism and uncertainty avoidance dimensions is discussed. Finally, studies relating to locus of control and self-esteem for the Chinese are also examined.

The final section will cover a discussion on relevant topics involving cigarette smoking and anti-smoking campaigns. After reviewing the cigarette smoking situation in Canada and China, the issue of how to convince smokers to quit smoking will be addressed. Studies that explore the effectiveness of anti-smoking advertising and threat messages will be further discussed.

2.1 Literature on Fear Appeals

Since Janis and Feshbach (1954) indicated that high fear might increase defensiveness and reduce persuasion, a great deal of studies on fear appeals have resulted in some inconsistent findings. Some results confirmed the negative relationship between fear arousal and persuasion (Janis & Terwilliger 1962; Haefner 1965). Some findings noted that the relationship of fear appeals and persuasion is a curvilinear one, which showed that the greatest effectiveness occurred at a moderate level of fear (Janis 1967). Several investigations stated that there is no relationship between fear arousal and persuasion (Frandsen 1963; Millman 1968; Eagly & Chaiken 1993). Most studies, however, indicated that fear is positively related to persuasion (Leventhal & Niles 1964; Miller & Hewgill 1966; Rogers 1975, 1983; Tanner et al 1989; King & Reid 1990; Keller & Block 1996). Facing divergent conclusions about the persuasive effectiveness of fear appeals, two meta-analytic reviews of fear appeals research have concluded that higher levels of induced fear are associated with greater persuasive effectiveness (Boster & Mongeau 1984; Sutton 1982). That is, receivers who report greater fear/anxiety following the persuasive message are more persuaded by the message.

Throughout the development of fear appeals theories, researchers have become increasingly aware of the importance of the role of cognitive mediational processes in persuasion (Maddux and Rogers 1983). Early formulations, e.g. the drive-reduction model, assumed that the arousal of the emotional state of fear was necessary for the effectiveness of a fear appeal communication. The attention was on the manipulation of the level of fear. Leventhal (1970) proposed a parallel response model that stressed the importance of differentiating emotional responses from cognitive response (fear control

versus danger control). Rogers' (1975) protection motivation theory attempted to take the next logical step of elaborating the crucial cognitive mediating processes (appraised severity, expectancy of exposure, and belief in efficacy of coping response) and linking them to antecedent communication stimuli. A revision of protection motivation theory (Rogers, 1983) offered a more comprehensive model by incorporating self-efficacy expectancy as a fourth cognitive mediating process. Moreover, Tanner et al's (1991) ordered protection motivation model concluded that the persuasion of a fear appeal engages both cognitive and emotional processes. Also, they proposed that responses to a fear communication be evaluated in terms of their social implication.

The Drive-Reduction Model (DRM)

The drive-reduction model states that information contained in a message evokes an emotional reaction, which in turn motivates a coping response. This model assumes that the emotional response of fear functions as a drive which mediates belief change and behavior change. For example, a message relating smoking to lung cancer may evoke an emotional response (e.g., concern for one's health). To cope with this emotion, the individual may either stop smoking or discount the veracity of the message.

According to the drive-reduction model, the fear-arousing content of the persuasive message is positively related to the amount of fear generated in the audience. As perceived fear increases, the audience's attitude more closely approaches the attitude recommended in the persuasive message. Therefore, the greater the amount of fear-arousing material in persuasive messages, the closer the attitudes of audience members become to the attitude recommended in the message. As Sutton (1982) indicated, the

effect of the persuasive messages, which vary in fear-arousing content, is the production of varying amounts of fear in the receivers. Therefore, the level of fear is the main variable, which was manipulated in the research of the fear-drive model.

The DRM has been rejected since limited support was obtained from the majority of tests (Leventhal 1970; Rogers 1975; Beck & Frankel 1981). Nevertheless, the theory not only initiated research in the fear area, but started research in a theoretically elegant fashion by applying sophisticated learning theory principles to the study of fear appeals and attitude change (Rogers 1983).

The Inverted-U Model

The Inverted-U model offers a theory of the curvilinear relationship between the amount of persuasion and the level of fear arousal in response to a threat communication. This model proposes that moderate fear levels are more effective than either low fear levels or high fear levels. Low fear levels are not sufficient to motivate the individual to take preventive action, while high fear levels create a sense of paralysis, in which the individual becomes unable to respond (Janis and Feshbach 1954).

According to this model, the relationship between fear and acceptance takes the form of an inverted-U shaped curve. Thus, when the message recipient is either extremely fearful or has very little fear, little attitude or behavioral conformity toward the message recommendation will occur. The optimal amount of conformity is produced when fear is at moderate levels. At low levels of fear, the audiences are unaffected because they dismiss all information as being inconsequential by means of blanket reassurance (e.g., we don't need change because we are not convinced of the danger). At

high levels of fear, the audience exhibits defense mechanisms (e.g., denial and minimizing rationalization) which interfere with acceptance of the message. Thus moderate levels of fear are the optimal condition that affects the attitude of people toward fear.

A similar model was suggested by McGuire (1968) based on learning principles. He hypothesized that fear acts both as a drive and as a cue. As a drive, perceived fear increases the probability of an individual's yielding to the recommendations made in the persuasive message. As a cue, perceived fear increases the probability of an individual's resisting the message recommendation. McGuire argues that curvilinear effects and nonmonotonic interactions should be expected when relating personality variables to persuasion.

In order to test directly McGuire's model in the area of fear appeals, Dziokonski and Weber's study (1977) created high, moderate, and low levels of fear within the context of a communication aimed at persuading recipients to change their attitudes about gum disease and oral hygiene. A 3 (high, moderate, and low) x 3 (repressors, neutrals, and sensitizers) x 2 (high and low vulnerability) factorial design was performed using one hundred eighty-one female college students. Unfortunately, their finding was contrary to predictions generated from McGuire's model, no consistent interactions appeared on any of the dependent variables despite successful manipulations.

Although there were few studies on a greater range of fear, researchers have realized that curvilinear relationships should not be dismissed simply because they were rare in the literature. Eagly and Chaiken (1993) pointed out that researchers may not have

produced an adequate range of fear and fear arousal to test whether or not there is a curvilinear relationship between level of fear and fear arousal and attitude change.

In 1995, Chebat, Laroche, and Filiatrault investigated the influence of affect dimensions including fear appeal on memorization of a message by graduate Canadian students. A realistic commercial was created by a team of professionals (e.g., actor, director, cameramen, and editors) in order to manipulate three levels of fear (none, low, high). They chose a peculiar topic, which was used for the first time in a fear study. At the no-threat level, the credit card was described as a financial instrument offering substantial flexibility for payment; at the low level of threat, the credit card was described as a tool to avoid the negative consequences of theft because consumers were only liable for a small amount in case of theft; and at the high level of threat, participants were reminded that carrying cash could lead to murder in some unsafe North American cities.

The finding showed curvilinear effects of fear on memorization. The authors argued that fear might be acting as a cue below the threshold of optimality and as a drive beyond that threshold.

The Parallel Response Model (PRM)

Leventhal's (1970) parallel response model assumes that the response to a threatening communication involves two parallel but independent processes: danger control and fear control.

According to PRM, danger control is an objective process, which guides an individual's problem solving behavior and action. This process generates a representation of the threat, and it also generates action plans to cope with the threat based on its

representation. As problem solving proceeds, the external cues (such as information about danger, and feedback regarding the adequacy of the action taken) influence subsequent adaptive behavior.

On the other hand, fear control is a subjective process, which deals with the emotional component of the persuasive appeal. It is an emotional-coping process in which the message receiver strives to reduce the fear. Emotions are needed to cope with and control these emotions. These behaviors may be different from those behaviors needed to cope with the threat.

"In the parallel response model, emotional arousal is not a necessary antecedent of adaptive behavior...both types of behavior, emotional and adaptive, are consequences of environmental stimulation. They do not cause one another" (Leventhal 1970, p.124). In summary, the danger control process guides adaptive behavior while the fear control process guides emotional responses. The two processes mediate the relationship between the amount of fear-arousing material in the persuasive message and people's attitude toward the topic in question (Boster and Mongeau, 1984), as shown in Figure 1.
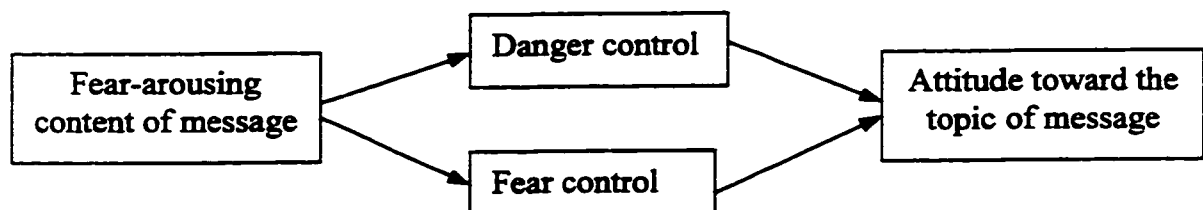
Figure 1: The Parallel Response Model (Source: Leventhal 1971)

According to Sutton's (1982) conclusion, the importance of the parallel response model lies largely in its movement away from the notion of fear as the central explanatory concept in persuasion and towards a recognition that an individual's response to a fear-arousing communication involves adaptive behaviors motivated by a desire to avert the anticipated danger. However, Rogers (1975, 1983) also pointed out that the PRM performed the invaluable service of differentiating emotional from cognitive responses to fear-arousing communication.

Recently, an extended parallel process model (EPPM) was proposed by Witte (1992). EPPM proposes that fear leads to message rejection, and that cognition, such as perceived threat and efficacy, leads to message acceptance. Threat determines the intensity of response, whereas efficacy determines the nature of the response. The purpose of the EPPM is to explain why fear appeals fail to re-incorporate fear as a central variable and to specify the relationship between threat and efficacy in propositional forms.

EPPM (Witte 1992, 1998) suggests that two appraisal processes (i.e., threat appraisal and efficacy appraisal) lead to one of three outcomes: (a) no response when perceived threat is low; (b) primarily cognitive danger control processes leading to acceptance of fear-arousing messages when perceived threat and perceived efficacy are high; and (c) primarily emotional fear control processes leading to the rejection of fear-arousing messages when perceived threat is high but perceived efficacy is low. Perceived threat determines the strength or how much the response there is to a fear appeal, whereas perceived efficacy determines the nature of response—whether a fear appeal induces

11

danger control or fear control processes. Fear directly causes fear control responses but can indirectly influence danger control responses when mediated by perceptions of threat.

Several studies have been conducted by Witte and his colleagues to test EPPM across a variety of topics (e.g., HIV/AIDS, radon awareness, and tractor safety), methods (experiments, survey, and focus group) and populations (Witte and Morison 1995; Witte 1993, 1998). From these studies, another point which should be noted is that individual differences, such as worldviews, trait variables (e.g., locus of control, anxiety), or prior experiences can influence outcomes (e.g., attitude, behavior intentions, defensive avoidance, reactance, etc.). However, the relationship between individual differences and reaction to the fear appeal is unclear.

Protection Motivation Theory (PM)

The most recent of the fear models, the protection motivation (PM) model (Rogers 1975, 1983) has increasingly gained acceptance among academics (Roser and Thompson 1995). In its original form, the model suggested that fear arousing persuasive messages are comprised of three variables: (1) levels of noxiousness of the threatened event, (2) the probability of the occurrence of the event, and (3) the effectiveness of a coping response that can reduce or eliminate the noxious event. Each of these crucial elements "initiates corresponding cognitive appraisal process that mediate attitude change" by arousing what has been termed "protection motivation" (Rogers 1975, p.93). Like Leventhal (1970), Rogers believes that emotional arousal is less important than a person's cognitive appraisal of threat. Contrary to Leventhal, however, Rogers (1975) is very specific about the cognition involved in threat appraisal. His model focuses on the above mentioned three factors, and he claims that people will accept or reject

recommendations based on their assessment of these variables. These cognitive processes mediate the persuasive effects of a fear appeal by arousing protection motivation, an intervening variable that arouses, sustains, and directs activity to protect the self from danger. See Figure 2.
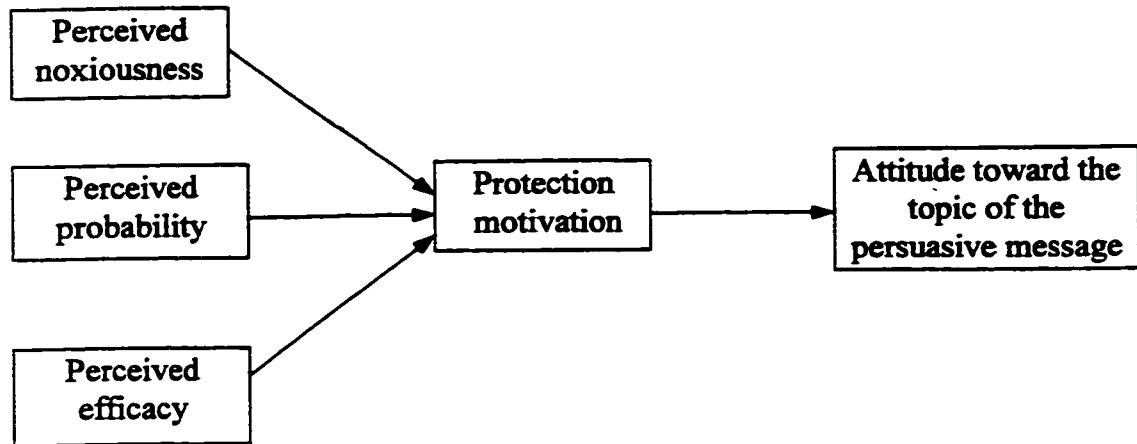
Figure 2: Protection motivation model (Source: Rogers 1975)

A revision of protection motivation theory, introduced in 1983 by Rogers, is substantially more complicated. It differentiates between maladaptive threat appraisal processes and adaptive coping appraisal processes. The fourth component, information about one's ability to perform a recommended response, was added into the PM. The revised theory offers a more comprehensive model. According to PM theory, whether or not the viewer acts on the coping advice or chooses a maladaptive coping response is mediated by four cognitive appraisal processes. These processes are appraisal of: (1) Severity of the threat (e.g., Is the threat severe?); (2) Probability that the threat will occur (e.g., Am I at risk for experiencing the threat?); (3) Response efficacy (e.g., Is the recommended response effective in averting the threat?); and (4) Self-efficacy (e.g., Am I

able to perform the recommended response to avert the threat?). If all of these cognitive mediators were at high levels, the maximum amount of protection motivation would be elicited, resulting in the maximum amount of attitude or behavior change. See Figure 3

In the case of smoking, the likelihood of smoking is decreased by (a) belief in the severity of the diseases caused by smoking, (b) belief in one's vulnerability to the disease, (c) belief that smoking cessation is an effective way to avoid the diseases, and (d) belief that one can successfully stop smoking. Strong beliefs about these four variables arouse protection motivation; consequently, individuals are more likely to change their attitudes and subsequently to adopt the healthy behavior (smoking cessation).

SOURCE OF INFORMATION	COGNITIVE MEDIATING PROCESSES		INTERMEDIATE STATE	COPING MODE
Verbal Persuasion (Fear Appeals)	Severity of Threat	Threat Appraisal		
	Probability of Occurrence	=	Protection Motivation ⟶	Behavior (adaptive or maladaptive)
Observed Learning		Fear		
	Coping Response Efficacy =			
Experience		Coping Appraisal		
	Self-Efficacy			

Figure 3: Protection Motivation Schema (Source: Rogers 1983).

After Rogers' protection motivation model was developed, increasing studies about fear were conducted to test it. Rogers and Mewborn (1976) ran three separate experiments testing the effects of various levels of magnitude of noxiousness, probability of occurrence and efficacy of the recommended coping response. Each experiment involved a different topic; one topic dealt with cigarette smoking, another with safe

14

driving and the third one with venereal disease. Each experiment divided the subjects into high-fear communication and low-fear communication groups. Results of the three experiments indicated that increments on the efficacy of the recommended coping responses increased intentions to comply with the recommended practices. Rogers and Mewborn found that "...regardless of what the threatened event was, or how noxious it was, or how likely it was to occur, the stronger the belief that a coping response could avert a danger, the more strongly people intended to adopt the communicator's recommendations" (Rogers & Mewborn 1976, p.59).

In a study, Maddux and Rogers (1983) manipulated four variables (probability of a threat occurrence; severity of the threat; coping response efficacy; and self-efficacy) so that there were high and low occurrences of each in different fear appeals on cigarette smoking. Using 150 subjects who were smokers, they were interested in observing how the various combinations would affect their subjects' behavioral intentions toward smoking. The results of the study determined that the probability of the threat's occurrence and effectiveness of the coping response had positive main effects on the subjects' intentions to adopt the recommended preventive healthy behavior. Furthermore, self-efficacy significantly influenced intentions to adopt the recommended coping behavior and was found to be the most powerful predictor of behavioral intention to adopt the recommended coping response.

Robberson and Rogers (1988) used 84 non-exercising female university students in their experiment to compare traditional negative appeals (fear appeals) to its counterpart, positive appeals, which emphasize the positive consequences of accepting a communicator's recommendation. The study also compared appeals to physical danger

15

(health) to appeals to psychological/social danger (self-esteem) and tested the protection motivation theory at the same time.

A 2x3 factorial design was used to assess the persuasive effects of two types of appeals (health and self-esteem) and three valences (positive, negative, and positive plus negative). The persuasive essays were created to manipulate the independent measures. For example, the positive (negative) appeal to health contained the sentence: "One of the greatest advantages (disadvantages) of (not) being involved in a regular exercise program is the resulting increase (decrease) in physical stamina and endurance." The essay on self-esteem discussed the effects of exercise on self-confidence, self-acceptance, appearance, other's opinions of us, and attaining goals in dating relationships and professional activities.

The result of the study showed that, when a communicator was attempting to persuade people to do something for the sake of their health, the traditional negative appeal to health was more effective than the positive appeal because the negative message strengthened beliefs in the severity of the health threat more than the positive health message. The study also demonstrated that people could be persuaded to engage in a healthy behavior for reasons other than health. Appeals to self-esteem can be as persuasive as appeals to health because people are motivated to protect themselves from danger, whether the danger is physical, psychological, or social.

Tanner, Hunt and Eppright (1991) developed an Ordered Protection Motivation (OPM) model by recognizing that emotional processes are important to coping appraisal, and that they are linked indirectly to behavioral intentions. The OPM model indicates that two dimensions should be considered in creating fear appeals: threat appraisal (severity

of threat and probability of occurrence) and coping appraisal (coping response efficacy, and self-efficacy). The threat appraisal is likely to be processed first, along with the behavior appraisal, and may evoke an emotional state of fear. Fear, in turn, leads to processing of coping response and self-efficacy information. Except for the effect of emotion, social implications of responses and prior knowledge on response to fear communication are also emphasized. The OPM model is shown in Figure 4.

Sources of information	Cognitive mediating process	Intermediate emotional state	Cognitive mediating process	Intermediate state	Coping mode

Verbal Persuasion (Fear Appeals)

Severity of Threat

Coping Efficacy

Observed Learning

Probability= Threat Appraisal → Fear → = Coping Appraisal → Protection Motivation → Behaviour adaptive or maladaptive)

of Occurrence

Self-Efficacy

Behavior Repertory Appraisal

Experience

Social Norms and Values

Figure 4: Ordered protection motivation (Source: Tanner et al. 1991)

Eppright, Tanner, and James (1994) incorporated two types of knowledge (AIDS prevention knowledge and general AIDS problem knowledge) into the OPM model. The former was observed to directly increase maladaptive or unsafe sex behavior. The latter was observed to indirectly increase adaptive safe sex behaviors via certain OPM model

17

mediators. Certain OPM mediators such as self-efficacy and vulnerability were observed to directly increase adaptive safe sex behaviors. Vulnerability was shown to directly increase maladaptive sex-related behaviors.

Recently, Schoenbachler and Whittler (1996) examined 371 adolescents' reactions to physical and social threat appeals in drug prevention public service announcements using the OPM model. Findings provide support for the overall OPM model. In their study, the authors predicted that social threat communications were more persuasive than physical threat communications in terms of attitude toward the communication, attitude toward drug use and behavioral intention to use drugs. They also proposed that increasing the level of fear in a communication from low to moderate and from moderate to high produced correspondingly stronger emotional responses in adolescents.

To test their hypotheses, a three (level of fear: high, moderate, and low) by two (type of threat: physical or social) between-subjects factorial experimental design was performed. Two prints of public service announcements (PSAs) were developed to represent two types of fear (physical and social). The physical fear PSA featured a young person on a gurney being rushed down a hospital hall. The social fear PSA showed several young people in a school hall. Two young people appeared to be talking about a third individual in the photograph. The copy on these two PSAs was varied to manipulate the intensity of threat.

As predicted in the hypotheses, the subjects indicated a more favorable attitude toward the social fear message. Subjects' attitudes toward drug use were more negative after a social fear message than after a physical fear message, and subjects indicated they were less likely to ever use drugs after receiving the social fear message. However, a

positive relationship between level of fear and emotional arousal was not supported. Their findings suggested that attempts to persuade teenagers to avoid drug use would be more successful in creating and changing attitudes and behavioral intentions if social fear messages were used. This study provided both theoretical and practical guidance for fear appeal advertising.

2.2 Summary of Literature about Fear Appeals

From the literature, it can be seen that numerous scholars worked on this meaningful area and have achieved fruitful results. A summary of some major studies on fear messages and persuasion is shown in Table 2.1.

Although there are some conflicting views, scholars have recognized that the cognitive mediating processes indeed exist in the persuading procedure of fear appeal messages (Rogers 1975, 1983; Beck & Davis 1978; Burnett & Wilkes 1980; King & Reid 1990; Tanner, Hunt, and Eppright 1991; Schoenbachler and Whittle 1996). Moreover, the finding of Tanner et al. (1991) stated that the emotional processes are linked indirectly, through cognitive mediating processes, to attitudes and behaviors. Therefore, it can be concluded that the persuasion of a fear appeal engages both cognitive and emotional processes.

Table 2.1: Summary of Previous Research on Fear Appeals Persuasion

Study	Topic of Fear Message	Independent Variable	Dependent Variable	Major Findings
Janis & Feshbach (1953)	Dental hygiene	Level of fear	Interest, emotional tension, behavioral intention, behavior	High fear levels arouse more interest/emotion. Moderate fear produced greatest change in intent and behavior.
Janis & Feshbach (1954)	Dental hygiene	Level of fear, Level of anxiety	Interest, emotional tension, intention, behavior	High anxiety individuals less influenced by strong fear than individuals low in anxiety.
Berkowitz & Cottingham (1960)	Seatbelt use	Level of fear, Topic relevance	Attitude, behavioral intention	High levels of fear more effective if topic relevance minimal. Low levels effective if topic relevance high.
Janis & Terwilliger (1962)	Smoking	Level of fear	Defensive reactions to fear message	High fear levels produced more defensive reactions.
Hewgill & Miller (1965)	Fallout shelters	Level of fear, Source credibility	Attitude, behavioral intention	High levels of fear most persuasive. No interaction between source credibility and level of fear.
Leventhal, Singer, Jones (1965)	Tetanus	Level of fear, Coping suggestion	Attitude, behavioral intention, behavior	Positive relationship between level of fear and attitude. Actual behavior a function of specificity of coping suggestion.

Study	Topic of Fear Message	Independent Variable	Dependent Variable	Major Findings
Leventhal and Watts (1966)	Smoking	Level of fear, recommendations for coping, behavior during communication exposure	Attitude, behavior	Level of fear positively related to attitude. Recommendations influenced actual behavior.
Rogers & Thistlewait (1970)	Lung cancer	Level of fear, degree of reassurance	Beliefs, Behavioral intention	High levels of fear more persuasive when high reassurance present. Low levels more effective with no reassurance.
Evans et al. (1970)	Tooth brushing	Social approval, physical fear	Behavioral intention, self-reported actual behavior	Physical fear messages more effective for intention and self-reported behavior. Social approval message most effective when actual behavior monitored.
Smart & Fejer (1974)	Drug use	Level of fear, Type of drug	Level of anxiety, attitude, behavioral intention	Positive relationship between level of fear and attitude, intention when nonexistent drug was subject. No significant effects when the type of drug was real (marijuana).
Rogers & Mewbom (1976)	Smoking, VD, Driving	Magnitude of noxiousness, probability of occurrence, efficacy of coping response	Behavioral intention	Effect of fear on behavioral intention mediated by severity of fear.
Beck & Davis (1978)	Smoking	Level of fear, Topic relevance	Attitude	No relationship between topic relevance, level of fear and attitude change. Positive relationship between level of fear and attitude change.

Study	Topic of Fear Message	Independent Variable	Dependent Variable	Major Findings
Feingold & Knapp (1977)	Drug use	Level of fear, type of conclusion, monologue vs. dialogue	Attitude	Explicit conclusion more effective. Boomerang effect---high levels of fear produced favorable attitude toward drug use.
Burnett & Oliver (1979)	HMOs	Level of fear, personality, Usage	Attitude, behavioral intention	Level of fear effectiveness varied for clusters based on personality, usage, and socioeconomic characteristics.
Burnett & Wilkes (1980)	HMOs	Level of fear	Behavior	High levels of fear more persuasive with clusters preferring high fear. Moderate levels more effective with remaining segments.
Robberson & Rogers (1988)	Exercise	Negative/positive appeal; physical /social danger	Credibility	Fear communications are more persuasive than positive appeal communication
King & Reid (1990)	Drinking and driving	Level of fear, injury to self/others	Fear arousal, support/counter arguments, attitude, behavioral intention	High levels of fear produced more counter arguments and fear arousal.
Tanner, Hunt, and Eppright (1991)	Sexually transmitted diseases	Level of fear, coping response, knowledge of topic, coping response repertoire	Fear arousal, behavioral intention, social costs of adopting response	Higher levels of fear produced greater levels of fear arousal. Coping response repertoire influenced behavioral intention. Knowledge of topic and coping responses influenced perception of social costs of adopting response.

Study	Topic of Fear Message	Independent Variable	Dependent Variable	Major Findings
Chebat, Laroche, and Filiatrault (1995)	Financial service,	Level of fear Source identification attractiveness	Memorization	Effect of fear on memorization may be curvilinear, identification with source may be powerful factor of memorization, attractiveness may hinder memorization.
Schoenbachler and Whittle (1996)	Drug Use	Level of threat, type of threat, sensation seeking	Fear arousal, support/counter argument, Behavioral intention	Fear arousal is unnecessary for persuasion to occur, social threat communications were more persuasive than physical threat communication.
Keller and Block (1996)	Smoking	Level of fear, Injury to self/others, Topic relevance	Attitude	High-fear appeals were more persuasive than the lower fear appeals on the other reference condition. Low-fear appeals were more persuasive than high-fear appeals in the self-reference.
Ho (1998)	Smoking	Disease dimension variables; social dimension variables, age	Behavior intention	Disease dimension variables contributed significantly to both young and adult smokers. Social dimension variables contributed only to young smokers.

(Source: Adapted from Schoenbachler and Whittler 1996)

There are several reasons to explain the conflicting results regarding the relationship between level of fear and level of persuasiveness in the studies: First, there is a question as to whether much of the early research had ever measured fear arousal, since the level of fear intended by the researcher may not match (or may be confounded with) the level of fear perceived by subjects (Higbee 1969; Dillard 1994; Witte 1993). Second, a key problem with some of the studies is that fear was operationalized in different ways, and that variables labeled "fear" may have also been thought of as being anxiety, nausea, worry, even concern (Higbee 1974; Witte 1993). Third, it has been widely suggested that there may be mediating variables which have an impact on the persuasiveness of fear appeals, including source credibility (Dembroski, Lasater, and Ramirez 1978), familiarity of the topic (Karlins and Abelson 1970), credulity of the subjects (Ray and Wilkie 1970), self-esteem of the subjects (Leventhal and Watts 1966), etc. These and other moderating variables may have an impact on how persuasive fear appeals are perceived to be.

Two important meta-analyses (Sutton 1982; Boster and Mongueau 1984) have demonstrated that the weight of evidence in the literature supports the premise of a positive relationship between levels of fear arousal and message persuasiveness. The protection motivation model and ordered protection motivation model have gained widespread support, and are thought to be the most useful models. For this reason, the PM model will be used here as a basic framework to test how culture moderates the mechanism of fear appeal persuasion in this paper.

In terms of type of fear appeals, the topics used in previous research covered two kinds: physical threat appeals and social threat appeals. Although most of the early research focused on physical threat appeals, social threat messages are used extensively

in advertising (e.g., for deodorant, dandruff shampoo, breath mints) and occasionally in anti-drug PSA contexts for coping response adoption (Schoenbachler and Whittler 1996). Also, the commercial applications mentioned frequently describe the consequences of social disapproval resulting from performance or abstinence of certain behaviors. Clearly, social threat messages can result in attitude and behavior modification.

However, the use of social threat appeals has been examined empirically in only three studies. Powell and Miller (1967) compared the effectiveness of social approval, social disapproval, and neutral messages in encouraging blood donation to the Red Cross. They found that both social approval and social disapproval messages were more effective in changing attitudes toward giving blood than messages that implied no consequences. In addition, social disapproval messages were significantly more effective in changing attitude than social approval messages.

Evans et al. (1970) examined whether social approval messages were more persuasive than physical threat messages. They presented groups of high school students with communications about tooth brushing that employed high physical threat, low physical threat, or social approval. The physical threat messages were more effective when the dependent variables were intention to comply with the message self-reported behavior, whereas the social approval messages were more effective when actual behavior change was measured over time.

In Schoenbachler & Whittler's research (1996) about adolescent processing of social and physical threat communication, results supported Tanner et al.'s (1991) notion that the social implications of a response to a threat message influence the message

effectiveness. A social threat communication in which the social implications of a teenager's response were clearly laid out was more persuasive than a physical threat communication from which teenagers had to draw their own conclusions about what others would think of them if they chose a particular response.

Over the last forty years, in the area of fear appeal studies, there have been several researchers who have examined the effects of personality variables such as self-esteem or self-evaluation (Leventhal 1962), and internal/external locus of control (Burnett 1981). Researchers have agreed that personality variables influence the effectiveness of fear appeals.

In Leventhal and Trembly's (1968) study, from the standpoint of the parallel response paradigm, it was hypothesized that high self-esteem subjects reacted to threat primarily by controlling danger; low self-esteem subjects experienced a strong emotional response and acted in ways that serve to control fear. Empirical work confirmed these predictions. Increases in fear were associated with increased acceptance for subjects exhibiting high self-esteem and decreased for those with low self-esteem.

Dabbs and Leventhal (1966) also found an interaction between self-esteem and level of fear on behavioral intention. Low self-esteem subjects increased their behavioral intention from the control group (no fear) to the low level fear condition, but they showed no further increase in the high fear condition. Higher self-esteem subjects, on the other hand, showed increased behavioral intentions from low-fear to high-fear.

In Ramirez and Lasater's study (1977), the authors also found that high self-esteem subjects were significantly less anxious about their dental health than low self-esteem subjects. High self-esteem subjects expressed significantly stronger intentions to

perform the recommended dental hygiene practices and when questioned after one week they had cleaned their teeth significantly more recently than low self-esteem subjects.

Another important personality variable that has been involved in fear appeals research is locus of control. Researchers have found that people with internal locus of control respond differently to fear appeals than people with external locus of control (Lavack 1997; Burnett 1981). Efran (1964) hypothesized that people with internal locus of control tend to avoid threats because they remind themselves of their inability to deal with their environment, whereas people with external of locus accept the failure implied in the threats. Farley and Mealiea (1972) showed that there is a positive but weak association between a generalized fear score and a score on locus of control. The results suggested that externals are generally more fearful than are internals.

Burnett's (1981) survey of 161 subjects examined the relationship between locus of control and fear appeals with respect to attitude and intention. The author predicted that the attitude and intention scores of externals would be higher than those of internals when exposed to higher fear levels and lower when exposed to lower fear levels. Four fear messages were used in his study. The determination of the four fear messages was developed through two pretests using randomly selected judges. The topic of the fear messages was a health maintenance organization. The findings indicated that level of fear appeal and locus of control predicted attitude and intention. There was, however, no significant interaction, as was originally predicted. At all levels of fear appeal, externals tended to react more favorably to the message.

2.3. Cultural Differences and Advertising

The study of cross-cultural differences in advertising is an area that has been gaining increasing attention from academics. Different cultures contribute to differences in values, cognitions, attitudes, and beliefs (Hofstede 1983; Han and Shavitt 1994). These differences in cognition, attitudes, values, and beliefs are, in turn, likely to result in variations in the kinds of advertising that are used in different cultures. The extent to which fear appeals are used may differ across cultures.

McGuire (1976) distinguished between cognitive and affective motives. Cognitive motives stress the need to be adaptively oriented to the environment and to achieve a sense of meaning, whereas affective motives stress the need to reach satisfied feeling states and to attain emotional goals. It has been recognized by scholars that both cognitive and affective systems are influenced by a series of external factors, arguably the most important of which is culture.

Redding (1980) examined the difference in cognitive processes between Westerners and Chinese. He concluded that Western cognition is logical, emphasizes sequential connections, use of abstract notions of reality which represent universals, and emphasizes on cause, whereas Chinese cognition is based on more intuitive perception, with more reliance on sense data, non-abstract, emphasis on the particular than the universal, and high sensitivity to context and relationships.

Uncertainty avoidance (UAI) is one of Hofstede's (1980, 1983) cultural dimensions. It is the extent to which people of a culture feel threatened by ambiguous situations (Hofstede & Bond 1984). The tolerance for uncertainty (ambiguity) and coping mechanisms for dealing with it are culturally grounded and transferred and reinforced

through the basic institutions of family, school and state. In other words, different societies adapt to uncertainty in different ways.

Cultures with high UAI have lower tolerance "for uncertainty and ambiguity, which expresses itself in higher levels of anxiety and energy release, greater need for formal rules and absolute truth, and less tolerance for people or groups with deviant ideas or behaviors" (Hofstede 1980, p. 395). Therefore, there is strong tendency for consensus in high UAI cultures, deviant behavior thus is not acceptable. Furthermore, Hofstede's (1980) research revealed that members of high uncertainty avoidance cultures resist change more, have higher levels of anxiety, have higher levels of intolerance for ambiguity, worry about the future more, and take fewer risks.

Zandpour & Harich's (1996) content analysis of 1914 television commercials in twenty-three countries focused on the emotional and rational appeals in advertisement. The study indicated that cultures with high uncertainty avoidance were more likely to appreciate the explicit conclusion that is provided in the argument strategy and the lecture format of advertising. As a result, Canada, United States, Hong Kong, and Taiwan are receptive to advertisements that involve high levels of feeling in terms of emotional appeal. Furthermore, Canada and United States are susceptible to ads that also involve high levels of thinking, but the latter two seem to use fewer thinking ads.

The study of Gudykunst and Ting-Toomey (1988) found that cultures with high UAI reported fewer novel situations when asked to report fear-eliciting situations. People feel more threatened by ambiguous and novel situations and tend to avoid such situations. On the other hand, people in cultures with low UAI have lower stress levels and weaker superegos and accept dissent and taking risks more than those from a high UAI cultures.

29

A study of intimacy expressions in three cultures (American, Japanese, and Chinese) revealed that, overall, American respondents displayed a lower degree of uncertainty avoidance tendency towards dealing with relational conflict issues relative to an Asian culture, i.e. Japan (Ting-Toomy 1991). These results are consistent with the fact that Asians are more cautious and reluctant to take risks than their American counterparts in business (Hall and Hall 1990). This conclusion coupled with the UAI dichotomy implies that Americans have a greater inclination toward aggressive behavior in conflict situations than the Taiwanese.

Individualism/collectivism is another of Hofstede's cultural dimensions. Individualism refers to the view of the self as independent, while collectivism refers to the view of the self as interdependent on the group. These differences in cultural orientations hold crucial implications for cognition and attitude. For example, individualists tend to focus on self-direction and/or on stimulation and hedonism (Schwattz 1994), whereas collectivists are more concerned with social appropriateness and emphasizing harmony than individualists (Triandis 1989). In essence, the individualism/collectivism dimension deals with the relationship between the individual and the collectivity. Members of individualist societies are more centered on their own needs, goals, and interests rather than on those of the collectivity. On the other hand, members of collectivist societies are more focused on the in-group and its needs, goals and interests (Toffoli 1997).

In Western cultures such as the U.S. and Canada, the central element in the mental programming of individuals is the notion of self-concept or personality. Self-concept is considered "a separate entity distinct from society and culture" (Hofstede

1980, p. 215). Comparatively, the concept of personality does not exist in the eastern Asian tradition. For example, the word *ren* which means, "man" is used to describe a " human constant," which includes "the person himself plus his intimate societal and cultural environment which makes his existence meaningful" (Hofstede 1980, p. 215). In other words, the self, society and culture are inextricably intertwined.

Individualism is perceived to be a key contributor to the "greatness of the United States" (Hofstede 1980, p.215) and Americans pride themselves on being fiercely individualistic. However, in an Asian culture such as the Chinese, individualism is viewed as selfish behavior. Personal goals taking precedence over those of the group is discouraged because it is at odds with the implicit assumption that maintaining the group's well-being is ultimately in the best interest of the individual (Ho 1978).

Individualist cultures encourage individuals to pursue personal goals and to devote a great deal of attention to the development of the individual, while collectivist cultures value loyalty to the extended family and encourage individuals to subordinate personal wishes to the overall goal of the collectivity (Hui and Triandis 1989). Therefore, people in individualist cultures are encouraged to be autonomous and independent, and to pursue individual achievement. These cultures place comparatively less emphasis on the mutual obligations of family and friends and more on the individual's personal responsibility for his or her own life. In contrast, people in collectivist cultures are encouraged to subordinate their personal needs to the demands of the family or the community, and they perceive less freedom, less autonomy to further their own goals, and less ability to determine outcomes in their own lives (Sastry and Ross 1998).

Studies have found that people in collectivist cultures have low levels of internal locus of control than people in individualist cultures. For example, Guagnano et. al. (1986) indicated that Asian American students had lower levels of perceived control than white American students; Crittenden (1991) and Lao (1978) found that female Chinese students had more external locus of control than their white counterparts in the United States. In Sastry and Ross' recent study (1998), a survey (World Value Survey) on Asian Americans, Asians in Asia (Japan, South Korea, China, and India) and white American adults was performed. They found that both Asian Americans and Asians in Asia reported lower levels of perceived control than non-Asians. In addition, evidence of a more external orientation and less internal locus of control among Chinese has been shown in a number of studies (Crittenden 1991; Sastry and Ross 1998; Hamid 1994; and Chan 1989).

As discussed earlier, self-esteem is a another personality factor which has been examined to have influence on persuasibility of fear message. From the cross-cultural literature, evidence can be found that self-esteem varies across cultures (Bond, Leung, and Wan 1982; Chiu 1992; Paschal and Kuo 1973).

Chiu's (1992) cross-cultural research compared the self-esteem between 446 American and 437 Chinese (Taiwanese) Children. The results indicated that American subjects obtained higher self-esteem scores than did the Chinese subjects. The findings confirmed the results from Paschal and Kuo's (1973) cross-cultural study on American and Taiwan Chinese university students. Moreover, using Rosenberg's (1965) self-esteem scale, Bond, Leung, and Wan's (1982) study found that self-esteem scores to be lower on average in highly collectivist cultures than in highly individualist cultures.

Bond (1991), in summarizing the findings of studies comparing the Chinese and American sense of self, stated that "Chinese people constantly describe themselves in less positive terms than do Americans" (p.34). The conclusion indicated that Chinese have less self-acceptance than the American.

In total, the cross-cultural literature has shown that the Chinese have lower self-esteem and self-acceptance compared to highly individualist cultures such as the American.

According to Blascovich and Tomaka's (1991) definition, self-esteem is the extent to which one prizes, values, approves or likes oneself. It "goes by a variety of names (e.g., self-worth, self-regard, self-respect, and self-acceptance) all of which are compatible with the dictionary definition of esteem ascribed to the self." (Blascovich and Tomaka 1991, p.115). Therefore, self-acceptance will be measured as a cultural dimension in the following study.

2.4. Fear Appeals and Smoking Behavior

Smoking is a habit that has tremendous negative consequences on those who engage in it. It shortens one's life expectancy, it makes one more vulnerable to everyday illness, it interferes with one's income through loss of productivity and illnesses; and it impairs the quality of one's life. In spite of the warning messages presented or published daily through various mediums such as news reports and warnings on cigarette packs, smoking is still a serious problem in our society. In Canada, smoking remains prevalent, as 6.4 million people (30% of the population aged 15 and over) engage in this behavior (Health Canada 1994).

In Asia, particularly China, the situation is even more serious. According to the estimation of the WHO, almost 320 million Chinese people (40% of all Chinese aged 15 and above) are smokers. At 1.7 trillion cigarettes, or 85 billion packs, per year they are responsible for roughly two thirds of the world's total consumption. Various economic and social factors are leading to a rise in youth smoking in China. Among males aged 15-25, it increased 6% between 1984 and 1996. Two out of three young men in China smoke. Although a law banning tobacco advertising in electronic and print media came into effect in 1995, and smoking in public places such as schools and public transport is currently outlawed in 82 cities, enforcement is patchy (Hong Kong Council 1998).

Facing such a serious situation, people are trying to find a myriad of possible solutions. Many nonprofit groups and government agencies world-wide have turned to social marketing to try and reduce the incidence of smoking. Governments have actively tried to reduce cigarette consumption by banning cigarette advertising, by passing legislation to control smoking, and by issuing Public Service Advertisements (PSAs) to educate people to avoid cigarettes and to persuade smokers to quit smoking. In fact, anti-smoking advertising has played a major role in the anti-smoking campaigns.

Researchers have been trying to explore effective ways to help people quit smoking. Although some research results have indicated that cigarette advertisements do not have any positive effect in influencing cigarette demand (Abernethy & Teel 1986; Johnson 1986), it has been demonstrated that informational, health-warning "public" advertisements and tobacco taxes can be effective at stimulating a reduction in cigarette consumption (Hu, Sung and Keller 1995). Chan's (1991) study shows that anti-smoking campaigns are more effective in preventing non-smokers from engaging in smoking

behavior than motivating smokers to quit the behavior. These results have been explained from an attitudinal perspective in that anti-smoking campaigns are effective at reinforcing negative attitudes already held by non-smokers towards smoking.

It has also been found that fear appeals can work well in influencing smokers' attitude and behavior. Among the empirical studies on fear appeals, many researchers have proposed that fear, or stressing the negative consequences of a particular action, can have persuasive effects on individuals. Smoking has been a particular research topic and empirical results have shown that fear appeals could be a significant factor in helping smokers quit smoking. Among these studies, Rogers and his colleagues have made an important contribution in this area.

Rogers (1984) found that the magnitude of the severity of the threat had an effect on the smoker's intention to stop smoking. In another study, Rogers et al. (1978) wanted to determine what effect varying the danger of noxiousness of a fear appeal would have on subjects' smoking behavior. Specially, they predicted that increases in the perceived noxiousness of the consequences of smoking would facilitate long-term abstinence from smoking.

Their subjects consisted of smokers who smoked an average of 23 cigarettes per day. They were divided into two groups. The first group was exposed to a low-fear condition, which involved watching an 18-minute film that depicted the case history of a smoker with lung cancer. The second group was exposed to a high-fear condition which involved watching the same film as group one and an additional five-minute film of an actual operation in which a smoker's diseased lung was removed.

Their findings were significant. Of those smokers who were exposed to the high-fear presentation 18.8 percent of them were abstinent at one-year follow-up while none of the smokers in the low-fear presentation were abstinent at a one-year follow-up. Rogers, Deckner and Mewborn (1978) speculated then that if the intervention continued over several weeks, and included booster sessions, the results might have been even higher.

In a recent study by Sturges and Rogers (1996), they manipulated threat by combining information about (a) the severity of the health dangers of tobacco use and (b) the participants' vulnerability to these dangers. The second independent variable was coping, manipulated by combining information about (a) the efficacy of the recommended coping response (refrain from using tobacco) and (b) self-efficacy, or one's ability to refrain from using tobacco. This study presented health-threat communications to children, adolescents, and adults to compare each other's responses.

A 2x2x2x3 factorial design was used in their study. Manipulation was performed by educational essay. The results showed that the information presented about the health threat and how to cope with it affected the children's, adolescents' and young adults' beliefs and intentions to avoid the danger. The results also showed that information about the threat of tobacco-related health problems, information about the ease and effectiveness of coping with the threat (avoiding tobacco), and age interacted to affect intentions to avoid cigarettes. Threat and coping messages were best in combination for young adults and teens, whereas coping was of most importance to children.

In his survey on Australian smokers, Ho (1998) used an expanded protection motivation model to investigate intention to give up smoking. Because smoking has both physiological and social-psychological foundations, the model included the social

dimensions as well as the original disease dimensions in the protection motivation model as predictors of health behavior. Ninety-six smokers (35 males and 61 females) in Australia were recruited. Forty-four were young adults (age<22 years) and 52 were adults (age>34 years). Results showed that the disease dimension contributed significantly to explaining the perceived likelihood of giving up smoking among both young and adult smokers. However, the social dimensions contributed significantly to the model's predictive capacity for the young smokers, but not for the older smokers. The author thus pointed out that for young smokers who are strongly influenced by social forces such as cigarette advertising and peer approval, a smoking-cessation effort based on social factors would be more effective than one based on health hazard.

CHAPTER 3

RESEARCH HYPOTHESES

3.1. Research Framework

From the literature on culture, it can be seen that members of a particular culture are not only different from other cultures because of language and customs, but also because they think, perceive their world, and dream differently, and have their emotions shaped by the norms of their culture. Thus, there should exist cultural differences in terms of fear appeal messages. We propose, thus, that culture will have a moderating effect on the cognitive process and affective reaction in the protection motivation model. The proposed theoretical framework of this study is shown in Figure 5.
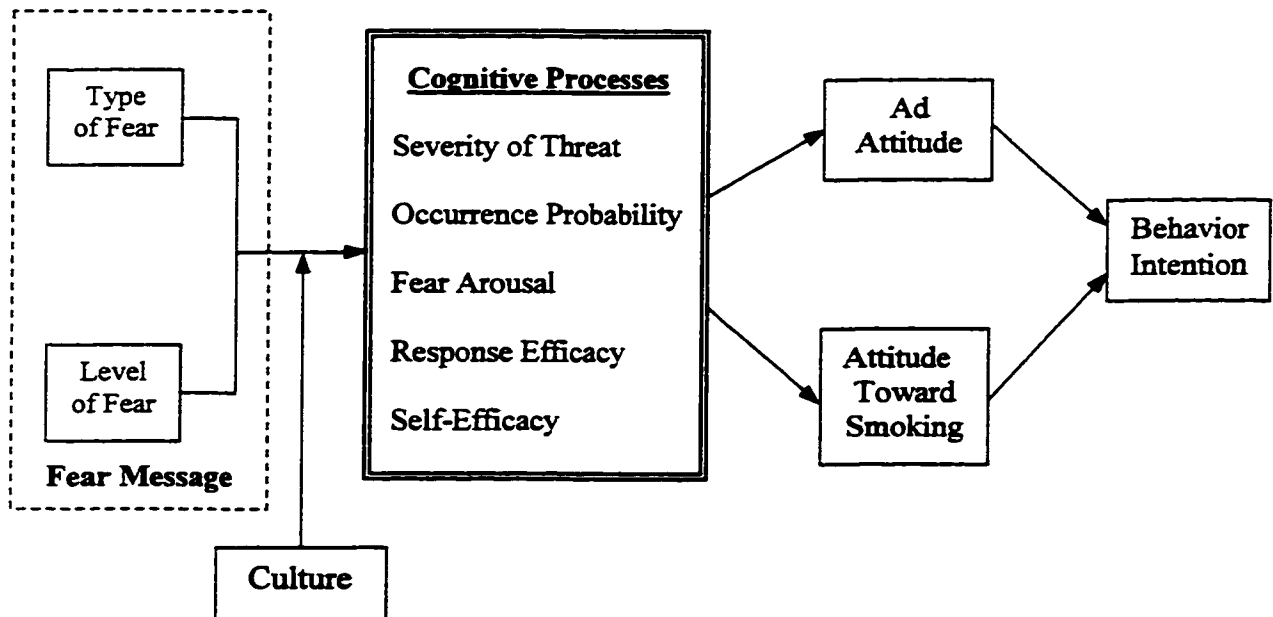
Figure 5. Proposed Framework of the Study

Moreover, to represent two different cultures in this study, we chose Canadian and Chinese samples. According to the study of Hofstede (1980, 1983), Canada has a high individualism score and below-average uncertainty avoidance score. Like many Asian countries, China is a high collectivist culture, and has an above-average uncertainty avoidance score. The main differences of these two cultures at different cultural dimensions are shown in Table 3.1.

Table 3.1 Comparison of Canadian and Chinese Cultures

	Chinese	Canadian
Individualism/Collectivism	Collectivist	Individualist
Locus of control	External	Internal
Uncertainty Avoidance	High	Low
Self-acceptance	Low	High

3.2. Research Hypotheses

Past fear-persuasion research has found that fear, if aroused by exposure to threatening messages, has a greater influence on attitude and behavioral change. Although, some studies have found that fear messages have no effect on behavior. For example, studies by O'Keefe (1971) and Feingold and Knapp (1977) found that anti-smoking and anti-drug abuse public announcement services had little impact on smoking and drug consumption intentions. Most of empirical studies in fear literature have confirmed that fear appeal messages had influence on people's attitude and behavior intention. Based on these findings, the first hypothesis proposes that:

H1: For both the Canadian and Chinese subjects, anti-smoking ads will result in attitude changes toward smoking.

From the literature about individualism/collectivism, it can be seen that members of collectivist cultures take the context into consideration and use strategies that are socially appropriate, while members of individualist cultures focus on the person they are trying to persuade and use strategies that may be socially inappropriate

Individualist cultures emphasize the goals of individuals rather than group concerns and needs, as opposed to collectivist cultures which emphasize more group harmony. People in a collectivist culture make decisions usually based on what others would think about them. Therefore, a person's perception of the behavior expected by a special social agent such as family, relatives, and friends is very important. Thus, the social threat message will be more effective in the collectivist culture than in the individualist culture, whereas the physical threat message will be more effective in the individualist culture than the collectivist culture.

As mentioned earlier, uncertainty avoidance involves the lack of tolerance in a culture for uncertainty and ambiguity. Cultures high in uncertainty avoidance have high levels of anxiety, a great need for formal rules, and a low level of tolerance for groups that behave in a deviant manner. Hofstede (1980) found that Canada had a below-average uncertainty avoidance score, while Taiwanese Chinese had an above-average score. The interpretation of these results is that although individuals in Canada eagerly approach relational conflict situations, the Taiwanese are more apt to avoid ambiguous encounters (Gudykunst and Ting-Toomey 1988). Moreover, people in countries with higher

uncertainty avoidance score, like the Taiwanese, have a greater need for consensus, tend toward conservatism and desire law and order (Hofstede 1980).

According to Hofstede's study (1980), individuals in high uncertainty-avoidance cultures tend to display emotions more than members in low uncertainty avoidance cultures do. This conclusion is supported by Gudykunst and Nishida's (1984) research, which revealed that Japanese students (high uncertainty avoidance) tend to display more nonverbal affiliative expressive behaviors in initial interactions with strangers than students in the USA (low uncertainty avoidance).

Marsella and Hus (1985) indicated that Western culture emphasizes individual responsibility for problems and for their resolution while many non-Western cultures emphasize group or environmental orientation. In their study, Japanese American subjects tended to utilize more social supports in coping with health problems while the Caucasian Americans tended to rely more on personal responsibility for their health.

Thus, as discussed earlier, Canadians are more individualistic, have higher self-acceptance and self-esteem, lower uncertainty avoidance, and more internal locus of control, whereas the Chinese are more collectivistic, have lower self-acceptance and self-esteem, higher uncertainty avoidance, and more external locus of control.

Consequently, the following hypotheses dealing with the type of fear were formulated:

H2a: Canadian subjects will have a more favorable ad attitude after viewing the physical threat advertisements than their Chinese counterparts.

H2b: Canadian subjects will have a more negative attitude toward smoking after viewing the physical threat advertisements than Chinese subjects.

41

H2c: Canadian subjects will report higher behavioral intention to stop smoking after viewing the physical threat ad than Chinese respondents.

H3a: Chinese subjects will have a more favorable ad attitude after viewing the social threat advertisement than their Canadian counterparts.

H3b: Chinese subjects will have a more negative attitude toward smoking after viewing the social threat advertisements than Canadian respondents.

H3c: Chinese subjects will report higher behavioral intention to stop smoking after viewing the social threat ad than Canadian respondents.

Tanner et al. (1991) emphasized that emotions must be aroused for persuasion to occur. Early research explored the role of threat in producing emotional response and yielded mixed results. Tanner model suggests that the relationship between the threat intensity and emotion is linear, and that the corresponding response in terms of persuasion is linear as well. Moreover, a series of studies by Rogers and his colleagues found that higher fear in anti-smoking messages increases behavioral intention. Therefore, the following hypotheses about fear and persuasion are proposed:

H4a: Fear arousal will positively affect ad attitude for both the Chinese and Canadian respondents.

H4b: Fear arousal will positively affect attitude toward smoking for both Chinese and Canadian respondents.

H4c: Increasing fear arousal will increase behavior intention toward quitting smoking for both Canadian and Chinese subjects.

CHAPTER 4

RESEARCH METHODOLOGY

The main purpose of the present thesis is to explore the effectiveness of fear appeal messages on different cultures. Toward this end, this chapter describes the research methodology to test the proposed hypotheses.

According to Toffoli (1997), one way of testing hypotheses in cross-cultural studies is to select amongst a number of cultures, two groups that score on opposite sides of cultural dimensions, then test for the interaction of this factor with the other independent variables. The present study followed this approach in testing the hypotheses. Canadian and Chinese were chosen in this study to represent the two different cultural groups.

Due to the complexity of cross-cultural studies, care was exercised in the present study with respect to sampling, translation, and ensuring that the constructs and measures were equivalent. Under this general principle, the chapter will cover the experimental design including stimulus (advertisement) design, questionnaire design, subject selection and the sampling procedure.

4.1 Experimental Design

To test the hypotheses, a 3 (low, moderate, and high levels of fear) × 2 (social threat vs. physical threat) × 2 (Chinese vs. Canadian subjects) between subjects factorial design was employed in this study. The type of fear containing social threat and physical threat, as well as the level of fear including low, moderate, and high levels, were

manipulated as independent variables. Being a moderating variable, culture was represented by the Chinese and Canadian cultures. See Table 4.1

Table 4.1 Treatments of the Experiment

Cell	Subjects	Type of fear	Level of fear
1	Chinese	Physical	High
2	Chinese	Physical	Moderate
3	Chinese	Physical	Low
4	Chinese	Social	High
5	Chinese	Social	Moderate
6	Chinese	Social	Low
7	Canadian	Physical	High
8	Canadian	Physical	Moderate
9	Canadian	Physical	Low
10	Canadian	Social	High
11	Canadian	Social	Moderate
12	Canadian	Social	Low

Ad stimuli

In total, 12 print ads were designed as experimental stimuli by an advertising agency. Six of them were English versions and six were Chinese versions. Both color picture and context were used in the ads to create the different manipulations.

Considering the difference between physical fear and social fear, we chose different manipulation strategies to create two types of fear in this study. Physical fear was manipulated by the threat to one's physical body, health, and life, whereas the social fear was manipulated by the threat toward one's social life; that is manipulating the

44

intensity of the social rejection. This method has been used in the Schoenbachler & Whittler's study (1996).

The ads were developed in an iterative process through extensive discussions with professors, student smokers, and one ad agency. They were pre-tested together with the questionnaire. The ads are described below.

For the physical threat advertisements, high fear was designed by presenting a strongly contrasting picture in which a half-beautiful face and a half-horrible skeleton symbolizing that smoking equals death. Meanwhile, the copy described the serious results of smoking such as lung cancer, heart disease, and early death, drawn from the study of the American Cancer Association. Next, a warning sentence, *cigarette smoking will shorten your life*, was provided in the advertisement. Then, the suggestion, *for your own good---stop smoking*, was chosen, which was the same for all three levels of physical fear advertisements.

For the moderate level of fear, the picture was depicted as a skeleton behind a face, which represented that death is approaching the smokers. The context included the consequences of smoking such as asthma, bronchitis, emphysema, followed by a warning sentence and a suggestion. The warning sentence, *cigarette smoking is dangerous to your life*, was less severe than the one in the high-level fear ad.

In the low-level fear ad, the face in the first two ads was kept but no skeleton appeared in the ad. The context indicated that smoking results in cough..., wheeze..., and weakness.... The warning sentence, *cigarette smoking is bad for your health*, was chosen.

In order to create a vivid effect, we chose black as a background color in these three physical fear advertisements.

As previously mentioned, the social fear was manipulated through the intensity of social rejection. We chose another kind of picture to manipulate different levels of social fear. In the three social threat ads, a male smoker faced a female nonsmoker. The woman's facial expression toward the smoker and the distance between the female nonsmoker and male smoker changed in the three pictures to represent different rejection to smoking. The context described a series of negative results from smoking including bad breath and smelly clothes (for high level fear), yellow teeth and weary face (for moderate fear), and polluted air and secondhand smoke (for low fear). A warning sentence indicated that a smoker would be rejected, avoided, and unwelcome, respectively, by others in the three ads.

Moreover, a sentence suggesting that *for everybody's good---stop smoking*, was used in all these ads.

The contexts of the ads are shown in Table 4.2 . Copies of the ads are included in Appendices.

Table 4.2. Context in the advertisements

Type of fear	Levels of fear	Context
Physical Threat	High level fear	• Lung cancer..., heart disease..., early death... • Cigarette smoking will shorten your life • For your own good---stop smoking
	Moderate level fear	• Asthma..., bronchitis..., emphysema... • Cigarette smoking is dangerous to your life • For your own good---stop smoking
	Low level fear	• Cough..., wheeze..., and weakness.... • Cigarette smoking is bad for your health • For your own good---stop smoking
Social Threat	High level fear	• Bad breath, smelly clothes • You will be rejected by others because of your smoking • For everybody's good---stop smoking
	Moderate level fear	• Yellow teeth, weary face • You will be avoided by others because of your smoking • For everybody's good---stop smoking
	Low level fear	• Polluted air, second hand smoker • You will be unwelcomed by others because of your smoking • For everybody's good---stop smoking

4.2. Questionnaire Design

The questionnaire was designed to test the hypotheses which have been formulated in the previous chapter. The questionnaire consisted of three sections. After a half page cover letter, the first section of the questionnaire (Section A) included items on

how many years subjects have been smoking, how many cigarettes subjects consumed per day, if the subjects tried to quit smoking, as well as demographic information including age and mother tongue. Then attitude toward smoking prior to seeing the advertisement was measured.

In the second section (Section B), after viewing the ad, scales measuring fear-arousal, attitude toward the ad, and behavioral intention, were provided. Attitude toward smoking after seeing the ad was also measured to examine if there were some changes in attitude due to the stimuli. Four cognitive variables including severity of threat, occurrence probability, coping efficacy, and self-efficacy were also assessed.

The final section of the questionnaire (Section C) contained measures of culture, individualism/collectivism, locus of control, and self-acceptance. We wanted to make sure that Chinese subjects in this study were actually more collectivistic, had more external locus of control, and lower self-acceptance, whereas Canadian subjects were more individualistic, had more internal locus of control and higher self-acceptance.

According to Toffoli's (1997) study, the national level's measure for uncertainty avoidance in Hofstede's study was not an appropriate measure for the individual level; factor analysis confirmed this issue in his study. Considering that our purpose to measure the cultural dimension was only to confirm the difference between the Canadian and the Chinese, we thus only used the conclusion from previous research rather than measure UAI via Hofstede's scales. Again, due to the same reason, we chose self-acceptance rather than self-esteem in our questionnaire to examine the differences between the two cultures.

In the following section, we provide a description of the measures used in this study.

After viewing the advertisement, subjects were asked to evaluate their general attitude toward the advertisement with seven items. Of these seven, four were adaptations from Rousseau's (1997) study (Repulsive/Appealing, Not Likeable/Likeable, Offensive/Tasteful, Disturbing/Pleasing). The other three items were added by the researcher to measure message credibility (Incredible/Credible, Implausible/Plausible, Untrustworthy/ Trustworthy).

Then, eight items measuring attitude toward PSAs were drawn from Lavack's (1997) questionnaire. The reliability of this measure was 0.81 in her study. One of her questions, "this kind of ad has been done so many times-it's the same old thing", was not included because it was not deemed appropriate for the Chinese subjects since there are not as many anti-smoking ads in China as in Canada.

Questions about attitude toward smoking were adapted from Allberg's (1989) and Rousseau's (1997) study, respectively. In total, eight items were used to measure attitude toward smoking before and after the advertisement to examine if the subjects had experienced some changes in attitude toward smoking. Of these eight items, five items were negative and three were positive attitude statements toward smoking.

Behavior intention was measured by seven items. Three of them were negative statements which emphasized intention at present, for example, "At present, I have no intention of decreasing the number of cigarettes that I smoke each day." The other four items were positive statements and emphasized intention in the future, for example, "I

will give up smoking completely someday." These questions were based on Maddux and Rogers' (1983) study which reported a Cronbach's alpha of 0.76

Four cognitive variables in the Protection Motivation model were also adapted from Maddux and Rogers' (1983) fear appeal studies. Coping response efficacy was defined as "the perceived ability of a coping behavior to remove a threat" (Tanner, Hunt and Eppright 1991, p. 37). It was measured using four seven-point items, for example, "By not smoking, people avoid some health problems." Self-efficacy was defined as "the individual's perceived ability to carry out the coping behavior" (Tanner, Hunt and Eppright 1991, p. 37). The self-efficacy was assessed using four items, for example, "for people like myself, it is difficult to avoid cigarette use." The reliability of response efficacy and self-efficacy were 0.85 and 0.63, respectively, in Maddux and Rogers' (1983) study. Six items were used to measure probability of occurrence and severity of the problem, three for each. Reliabilities in Maddux and Rogers' (1983) study were 0.78 and 0.85, respectively.

The emotional response, namely fear arousal, was measured by five items consisting of five mood adjectives (fearful, worried, anxious, threatened, and scared) from strongly disagree to strongly agree with seven-point scales. These questions were drawn from Lavack's (1997) questionnaire and the original reliability was 0.89 in her study.

One cultural dimension, individualism/collectivism was measured with a sixteen-item Triandis' attitudinal scale drawn from Chan's (1994), and Toffoli's (1997) study. Half of these items could be classified as collectivistic, for example, "Aging parents should live at home with their children," "What I look for in a job is a friendly group of

coworkers." The other half were individualist, for example, "I would rather struggle through a personal problem by myself, than discuss it with my friends," "The most important thing in my life is to make myself happy." In Chan's (1994) cross-cultural comparison between American and Hong Kong Chinese, the Cronbach's alpha for the collectivist index (COLLAT) was found to be 0.46 for the American sample, and 0.41 for the Hong Kong sample. The alphas for the individualist index (INDAT) were 0.51, and 0.53, for the two samples, respectively.

Locus of control was measured by twelve Abridged Levenson's (1973) locus of control scale items taken from Toffoli's (1997) study. Questions for the internal, powerful others, and chance dimensions which represented internal and external control were included. For example, "I can pretty much determine what will happen in my life," "I feel like what happens in my life is mostly determined by powerful people."

The measure of self-acceptance, based on the abridged Berger (1952) scale, was also taken from Toffoli's (1997) study. In total, 17 items were used. The reliability of the measure was 0.87 for Canadian subjects and 0.78 for Chinese subjects in Toffoli's study. As in Toffoli's (1997) study, four more questions were added at the end.

All questions were measured on a seven-point Likert scale, which ranged from 1="strongly disagree" to 7= "strongly agree". The layout of the questionnaire was kept constant across treatments and for all respondents. A summary of the measures discussed above is shown in Table 4.3 on the next page.

Both the ad and the questionnaire were designed in English. The translate/back-translate procedure was applied in this study. One Chinese with good English and Chinese language knowledge translated the English version of the ad and questionnaire

into Chinese, then another one translated the Chinese version back into English to ensure that the Chinese and English versions were identical. A copy of the entire questionnaire and the twelve advertisements are shown in Appendix 2.

Table 4.3 Measurements of Variables in the Study.

Variables	Items
Fear-arousal	(1) The ad made me feel fearful (2) The ad made me feel worried (3) The ad made me feel anxious (4) The ad made me feel threatened (6) The ad made me feel scared
Severity of threat	(1) The problems associated with smoking are very severe. (2) The health problems associated with smoking are very dangerous. (3) The problems resulting from smoking must not be neglected.
Occurrence probability	(1) The likelihood that the problems mentioned in the message will happen is high (2) If I continue smoking, I will develop the same problems as in the ad in the year ahead. (3) Smoking will lead to an increased risk of serious problems.
Self-efficacy	(1) For people like myself, it is difficult to avoid cigarette use (2) I don't have enough confidence to give up smoking. (3) I'm not able to stop smoking. (4) Quitting smoking would be very uncomfortable for me.
Response efficacy	(1) By not smoking, people can avoid some health problems. (2) Avoiding cigarette is a great way to promote health. (3) Stop smoking prevents others from suffering because they are close to you. (4) You will be more socially acceptable if you stop smoking.
Attitude toward smoking	(1) Sometimes circumstances make it imperative to smoke. (2) I think it is very acceptable to smoke. (3) I enjoy the feeling of smoking. (4) Smoking is an important part of my life. (5) Smoking reflects how I see myself. (6) People who smoke harm themselves and others. (7) Cigarette smoking is not a wise behavior. (8) Smoking should be banned in all public facilities.

Attitude toward ad	(1) Repulsive/Appealing (2) Not Likeable/Likeable (3) Offensive/Tasteful (4) Disturbing/Pleasing (5) Incredible/Credible (6) Implausible/Plausible (7) Untrustworthy/Trustworthy
Attitude toward PSA	(1) It required a lot of effort to follow the ad. (2) The ad irritated me. (3) The ad was unrealistic. (4) The ad was dull and boring. (5) The ad was insulting to my intelligence. (6) I felt the ad was pushy. (7) I felt the ad was in poor taste. (8) The ad makes me think about my life.
Behavioral intention	(1) At present, I have no intention of decreasing the number of cigarettes that I smoke each day. (2) At present, I have no intention to quit smoking completely. (3) I am still undecided about quitting smoking. (4) Within a week or two, I plan to quit cigarette smoking for a day. (5) I intend to cut down on the number of cigarettes that I smoke. (6) I will give up cigarette smoking completely someday. (7) I'm strongly motivated to stop smoking.

4.3. Pretest

After the advertisements and questionnaires were designed, a pretest was performed. This pretest was intended to serve two purposes. The primary purpose was to indicate whether there were any problems in the comprehension of the questionnaire. The second purpose was to determine if the manipulation check was successful, particularly, whether the ads in the six experimental conditions were significantly different in terms of levels of fear.

A pretest involving the administration of 40 questionnaires representing all of the experimental conditions was conducted on both Chinese and Canadian subjects (18 were

Canadians and 22 were Chinese). Canadian university students were chosen to see the English version of the advertisement and questionnaire in the pretest. Chinese students in Montreal completed the Chinese version of the pretest. Considering the effect of acculturation, we only contacted Chinese students who left China less than one year ago. During the data-collection in the pretest we also encouraged subjects to give their comments and opinions regarding the ad when they finished their evaluation of the ad and questionnaire.

No major problems in the questionnaire were discovered in the pretest. Both the Canadian and Chinese versions of the questionnaire were understandable. The initial data on the manipulation check showed that the three levels of physical threat were identifiable (the means for each level of fear were 6.24, 5.08, and 2.25 for Canadians; and 6.1, 5.03, and 3.04 for Chinese, respectively). However, the data for the social threat, indicated that there was a problem with the social fear manipulation. ANOVA results showed that the difference between the high and moderate fear was not significant in both the Canadian and Chinese cells (the mean values for the high, moderate, and low levels for the Canadian cell were 3.36, 3.28 and 2.2, and those for the Chinese cells were 3.68, 3.55, and 2.9, respectively). Therefore, it was necessary to modify the social fear ads to improve the manipulation in terms of level of fear.

By analyzing the comments and suggestions from subjects during the pretest, we found that the nonsmoker's expression in the first version was over emphasized so that the ad viewer felt uncomfortable. Furthermore, compared with a handsome smoker, the nonsmoker was viewed as ugly and could not be perceived as being victimized. Thus, the ads could not elicit any impact or pressure. Based upon these points, we removed the

strong facial expression on the female nonsmoker, but kept changing her facial expression at proper levels to express her uncomfort due to smoking.

We also made changes on the male smoker's face to emphasize the negative consequence of smoking toward the smoker himself. In the final ads, the male smoker's face color changed to convey to viewers different messages. For example, the male smoker's face was shown pale and unhealthy to match the words such as weary face so as to create an impact on smokers. The nonsmoker's facial expression and the sentence indicated that you would be avoided by others because of your smoking creating further pressure toward smokers.

Another factor considered was the distance between the female nonsmoker and male smoker in the ad. The distance in the initial ad changed from low level fear to high level fear conditions. Subjects had questioned the relationship between the smoker and nonsmoker. They perceived that the two persons in the high fear ad might be dating, but in the moderate fear ad, the two persons at a further distance from one another might be in common social situations. Since different people experience varying pressures from different situations, confusion might be introduced by changing the distance between the two persons. Therefore, in the final version of the ads, we kept the distance between the female nonsmoker and male smoker constant for all three levels of fear to represent common social situations.

From the discussion with subjects in the pretest, we noticed that they seemed to pay more attention to the picture and to neglect the copy in the ads, particularly a warning sentence, which was small and of the same size. Actually, this warning sentence was used to produce pressure on smokers and changed in different levels of fear. To achieve

noticeable effect, we enlarged the size of the warning sentence and used boldface on key words such as shorten life, dangerous, bad, reject, avoid, and unwelcome in both the physical threat and social threat advertisements.

Following some modifications, the ads were shown to the subjects again and we got satisfactory results for this second version of the ads from the data collected. The mean values for the Canadian cells were 4.32, 3.08 and 2.36 corresponding to high, moderate, and low levels of fear, with the corresponding values for the Chinese cells being 4.84, 3.76, and 2.96, respectively. Therefore, the second version of the ads was finally used in the experiment.

4.4. Subjects

In cross-cultural research, efforts must be made to ensure that the cultural samples are comparable, otherwise one could invoke alternative explanations for any differences in results which might appear across the cultures (cited in Toffoli 1997).

Due to the sample comparability required in cross-cultural studies, it was necessary to pay special attention to the selection of the subjects for the experiment. In the present study, university students in Canada and the P. R. China were chosen as the principal subjects. Though there are a plethora of studies that have been criticized for using student populations, students represented a logical choice for this study because they could meet some important criterion of comparability on the variables of age, sex, and education. Moreover, most prior work on the effectiveness of fear appeals had shown that such messages are effective with college level individuals.

The main objective of the research was to compare the opinions of Chinese and Canadian smokers on various levels of fear appeals for smoking cessation. Since in China women rarely smoke, but it is not the case in Canada, a comparison between male Chinese smokers and male and female Canadian smokers would have been questionable from a validity point of view. Therefore, only male smokers studying at university were chosen as subjects in the present study.

The sample for the 12 cells in the experiment was made up of 353 subjects, 173 subjects for the six Canadian cells and 180 for the six Chinese cells. The Canadian subjects were students attending two English speaking universities in Montreal, Canada, who were exposed to the message and questionnaire in English. Chinese subjects were business students at Jilin University of Technology located in Changchun, P. R. China, who were shown the stimuli and questionnaire in Chinese. Table 4.4 lists the number of subjects for each of the twelve cells.

Table 4.4 Distribution of Subjects per Cell

| | Level of Fear | Type of Fear | |
		Physical	Social
Canadian	High	29	29
	Moderate	30	26
	Low	29	30
Chinese	High	30	30
	Moderate	30	30
	High	30	30

4.5. Experiment Overview

The experiment was performed in the spring/summer of 1999 in China and Canada separately. Students participating in the experiment followed the same experimental procedure. All rules and policies regarding the use of human subjects at Concordia University were followed. The detailed procedures used during the experimental phases will be discussed below.

Classes for commerce students were selected for experimental testing from the summer class schedule. The researcher contacted the respective professors before the experiment. After disclosure of the purpose, nature, and specifics of the experiment, professors were asked for their cooperation. If the permission was granted by the professor, a date and time was set to visit the classroom.

Upon arrival, the researcher presented herself briefly and told the students about the experiment being conducted on anti-smoking messages and their effect on smoking behavior. Then, students who were smokers were asked for their assistance in this research. It was especially emphasized that no obligation was placed on them to do so. It was also noted that they did not need to sign their name on the questionnaire if they agreed to participate in the study and that all of their answers would only be used for statistical purposes. No incentive of any kind, money or other, was promised for participating in the experiment. The researcher, however, expressed her great appreciation for the cooperation from the students.

Consenting respondents were then handed a questionnaire booklet containing one advertisement which was located in the third page. After the respondents had

completed their questionnaire, the researcher thanked them once again. The entire procedure took approximately 20 minutes.

After completion of the questionnaires, respondents were informed in greater detail of the entire purpose of the study, which was to examine the effectiveness of using fear appeals in anti-smoking advertisements.

The same procedure was followed in the commerce faculty of Jilin University of Technology, China, by a marketing professor who was an ex-colleague of the researcher. The questionnaire and advertisement were the Chinese versions that had been translated/back translated to ensure their equivalency with the English version.

CHAPTER 5

DATA ANALYSIS AND MAJOR RESULTS

5.1. Assessment of Measures

Data Input

The data from the questionnaires was entered into SPSS for Windows. The questionnaires were coded according to the experimental condition they belonged to (culture: Chinese/Canadian; type of fear: physical/social; level of fear: high, moderate, and low). Then, all of the data were verified to eliminate any potential input errors.

Sample Size

A total of 353 students (180 Chinese and 173 Canadians) participated in the study. Of these, 10 students (9 were Canadians and 1 was Chinese) were deleted from the data because they did not smoke. Non-smokers could not report their ability to quit smoking as well as intention about quitting smoking. This resulted in a reduced sample size of 343 students.

Additionally, 11 subjects (4 Chinese and 7 Canadians) were removed from the sample because they could not finish all of the questions in the questionnaire. The exclusion of these subjects resulted in a further reduced sample size of 332 subjects (175 Chinese and 157 Canadians).

Reliability Analysis

Due to the characteristics of the cross-cultural study, a series of separate factor analyses of the data for each measure were carried out for each culture. The factor structures were examined for similarity using a method similar to that of Buss and Royce (1975). If the structure was comparable between the Canadian and the Chinese subjects, the items which loaded on the same factors and had loadings higher than 0.4 were retained for subsequent purification. Measures of the variables were obtained by averaging the retained items.

For the factor analyses, the principal component analysis was chosen as the extraction method and varimax was chosen as the rotation method. The results of factor analyses and reliabilities of the new scales are reported below.

Behavior Intention

Six common items loaded on two factors for both the Canadians and the Chinese samples. One item was removed because of low loading. The result is shown in Table 5.1. One factor represents people's intention at present (BI1), the second one emphasizes future intention (BI2). The two factors explained 65% of the total variance for the Canadian sample and 60% for the Chinese sample. After reversing the three items of behavior intention for the present dimension, the reliabilities of BI1 were 0.72 and 0.64 for the Canadian and the Chinese, respectively. The Cronbach's alphas on BI2 were 0.61 and 0.67 for the two samples respectively.

Table 5.1. Results of Factor Analysis for Behavior Intention

	Canadian		Chinese	
	Present (BI1)	Future (BI2)	Present (BI1)	Future (BI2)
At present, I have no intention of decreasing the number of cigarettes that I smoke each day	0.723		0.578	
At present, I have no intention to quit smoking	0.849		0.722	
I'm still undecided about quitting smoking	0.754		0.850	
Within a week or two, I plan to quit cigarette smoking for a day		0.743		0.698
I intend to cut down the number of cigarettes that I smoke		0.822		0.554
I will give up cigarette smoking completely someday		0.695		0.833

Ad attitude

Out of fifteen items, thirteen loaded on three different factors which represented the affective, cognitive, and credible dimensions of ad attitude. Two items were removed because of poor loadings. The three factors explained 60.9% of the total variance for the Canadian sample and 64.1% for the Chinese sample. All of the statements in the affective and credible dimensions had a positive direction. To simplify the analysis, all of the statements in the negative cognitive dimension of ad attitude were reversed to reflect a positive ad attitude. The results of the factor analyses and the reliabilities of these three factors are shown in Table 5.2.

Table 5.2 Results of Factor Analysis and Reliability for Ad Attitude

	Canadian			Chinese		
	Affective (Aad1)	Credible (Aad2)	Cognitive (Aad3)	Affective (Aad1)	Credible (Aad2)	Cognitive (Aad3)
Repulsive/Appealing	0.706			0.823		
Not likeable/Likeable	0.746			0.832		
Offensive/Tasteful	0.769			0.737		
Disturbing/Pleasing	0.763			0.694		
Incredible/Credible		0.806			0.772	
Implausible/Plausible		0.830			0.890	
Untrustworthy/Trustworthy		0.751			0.851	
I felt the ad was in poor taste.			0.780			0.806
The ad was dull and boring			0.735			0.783
I felt the ad was pushy			0.700			0.748
The ad was insulting to my intelligence			0.754		..	0.736
The ad irritated me			0.677			0.577
The ad was unrealistic			0.598			0.615
Reliability	0.78	0.81	0.82	0.77	0.83	0.83

Attitude toward smoking

A factor analysis was carried out on the items measuring attitude toward smoking before the ad and after the ad for both the Canadian and the Chinese. Two items were deleted because of low loadings (<0.4) The two factors explained 62.8% of the total variance for the Canadian sample and 59.9% for the Chinese sample. The reliabilities of attitude toward smoking after the ad (SMATTIA1) which represented the self dimension were 0.65 and 0.63 for the Canadian and the Chinese, respectively. For the attitude

toward smoking (SMATTIA2) which represented the others dimension, the alphas were 0.77 and 0.69, respectively. See Table 5.3. After reversing the self dimension scale, the two attitudes toward smoking scales became all positive statements with higher scores implying more negative attitude toward smoking.

Table 5.3. Results of Factor Analysis and Reliability for Attitude toward Smoking

	Canadian		Chinese	
	Smattib1	Smattib2	Smattib1	Smattib2
Smoking is an important part of my life	0.813		0.789	
I enjoy the feeling of smoking	0.678		0.694	
Smoking reflects how I see myself	0.654		0.638	
I think it's very acceptable to smoke	0.630		0.653	
People who smoke harm themselves and others		0.884		0.852
Cigarette smoking in not a wise behavior		0.854		0.858

The same procedure was performed on the measures of attitude toward smoking before the ad. Like attitude toward smoking after ad, the same items were found loading on two factors (SMATTIB1 and SMATTIB2). The reliabilities of SMATTIB1 were 0.63 and 0.58 for the Canadian and Chinese, and 0.77 and 0.62 for SMATTIB2 .

Fear arousal

The five items measuring fear arousal loaded on one factor for both the Canadian and Chinese samples. This factor explained 64.9% of the total variance for the Canadian sample and 78.1% for the Chinese sample. The reliabilities were 0.93 and 0.87, respectively.

Cognitive variables

Separate factor analyses were carried out on eight items measuring the self-efficacy and coping response efficacy. After removal of one item that did not have common loading ("You'll be socially acceptable if you stop smoking"), results showed that seven items loaded on two factors for both the Canadians and Chinese (four loaded on self-efficacy and three loaded on coping response efficacy). See Table 5.4. The two factors explained 64.75% of the total variance for the Canadian and 71.16% for the Chinese sample.

Separate factor analyses were also conducted on the six items that measured severity and probability of occurrence. It seemed that all of the subjects treated the severity and the probability of occurrence as one single dimension. After removing one item with poor loading ("The likelihood that the problems mentioned in the message will happen is high"), the five remaining items on this factor were considered as one new scale which we labeled "severity". This factor explained 62.91% of the total variance for the Canadian and 65.6% for the Chinese subjects. The results are also shown in Table 5.4.

Table 5.4 Results of Factor Analysis and Reliability for Cognitive Variables

	Canadian			Chinese		
	SE	RE	Severity	SE	RE	Severity
I'm not able to stop smoking	0.819			0.827		
I don't have enough confidence to give up smoking	0.805			0.892		
Quitting smoking is very uncomfortable for me	0.770			0.750		
For people like myself, it is difficult to avoid cigarette use	0.740			0.899		
Avoiding cigarettes is a great way to promote health.		0.883			0.817	
By not smoking, people avoid some health problems		0.878			0.826	
Stopping smoking will prevent others from suffering because they're close to you.		0.668			0.813	
The problems associated with smoking are very severe			0.855			0.818
Smoking will lead to an increased risk of very serious problems			0.850			0.806
The health problems associated with smoking are very dangerous			0.747			0.872
The problems resulting from smoking must not be neglected			0.737			0.817
If I continue smoking, I'll develop the same problems as in the ad in the years ahead			0.731			0.675
Reliability	0.86	0.75	0.84	0.79	0.76	0.86

Locus of control

The same procedure was followed for locus of control. Results of the factor

analyses showed that the same four items loaded on one factor which represented internal

locus of control for both the Canadian and Chinese samples. Five other items loaded on a

second factor, which represented external locus of control. The two factors explained

61.4% of the total variance for the Canadian sample and 49.9% for the Chinese sample. The reliability on internal locus of control was 0.79 for the Canadian sample and 0.74 for the Chinese sample. The alphas on external locus of control were 0.67 and 0.66 for the two samples. See Table 5.5.

Table 5.5 Results of Factor Analysis and Reliability for Locus of Control

	Canadian		Chinese	
	LOC external	LOC internal	LOC external	LOC internal
I feel like what happens in my life is mostly determined by powerful others	0.720		0.702	
Often there is no chance of protecting my personal interests from bad luck happenings	0.686		0.518	
Although I might have good ability, I won't be given leadership responsibility without appealing to those in positions of power	0.679		0.604	
My life is chiefly controlled by powerful others	0.589		0.693	
To a great extent my life is controlled by accidental happening	0.575		0.707	
When I get what I want, it's usually because I worked hard for it		0.806		0.748
I can pretty much determine what will happen in my life		0.780		0.753
I'm usually able to protect my personal interests		0.778		0.704
My life is determined by my own actions		0.734		0.771
Reliability	0.67	0.79	0.66	0.74

I/C and self-acceptance

Four items, three individualist and one collectivist, were deleted from subsequent analyses because of poor reliability ("When faced with a difficult personal problem, it is better to decide what to do yourself, rather than follow the advice of others"; "Aging

parents should have their own household"; "I tend to do my own things, and most people in my family do the same"; "Children should live at home with their parents until they get married"). The method was also used in Chan's (1994) study. Of the remaining twelve items, the five individualist items were averaged to form an individualist index (INDAT) and the seven collectivist items were averaged to form a collectivist index (COLLAT). The Cronbach's alpha on COLLAT was 0.72 for the Canadian sample and 0.60 for the Chinese sample. The Cronbach's alphas on INDAT were 0.51 for the Canadians and 0.54 for the Chinese. The reliability of the I/C measures are relatively low in comparison to those of other factors in our study, however, compared to Chan's study (1994), the reliability is actually higher. (Cronbach's alphas on COLLAT in Chan's study were 0.46 for the American sample and 0.41 for the Chinese sample, while alphas on INDAT were 0.51 and 0.53, respectively, for the two samples).

The same approach as for the I/C measures was used for the self-acceptance (SELFA) measures. After removing four items: "I'm satisfied with my present situation;" "I'll continue to grow best by being myself"; "I always do things confidently and positively"; "I believe that I have the ability to deal with my daily work", the Cronbach's alpha on SELFA for the Canadian sample was 0.84 and 0.72 for the Chinese sample.

The reliabilities of the culture variables are shown in Table 5.6.

Table 5.6 Reliabilities of Culture Variables

	Items retained	Cronbach's alpha	
		Canadian	Chinese
Collectivist Index (COLLAT)	5	0.72	0.60
Individualist Index (INDAT)	7	0.51	0.54
Self-acceptance (SELFA)	13	0.84	0.72
Locus of control—internal	4	0.79	0.74
Locus of control—external	5	0.67	0.66

5.2. Descriptive Statistics

Descriptive statistics

To ensure that the two culture samples were comparable, statistical comparisons on age, daily cigarette consumption, years of smoking, and times of quitting between the two groups were carried out.

Age

An independent t-test on age was conducted and results showed that the Canadian subjects were relative older than the Chinese subjects (Ms=24.94 versus Ms=21.51, t = - 8.504, p=0.01).

Cigarette Consumption

Subjects were asked how many cigarettes they consumed per day. There existed significant difference between the two groups. The Canadian subjects were heavier smokers than the Chinese subjects. More Chinese subjects reported to smoke only at special occasions and smoke less than 10 cigarettes per day than Canadians. The result is detailed in Table 5.7.

Table 5.7 Daily Cigarette Consumption

	Chinese		Canadian		Total	
	N	%	N	%	N	%
Smoke only at special occasions	64	36.6	40	25.5	104	31.3
1-10 cigarette	92	52.6	47	29.9	139	41.9
Above 10 cigarettes	19	10.9	70	46.6	89	26.8
Total	175	100	157	100	332	100
Pearson Chi-Square = 48.498, Significance = 0.000						

Years of Smoking and Times of Quitting

Results showed that Canadian subjects had a longer smoking history than their Chinese counterparts. This is understandable because the Canadian subjects were relatively older than the Chinese subjects. Another question asked subjects if they had ever tried to quit smoking. Results indicated that Canadians tried more times to quit than the Chinese subjects did. The detailed results can be seen in Tables 5.8 and 5.9.

Table 5.8 Years of Smoking

	Chinese		Canadian		Total	
	N	%	N	%	N	%
Less than one year	31	5.1	8	5.1	39	11.7
1-2 years	51	29.1	17	10.8	68	20.5
3-5 years	63	36.0	70	44.6	133	40.1
6-9 years	22	12.6	39	24.8	61	18.4
More than 10 years	8	4.6	23	14.6	31	9.3
Total	175	100	157	100	332	100
Pearson Chi-Square = 42.076, Significance = 0.000						

Table 5.9. Times of Quitting Smoking

	Chinese		Canadian		Total	
	N	%	N	%	N	%
Never	110	62.9	81	51.6	191	57.5
1-2 times	39	22.3	47	29.9	86	25.9
3-5 times	14	8.0	25	15.9	39	11.7
6-9 times	12	6.9	4	2.5	16	4.8
Total	175	100	157	100	332	100
Pearson Chi-Square = 11.307 Significance = 0.010						

Based on the above findings, the two groups are not entirely comparable in terms of these variables. However, the differences on the years of smoking and the times of quitting might be due to the fact that the Canadian subjects were older than the Chinese. Therefore, age can be treated as a covariate in the testing of the hypotheses to remove the possible influence from these variables. As for the differences on cigarette consumption, one possible reason might be that the Chinese subjects understated the number of cigarettes consumed because they did not wish to show their negative behavior to others based on their high collectivist characteristics. Particularly, given that the subjects were highly educated, it is understandable that they did not wish for others to see them as heavy smokers even though they actually were.

Apart from this, it should be pointed out that these subjects met important criteria of comparability: the fact that they all came from essentially the same "occupational" group, namely, students—they were at the same educational level, same gender, and all of the subjects were smokers.

Descriptive statistics of variables in the framework

All the descriptive statistics of the variables in the framework in this study appear in Table 5.10.

Table 5.10 Descriptive Statistics for Main Variables in the Framework

	Items retained	Canadian (N=157)	Chinese (N=175)	*t* ratio
Severity Measure (SEVERE)	6	5.1389 (1.1862)	4.7783 (1.2033)	-2.744***
Self-efficacy (SE)	4	3.3535 (1.3325)	3.2700 (1.4721)	-5.40***
Coping Response Efficacy (RE)	3	5.4862 (1.1345)	5.5886 (1.0978)	0.835
Fear arousal (FEAR)	5	3.4229 (1.4709)	3.8046 (1.3466)	2.468**
Ad attitude 1—affective (ADATTI1)	4	3.8758 (1.0086)	3.7886 (1.2507)	-0.649
Ad attitude 2—credible (ADATTI2)	3	4.7792 (1.0679)	4.9943 (1.3802)	1.575
Ad attitude 3—cognitive (ADATTI3)	6	4.5592 (1.1474)	4.3905 (1.2528)	-1.275
Attitude toward smoking 1 (SMATTIB1)—before ad	4	4.3774 (0.9755)	4.2500 (1.0432)	-1.145
Attitude toward smoking 2 (SMATTIB2)—before ad	2	5.3217 (1.2760)	5.1914 (1.2534)	-0.937
Attitude toward smoking 1 (SMATTIA1)— after ad	4	4.7229 (1.0380)	4.1614 (1.0992)	-4.77***
Attitude toward smoking 1 (SMATTIA2)— after ad	2	5.5701 (1.0538)	5.2914 (1.2168)	-2.21**
Behavior Intention 1 (BI1)—present	3	4.189 (1.4889)	3.602 (1.2679)	-3.88***
Behavior Intention 2 (BI2)—future	3	4.7155 (1.3370)	4.4476 (1.3346)	-1.82**

Note: Standard deviation: in parenthesis
  * approaching statistical significance at p<0.10
  ** statistical significance at p<0.05
  *** statistical significance at p<0.01

Descriptive statistics of culture variables

Before proceeding to test the hypotheses, it was necessary to verify if there were

significant differences between the two cultures. Based on the literature, compared to

their Canadian counterparts, the Chinese should score higher on the collectivist measure

and lower on the individualist measure, exhibit higher external locus of control, lower

internal locus of control and lower self-acceptance. A series of independent t-tests were

carried out. The results showed that there existed significant difference between the

Canadian and Chinese samples in terms of the above dimensions. See Table 5.11.

Table 5.11 Descriptive Statistics for Culture Variables

	Canadian (N=157)	Chinese (N=175)	t ratio
Individualist index (INDAT)	4.6102 (0.9094)	3.3829 (0.9979)	-11.666*** .
Collectivist index (COLLAT)	4.6178 (0.6478)	5.5461 (0.8754)	11.055***
Locus of control--external LOC1	3.1185 (0.9956)	3.9760 (1.003)	7.804***
Locus of control-- internal LOC2	5.4713 (0.9566)	5.2957 (0.9293)	-1.696***
Self-Acceptance (SELFA)	5.1235 (0.9134)	4.5244 (0.7200)	-6.67***

Note: Standard deviation: in parenthesis
      *   approaching statistical significance at p<0.10
      **   statistical significance at p<0.05
      ***   statistical significance at p<0.01

To rule out the possibility that the differences in the cultural variables were

affected by age rather than by culture, ANCOVAs were performed. The main effects

remained significant at p<0.01 level, while the covariate was not significant. Therefore differences did exist in terms of individualist/collectivist, locus of control, and self-acceptance between our two samples. They were all in the expected directions. Next, we will see if these cultural differences can affect people's attitude and behavior change when viewing the fear appeal messages.

5.3. Hypotheses Testing

Manipulation Check

Three ANOVAs were performed to determine whether the fear treatments actually aroused varying levels of fear. Since the present study included two different types of fear messages with different ads, the tests were carried out for physical fear ads and social fear ads separately. As shown in Table 5.12, significant differences were found at the 0.01 level of significance for both the physical and social fear treatments, confirming that the three intensity levels of fear in the anti-smoking ads produced variation in fear arousal and in the expected direction. Post-hoc Scheffe tests revealed that the mean rating on fear arousal for high fear ads (physical and social) were significantly greater than the mean for the low fear ads.

Table 5.12   ANOVA Results : Fear Arousal by Treatments

	Mean	F	Significance
Physical fear treatments High Moderate Low	4.87 3.45 3.22	23.95	p< 0.000
Social fear treatments High Moderate Low	3.85 3.38 3.01	6.47	p< 0.002
All six treatments		14.64	p< 0.000

In an attempt to remove possible extraneous variation from fear arousal caused by factors other than the treatments, an ANCOVA was also run. When age was included as a covariate, the main effects remained significant but the covariate was found to be insignificant.

Figures 6 and 7 show the fear arousal means under the three different treatments for the two culture groups.
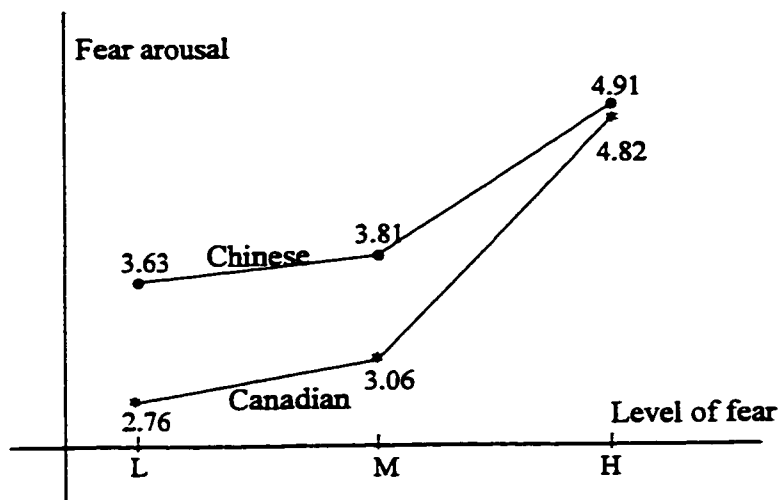
Figure 6. Fear Arousal from the Physical Fear Ads
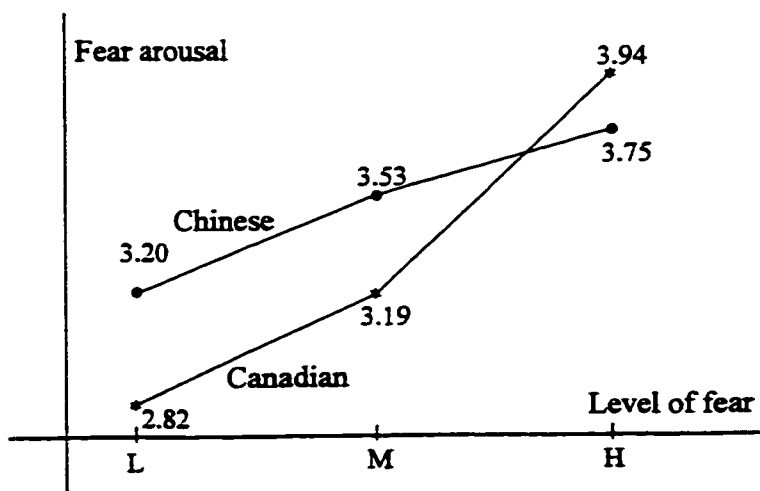
Figure 7 Fear Arousal from the Social Fear Ads

Tests of the Hypotheses

H1:   For both Canadian and Chinese subjects, anti-smoking ads will result in attitude

changes toward smoking.

A series of paired t-tests were undertaken to test the hypothesis. Attitude toward smoking for both the self and others dimensions was chosen each time to compare the attitude prior to seeing the ad and after viewing the ad. See the summary of the paired t-test results in Table 5.13.

The results from Table 5.13 show that Canadian subjects experienced attitude change toward smoking after viewing the anti-smoking advertisements. There exist significant differences between attitude toward smoking before ad and after ad for both physical and social fear treatments and both self and others dimensions. The means of attitude toward smoking for self-dimension were 4.39 (before ad) and 4.66 (after ad), (t=4.08***) under physical treatment, 4.37 (before ad) and 4.78 (after ad) (t=5.63*) under social treatment. For others dimension, the means were 5.30 (before ad) and 5.58 (after ad) (t=2.62**) under physical treatment, 5.34 (before ad) and 5.55 (after ad) (t=2.27**) under social treatment condition. These results support the hypothesis.

However, for the Chinese sample, no significant differences were found in the two treatment conditions. These unexpected results may be attributed to the Chinese subjects not perceiving a strong impact from the ads because the people in the ads had western facial profiles rather than Asian's. The Chinese subjects may consider that the threat would happen to other people but not to themselves.

Since the Chinese subjects held the same attitude toward smoking after viewing advertisements, H1 was only partially supported.

Table 5.13 Summary of Paired t-tests to Test H1

	Canadian		Chinese	
	Mean	t	Mean	t
Physical ad				
SMATTIB1	4.39	4.08***	4.19	-1.48
SMATIIA1	4.66		4.06	
Social ad				
SMATTIB1	4.37	5.63***	4.30	-0.53
SMATTIA1	4.78		4.26	
Physical ad				
SMATTIB2	5.30	2.62**	5.23	0.48
SMATTIA2	5.58		5.27	
Social ad				
SMATTIB2	5.34	2.27**	5.15	
SMATTIA2	5.55		5.31	1.57

Note: *   approaching statistical significance at p<0.10
**   statistical significance at p<0.05
***   statistical significance at p<0.01

H2a to H2c

H2a stated that Canadian subjects would have a more favorable ad attitude after viewing the physical threat advertisement than their Chinese counterparts. ANOVAs were carried out on the mean ratings of the ad attitude for the affective, credible, and cognitive dimensions by culture group. See the results in Table 5.14. Of the three dimensions, only one ad attitude (credible) was significant between the Canadian and the Chinese. Therefore, the results failed to support H2a.

H2b predicted that; following exposure to a physical threat advertisement, Canadian subjects would have a more negative attitude toward smoking than their Chinese counterparts. Analyses of variance were carried out on attitude toward smoking for two dimensions. See the results in Table 5.14. The mean attitude toward smoking for the self-dimension for the Canadians was 4.66, whereas the mean score for the Chinese

sample was 4.06 (F=12.34 p=0.000). The means for attitude toward smoking in others dimension were 5.59 and 5.27 for Canadians and Chinese, respectively (F= 2.86 p=0.06). This indicates that Canadian subjects tended to consider smoking more negatively than their Chinese counterparts after seeing the physical threat ad. H2b was thus supported.

H2c stated that Canadian subjects would have higher behavior intention to stop smoking than their Chinese counterparts following exposure to physical fear ads. ANOVAs were carried out on the two-dimension behavior intentions (present and future), with culture as independent variable. The means obtained for the two groups were significantly different for the two dimensions. The means of behavior intention for the present dimension were 4.14 and 3.86 for the Canadian and Chinese subjects (F=4.60**); the means of behavior intention for the future dimension were 4.82 and 4.53 for the Canadian and Chinese samples (F=2.59*). Therefore, H2c was supported.

To rule out the possibility that the differences in the attitudinal variables and behavior intention were affected by age rather than culture, ANCOVAs were performed with age as a covariate. For the three ad attitude factors, attitude toward smoking for the self dimension, and the two behavior intention factors, the main effects remained significant at p<0.01 level, while the covariate was not significant. These results indicate that there are differences in reaction toward anti-smoking ads due only to cultural differences. To summarize, H2b and H2c were supported.

Table 5.14 Summary of ANOVAs to Test H2a, H2b and H2c

	Mean	F
Ad attitude (affective)		
Canadian	3.96	1.30
Chinese	3.74	
Ad attitude (credible)		
Canadian	4.73	2.93*
Chinese	5.08	
Ad attitude (cognitive)		
Canadian	4.65	0.64
Chinese	4.50	
Attitude toward smoking (self)		
Canadian	4.66	12.34***
Chinese	4.06	
Attitude toward smoking(others)		
Canadian	5.59	2.86*
Chinese	5.27	
Behavior intention (present)		
Canadian	4.14	4.60**
Chinese	3.86	
Behavior intention (future)		
Canadian	4.82	2.59*
Chinese	4.53	

Note: * approaching statistical significance at p<0.10
  ** statistical significance at p<0.05
  *** statistical significance at p<0.01

H3a-H3c

H3a stated that, following a social threat ad; Chinese subjects would have more favorable ad attitudes than their Canadian counterparts.

A series of ANOVAs were carried out to test H3a, H3b, and H3c. As shown in Table 5.14, there were no significant differences between the Canadian and the Chinese samples in terms of ad attitude after they viewed the social fear ads; however, the Chinese subjects rated the affective and credible dimensions somewhat higher than the Canadians. The mean of the affective ad attitude for the Canadians was 3.80, whereas the

mean for the Chinese was 3.83, (F=0.06, p=0.851). The mean of the credible dimension ad attitude for the two samples were 4.82 and 4.91, respectively, (F=0.23, p=0.63). Therefore, H3a was rejected, but a directional support existed.

For the two attitudes toward smoking measures, only one was significant but in the opposite direction. Table 5.15 shows the results of the ANOVA. The mean of attitude toward smoking for the self-dimension was 4.78 for the Canadians and 4.26 for the Chinese, F=10.31, p=0.002. This result indicates that there were significant differences between the two samples on attitude toward smoking for the self-dimension after viewing the social threat ad. However, the attitude toward smoking for the others dimension was similar for the two samples (means of SMATTI2 for the Canadians: 5.55, for the Chinese: 5.31, F=2.05, p= 0.15). H3b was thus rejected.

Table 5.15   Summary of ANOVAs to Test H3a, H3b and H3c

	Mean	F
Ad attitude (affective)		
Canadian	3.80	0.06
Chinese	3.83	
Ad attitude (credible)		
Canadian	4.82	0.23
Chinese	4.91	
Ad attitude (cognitive)		
Canadian	4.47	1.06
Chinese	4.28	
Attitude toward smoking (self)		
Canadian	4.78	10.31***
Chinese	4.26	
Attitude toward smoking(others)		
Canadian	5.55	2.05
Chinese	5.31	
Behavior intention (present)		
Canadian	4.23	10.91***
Chinese	3.52	
Behavior intention (future)		
Canadian	4.61	1.83
Chinese	4.36	

Note: *   approaching statistical significance at p<0.10

**   statistical significance at p<0.05,
*** statistical significance at p<0.01

The same phenomenon was found on behavior intention, the Canadian subjects rated higher behavior intention for the present dimension than the Chinese. The ANOVA results showed that the mean of behavior intention for the present dimension was 4.23 for the Canadians and 3.52 for the Chinese (F=10.91, p=0.001). However, no difference was found between the two samples in term of behavior intention for the future dimension (means of BI2 for the Canadian: 4.61, for the Chinese: 4.36 F=1.83 p=0.18). Thus H3c was also rejected.

H3a, H3b, and H3c were based on social fear as means of persuasion. The reason why there were no significant differences or had opposite directions between the Canadian and the Chinese likely lies in the special situation in China. The practice of giving cigarettes as gifts or as a symbol of friendship is a custom in Chinese society. Chinese subjects might not perceive a strong threat from social fear ads because Chinese society may not exert so much pressure on smokers.

Another possible explanation relates to the manipulation of the social fear ads. We chose the copy that "you'll be rejected/avoided/unwelcome by others because of your smoking." This was to emphasize the intensity of social rejection. However, this kind of rejection actually comes from social rejection in a broad sense, Chinese people may care about being rejected from their parents, children, and friends, but not from an unknown person in the society. This might be why both the Canadian and the Chinese samples had lower fear arousal from the social fear ads than from the physical fear ads (means of fear arousal from the social fear ads: Canadian: 2.82, Chinese: 3.20, means for the physical ads: Canadian: 3.55, Chinese 4.12). Since the impact from the social fear ads was not

strong enough, it is possible that no significant differences were found in this study for this reason.

Finally, it is possible that the Canadians and North Americans have been sensitized through ads to social fear, for instance, toothpaste, mouthwashes, and deodorants, etc. Social fear may be particularly salient because of this. This could be a possible explanation that the Canadian subjects had more negative attitude toward smoking for the self-dimension and higher behavior intention in the present.

Hypotheses 4a to 4c

H4a: Fear arousal will positively affect ad attitude for both Chinese and Canadian respondents;

H4b: Fear arousal will positively affect attitude toward smoking for both Chinese and Canadian subjects;

H4c: Increasing fear arousal will increase behavior intention toward quitting smoking for both Canadian and Chinese subjects.

H4a, H4b, and H4c proposed a relationship between fear arousal and persuasiveness of the ad. A series of regressions were performed with fear arousal as independent variable and ad attitude, attitude toward smoking, as well as behavior intention as dependent variables.

Fear arousal, as predicted, positively affected the cognitive and credible ad attitude measures for the Chinese sample (ad attitude in credible dimension: b=0.197, t=2.57*, ad attitude in cognitive dimension: b=0.140, t= 2.00**). However, no relationship was found between fear arousal and affective ad attitude. In contrast to the Chinese subjects, the Canadian sample showed no relationship between fear arousal and

the cognitive and credible dimensions but rather a negative relationship with affective ad attitude. This violation of H4a might be attributed to the fact that the fear was aroused in the high fear message by means of the picture of a skeleton which may have been be too strong to increase favorable feelings toward the message. This phenomenon was also found in Janis & Terwilliger 's (1962) study on smoking. H4a was thus partially supported.

As shown in Table. 5.16 increasing fear arousal did not result in an increase in attitude toward smoking for both the Canadian and Chinese samples; no significance was found for the relationship between fear arousal and the two dimensions of attitude toward smoking. H4b was thus rejected.

H4c was also partially supported. As shown in Table 5.16, fear arousal positively affected the two behavior intention measures for the Chinese sample (present behavior intention: b=0.263, t=3.83***; future behavior intention: b=0.184,t=2.49*). However, only the future dimension was significant for the Canadian sample (b=0.218, t=3.07***).

Table 5.16   Summary of Regressions to Test H4a, H4b, and H4c

	Canadian		Chinese	
	b	T	b	t
Ad attitude (affective)	-0.127	-2.34**	0.018	0.25
Ad attitude (credible)	0.069	1.18	0.197	2.57*
Ad attitude (cognitive)	0.085	1.37	0.140	2.00**
Attitude toward smoking (self)	0.085	1.59	0.022	0.35
Attitude toward smoking (others)	0.018	0.306	0.073	1.07
Behavior intention (present)	0.073	0.91	0.263	3.83***
Behavior intention (future)	0.218	3.07***	0.184	2.49*

Note: *   approaching statistical significance at p<0.10
      **   statistical significance at p<0.05 ,
      *** statistical significance at p<0.01

Summary of hypotheses testing

The above tests revealed that variation in the levels of fear in anti-smoking ads did produce differences in fear arousal. It can be seen that greater fear was aroused by the high fear ad than the low fear ad for both the Canadian and Chinese samples. Significant differences in fear arousal between high and moderate fear ads were found for the physical fear treatment, but not for the social fear treatment. However, the degree of fear aroused by the moderate fear ad was at least directionally lower than the degree of fear aroused by the higher fear ads for the two culture samples in the present study.

As expected, Canadian subjects experienced attitude change toward smoking in either the self or the others dimensioning. On the other hand, no attitude changes toward smoking in both dimensions was found for the Chinese subjects. A possible explanation might be that the impact from the ads was not strong enough for the Chinese subjects because of the western facial profile in the advertisements.

When facing different types of fear, rooted in the individualistic culture, Canadian subjects had more negative attitude toward smoking and higher behavior intention than their Chinese counterparts after viewing the physical fear ads. It showed that Canadians cared more for their own health and life than the Chinese did. Moreover, There was only one dimension which was significantly different between the Canadian and the Chinese in terms of ad attitude.

The social fear ads didn't have different influences on the two culture groups in terms of the attitudinal variables and behavior intention. These unexpected results may

come from the special smoking environment in China, or perhaps that the manipulation of the advertisements could not create strong impact on the Chinese subjects.

For the relationship between fear arousal and attitudinal variables as well as behavior intention, results were mixed. Generally speaking, a positive relationship between fear arousal and behavior intention for the Canadian and the Chinese samples existed. No significant relationship between fear arousal and attitude toward smoking for either of the two samples was found. There were positive relationships on the cognitive and credible ad attitude dimensions for the Chinese sample and a negative relationship for the affective ad attitude dimension for the Canadian subjects. These results indicate that just merely increasing the intensity of fear could not make Canadian and Chinese subjects change their attitude toward smoking. For the Canadian subjects, higher fear arousal led to negative affective ad attitude contrary to expectations.

A summary of all of the key results is shown in Table 5.17.

Table 5.17 Summary of Hypotheses Testing

	Hypotheses	Results
H1	For both Canadian and Chinese subjects, anti-smoking ads will result in an attitude change in terms of attitude toward smoking.	Partially supported
H2a	Canadian subjects will have more favorable ad attitude after viewing the physical threat advertisements than their Chinese counterparts.	Not supported
H2b	Canadian respondents will report more negative attitude toward smoking after viewing the physical threat advertisements than Chinese respondents;	Supported
H2c	Canadian respondents will report higher behavior intention to stop smoking after viewing the physical threat ads than Chinese respondents;	Supported
H3a	Chinese subjects will have more favorable ad attitude after viewing the social threat advertisements than their Canadian counterparts.	Not supported
H3b	Chinese respondents will report more negative attitude toward smoking after viewing social threat advertisement than Canadian respondents;	Not supported
H3c	Chinese respondents will report higher behavior intention to stop smoking after viewing the social threat ads than Canadian respondents	Not supported
H4a	Fear arousal will positively affect ad attitude for both Chinese and Canadian respondents;	Partially supported
H4b	Fear arousal will positively affect the attitude toward smoking for both Chinese and Canadian respondents;	Not supported
H4c	Increasing fear arousal will increase the behavior intention toward quitting smoking for both Canadian and Chinese subjects.	Partially supported

5.4. Further Exploration on Framework

The results of this exploratory study have uncovered a relationship between type of fear and level of fear with attitudinal variables and behavior intentions for two different cultures when viewing the anti-smoking ads. As shown in Chapter 3, these

86

relationships are an important part in the framework of the study. However, they do not present the whole picture on the fear-persuasion relationship. As shown in the previous section, increasing fear arousal can change ad attitude, but can the change in attitude bring a change in behavior intention? How do other cognitive variables influence subjects from different cultures to react to different fear messages? What are the important factors influencing the Canadians and Chinese to change their attitude and behavior? What would be the model for the Canadians or the Chinese on fear persuasion? It is necessary to go further to explore the relationships in the proposed framework for different cultures. With the purpose of shedding some light for future research in this area, we further explored the relationships among the constructs of the framework presented in Chapter 3.

A series of multiple regressions (stepwise) were performed at two stages. At the first stage, severity, coping response efficacy, self-efficacy, and fear arousal were used as the independent variables. Considering fear arousal may have interactions with the cognitive variables, three interaction variables (severity×fear, fear×coping response efficacy, and fear×self-efficacy) were also treated as independent variables in the multiple regression. The three ad attitude factors and the two factors of attitude toward smoking were used as dependent variables. Tables 5.18 to 5.22 present the results of the multiple regressions. At the second stage, the attitudinal variables became the independent variables and the behavior intention measures were used as dependent variables. Results of these multiple regressions appear in Tables 5.23 to Table 5.24.

Table 5.18 Regression on Ad Attitude1 (affective)

	Physical				Social			
	Canadian		Chinese		Canadian		Chinese	
	b	t	b	t	b	t	b	t
Severity			0.36	2.94***				
Fear	-0.17	-2.56**	-0.19	-1.73*				
Severity ×Fear							0.04	2.37**
R square F	0.08 6.54**		0.10 4.77**		/		0.06 5.61**	

Note: * approaching statistical significance at p<0.10
  ** statistical significance at p<0.05
  *** statistical significance at p<0.01

Table 5.19 Regression on Ad Attitude2 (credible)

	Physical				Social			
	Canadian		Chinese		Canadian		Chinese	
	b	t	b	t	b	t	b	t
Severity			0.34	2.79***				
RE	0.27	2.42**						
SE							-0.17	-1.77*
Fear×RE					0.035	2.56**	0.05	2.72***
R square F	0.074 5.83**		0.09 0.76***		0.08 6.57**		0.10 4.67**	

Note: * approaching statistical significance at p<0.10
  ** statistical significance at p<0.05
  *** statistical significance at p<0.01

88

Table 5.20   Regression on Ad Attitude3 (cognitive)

	Physical				Social			
	Canadian		Chinese		Canadian		Chinese	
	b	t	b	t	b	t	b	t
Fear					0.51	3.32***		
RE			0.42	3.72***	-0.20	-1.80*		
SE			-0.17	-2.02**				
Severity× Fear							0.04	2.44**
SE × Fear					-0.07	-2.50**		
R square F	/		0.19 9.56***		0.14 4.2***		0.06 5.95**	

Note: *   approaching statistical significance at p<0.10
        **   statistical significance at p<0.05
        ***   statistical significance at p<0.01

Table 5.21   Regression on Attitude toward Smoking 1 (self dimension)

	Physical				Social			
	Canadian		Chinese		Canadian		Chinese	
	b	t	b	t	b	t	b	t
Severity							0.27	3.08***
Severity× Fear			0.028	2.37**				
SE × Fear					0.08	3.75***		
SE	-0.33	-4.0***	-0.37	-5.30***	-0.65	-5.5***	-0.23	-3.21***
R square F	0.18 15.96***		0.29 16.92***		0.28 15.45***		0.19 10.12***	

Note: *   approaching statistical significance at p<0.10
        **   statistical significance at p<0.05
        ***   statistical significance at p<0.01

89

Table 5.22   Regression on Attitude toward Smoking 2 (others dimension)

	Physical				Social			
	Canadian		Chinese		Canadian		Chinese	
	b	t	b	t	b	t	b	t
Severity			0.41	4.11***	0.59	7.73***	0.36	3.18***
RE	0.48	4.79***					0.29	2.35**
SE			-0.18	-2.19**				
R square F	0.24 22.94***		0.21 11.32***		0.43 59.70***		0.31 19.07***	

Note: *   approaching statistical significance at p<0.10
        **   statistical significance at p<0.05
        ***   statistical significance at p<0.01

Table 5.23   Regression on Behavior Intention1 (present dimension)

	Physical				Social			
	Canadian		Chinese		Canadian		Chinese	
	b	t	b	t	b	t	b	t
Ad atti1					0.34	1.95*		
Ad atti2					0.37	2.30**		
Ad atti3					-0.49	-3.31***	0.26	2.27**
Smokatti1	0.44	2.52**	0.40	3.99***	0.68	4.25***	0.42	3.32***
Smokatti2								
R square F	0.08 6.37**		0.16 15.92***		0.24 6.06***		0.17 8.88***	

Note: *   approaching statistical significance at p<0.10
        **   statistical significance at p<0.05
        ***   statistical significance at p<0.01

Table 5.24   Regression on Behavior Intention 2 (future dimension)

	Physical				Social			
	Canadian		Chinese		Canadian		Chinese	
	b	t	b	t	b	t	b	t
Ad atti1								
Ad atti2	-0.25	-1.79*						
Ad atti3								
Smokatti1	0.67	4.48***	0.36	2.65**				
Smokatti2	0.29	2.05**					0.37	3.58***
R square F	0.29 9.98***		0.08 7.03***		/ 		0.13 12.69***	

Note: *   approaching statistical significance at p<0.10
　　　　 **   statistical significance at p<0.05
　　　　 ***   statistical significance at p<0.01

From these results, we can generalize some common characteristics for both the Canadian and Chinese samples.

1. One cognitive variable, self-efficacy, was negatively related to attitude toward smoking for the self dimension for both Canadian and Chinese subjects and for both the physical and social fear conditions (Canadian/physical: b=-0.33, t=-4.0***, Chinese/physical: b=-0.37, t=-5.30***, Canadian/social: b=-0.65, t=-5.50***, Chinese/social: b=-0.23, t=-3.21***). It can be concluded that the more confidence the subjects had, the more negative the attitude toward smoking. This finding is consistent with the majority of research within the fear-persuasion area.

91

2. The Chinese and the Canadian subjects had the same reaction after viewing the physical fear anti-smoking ad in terms of the relationship between fear and ad attitude for the affective dimension (Canadian: b=-0.17, t=-2.25**, Chinese: b=-0.19, t=-1.73**). The higher the fear arousal, the more negative the ad attitude for the affective dimension. This is because the vivid picture in the moderate and high fear ads created very strong fear; some respondents reported that the strong image made them feel uncomfortable, thus smokers under this kind of situation could not rate the ad as likeable or pleasing.

3. When facing the social fear ads, both Canadian and Chinese had a positive relationship between the severity and attitude toward smoking for the others dimension (Canadian: b=0.59, t=7.73***, Chinese: b=0.36, t=3.18***). It indicates that a strong social rejection can result in a more negative attitude toward smoking for the others dimension, which was also confirmed in previous studies (Ho 1998; Schoenbachler and Whittler 1996).

4. After viewing the physical fear ads, attitude toward smoking (self dimension) affected Canadian and Chinese behavior intention to stop smoking in either the present or future dimensions. (present BI/ Canadian: b=0.44, t=2.52**, present BI/Chinese: b=0.40, t=3.99***, future BI/Canadian: b=0.67, t=4.48***, future BI/Chinese: b=0.36, t=2.65**). As for the social fear ad, attitude toward smoking influenced the behavior intention only in the present dimension for both Canadian and Chinese (Canadian: b=0.68, t=4.25***; Chinese: b=0.42, t-3.32***). This finding indicates that the attitude toward

smoking is an important predictor to change behavior for both Canadian and Chinese.

It should be mentioned the fact that the coefficients for the Canadian sample were relatively higher than the Chinese sample which reflect a consistence with the supported hypotheses 2b and 2c.

5. Fear and coping efficacy had an interactive effect on ad attitude for the credible dimension in the social fear treatment for the two samples (Canadian: $b=0.04$, $t=2.56^{**}$, Chinese: $b=0.05$, $t=2.72^{***}$). However, the severity and fear didn't have main effects on this attitudinal variable.

Apart from the above common grounds found for the two samples, it is also interesting to explore their differences. From the above tables, it can been seen that despite the differences in the two samples, there still existed some patterns which can be generalized. This is the topic to which we now turn to.

First of all, it can be seen from the tables that the behavior intention was affected mainly by the attitude toward smoking rather than by the ad attitude for the Chinese sample in the physical conditions. However, for the Canadian sample, ad attitude and attitude toward smoking together affected the behavior intention to quit smoking, particularly, the credibility dimension of the ad attitude which was influenced by both the physical and social fear ads. This means that the more credible Canadian subjects perceived the message, the more their behavior intention changed. Therefore, when persuading Chinese people to give up smoking, the attitude toward smoking that they hold should be an important factor that could be affected. However, for the Canadians,

both ad attitude and attitude toward smoking should be considered as important predictors to change behavior intention.

Secondly, except for self-efficacy which had an effect on attitudinal variables for both samples, the second main variable influencing attitude was different between the two samples. Canadian subjects were affected by their evaluation of coping response efficacy in both the physical and social fear treatment conditions. If they believed that stopping to smoke could reduce the physical or social threat, they would have more positive attitude toward the ad and more negative attitude toward smoking. Chinese subjects, on the other hand, were more affected by the severity of the threat rather than coping efficacy. Since the Chinese society is a high uncertainty culture, the Chinese avoid risk more than the Canadians who are low uncertainty avoidance culture. Also, since the Chinese have a higher external locus of control than the Canadians; they could perceive higher severity when they read the ad and form their attitude. The higher the severity they perceived, the more negative the attitude toward smoking they could form.

It should be mentioned here that the attitude toward smoking was influenced through the interaction of severity and fear although there were not main effects of both of them in the physical fear treatment for the Chinese subjects. Therefore, when choosing fear appeals as an advertising strategy for the Chinese, it is important to incorporate more information about the severity of the threat in the message. For Canadians, coping response efficacy can be an important consideration.

Another interesting phenomenon is that social fear advertisement has an influence on attitude toward smoking only for the self-dimension for the Canadian subjects, no

such an influence was found in the others dimension. This agrees with the results in the literature which confirm that the Canadians are more individualistic.

Based on the statistical results of the multiple regressions and the above discussion on this exploratory analysis, the final models for the Canadians and the Chinese on fear-persuasion patterns can be established. See Figures 8, 9, 10, and 11. Only significant paths ultimately leading to behavioral intention changes are depicted on these schemes.
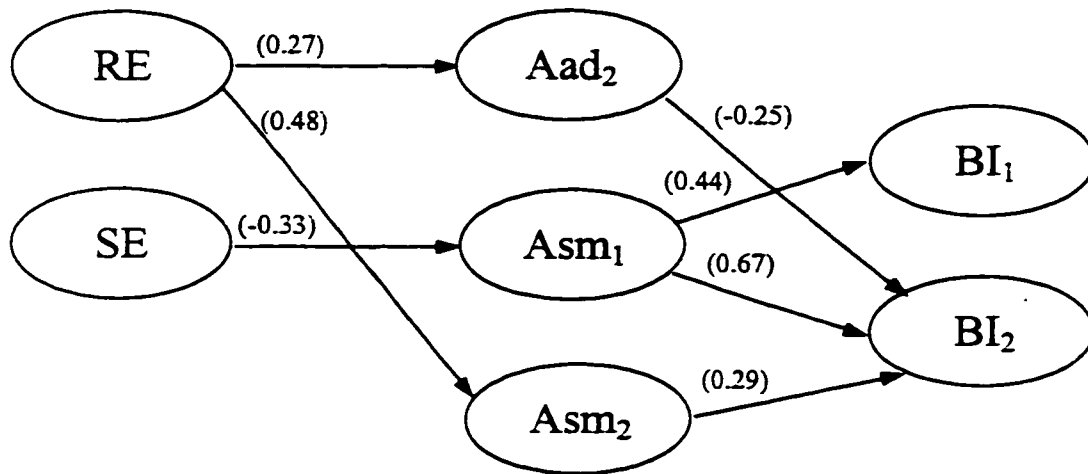
Figure 8: Model for the Canadians on Physical Fear Treatment.
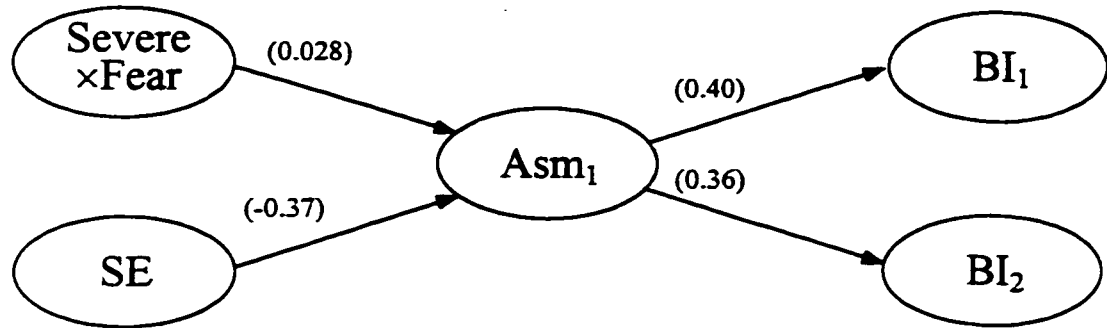
Figure 9: Model for the Chinese on Physical Fear Treatment.
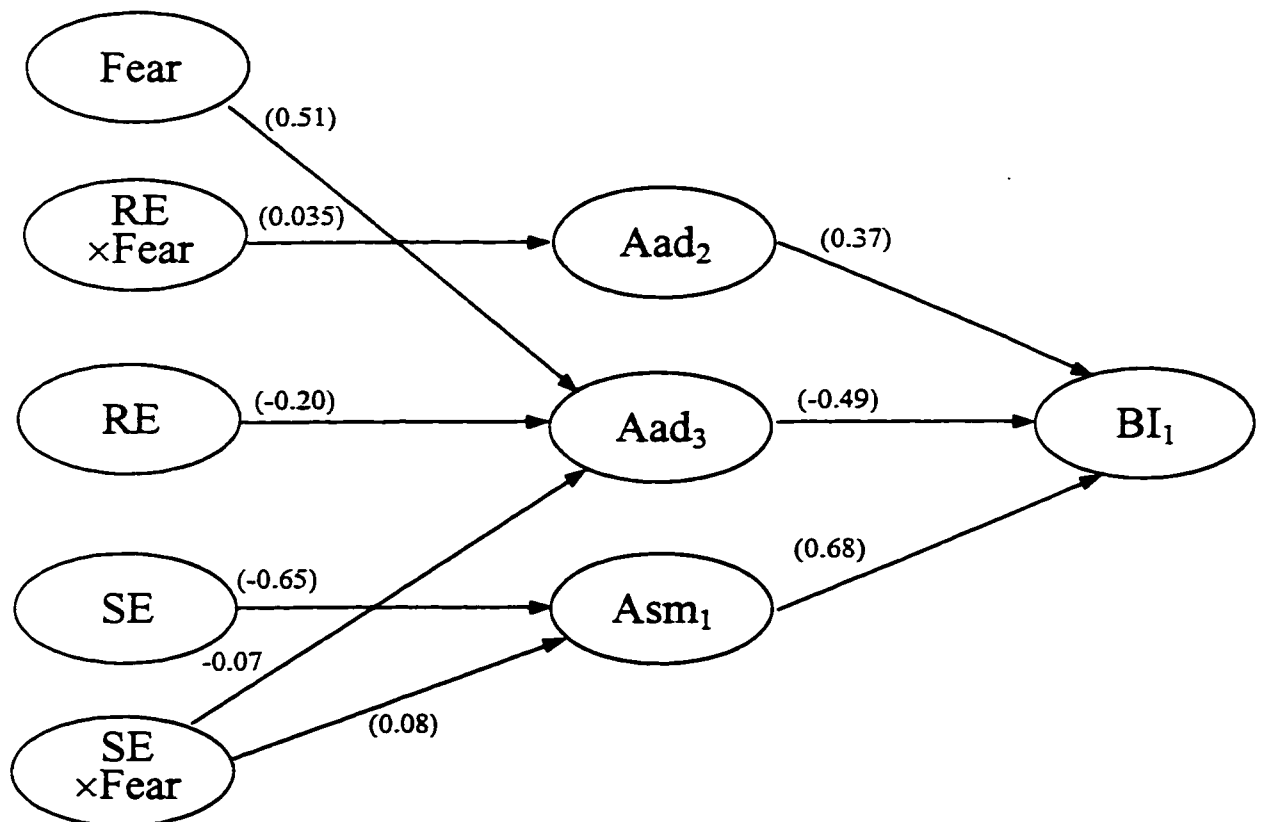
Figure 10: Model for the Canadians on Social Fear Treatment.
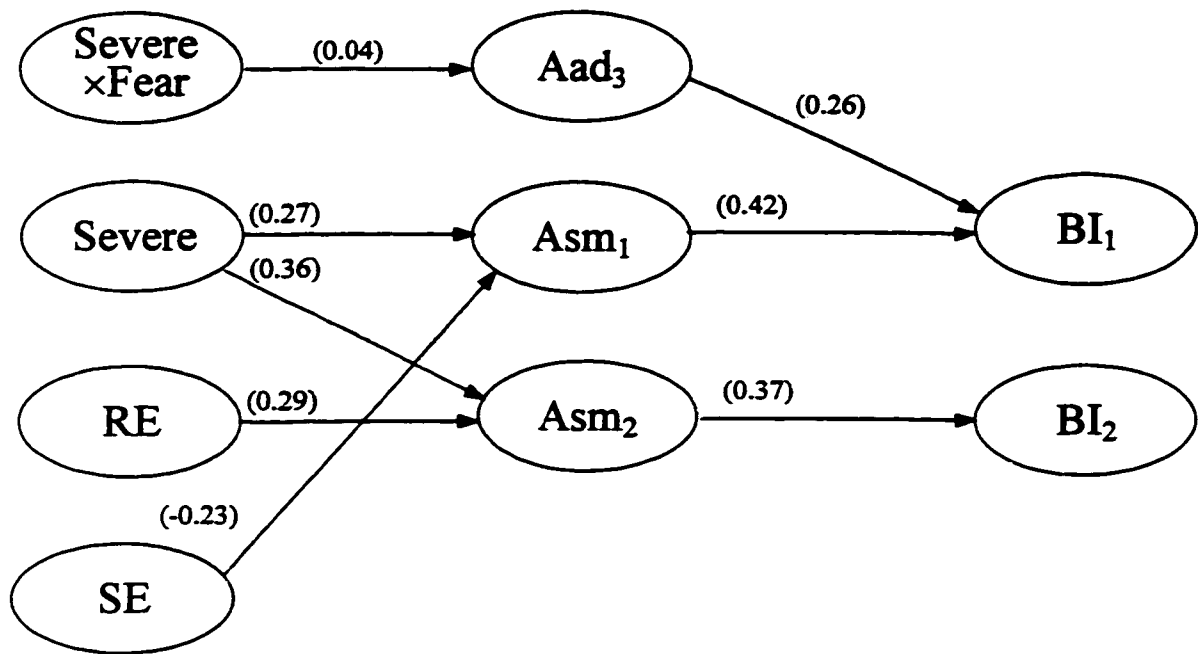
Figure 11: Model for the Chinese on Social Fear Treatment.

CHAPTER 6

DISCUSSION AND CONCLUSIONS

6.1. Discussion of the Findings and Implications

This study explored the effects of cultural differences between Canadian and Chinese on fear appeals communication. Two types of fear (physical and social) and three levels of fear (high, moderate, and low) were produced through different print ads to form the different experimental treatments. We measured attitudinal variables including ad attitude along three dimensions (affective, credible, and cognitive), attitude toward smoking at two dimensions (self and others), and behavior intention to quit smoking at present and in the future. Several cognitive variables were also measured to explore the mechanisms of fear-persuasion on these two cultures. They were severity of the threat, coping response efficacy, self-efficacy, as well as fear arousal as an emotional response to the fear message.

The comparisons focused on the effect of type of fear on persuasion and the level of fear on persuasion for the two cultural groups. We further examined the influence of cognitive variables on the mechanisms of persuasion and tried to find the specific models for both the Canadian and Chinese groups.

Two out of three hypotheses on the effect of physical fear ads were confirmed. Belonging to an individualistic culture, the Canadians had more negative attitudes toward smoking and higher intention to quit smoking than Chinese subjects after viewing the physical fear advertisement. Three hypotheses about social fear ads were not supported even though one had directional support which indicated that the effectiveness of social

fear advertisements was similar for both Canadian and Chinese subjects in the present study. Two possible reasons for the failure to support the hypotheses may stem from the manipulation of the social fear ads and the special situation of smoking in China. Three additional hypotheses regarding the relationships between level of fear and the effectiveness of the ads did not find entire support. Two of them were partially supported which confirmed that increasing fear arousal resulted in either ad attitude change or behavior intention change for the two samples.

Notwithstanding the failure to obtain significant results for several hypotheses, the significant findings can help us better understand how Canadians and Chinese students view different fear appeal messages. In sum, fear appeal messages can persuade Canadian subjects to change their attitude toward smoking for both self and others dimensions. The Chinese subjects hold the same attitude toward smoking after viewing the ads. As for type of threat in the message, the physical fear advertisements were found to be more persuasive for the Canadians as compared to the Chinese subjects in terms of attitude toward smoking and behavior intention. No significant differences were found between the two culture groups for the attitude and behavior intention change after viewing social fear ads in this study. Moreover, increasing fear arousal did not result in a change of attitude toward smoking for both the Canadian and the Chinese samples. However, it did affect the ad attitude and behavior intention of the future dimension for the two samples.

Since this was a first step in trying to introduce culture in fear-persuasion mechanisms, the exploration on the framework shed some light in this area for future research. To get successful persuasion on fear appeal messages, self-efficacy is an

important cognitive variable. In the present study, significant effects were found on attitude toward smoking for both the Canadian and the Chinese samples whether under physical or social fear treatments. Attitude toward smoking, in turn, influenced behavior intention to quit smoking. This finding is consistent with the results of the study of Sturges and Rogers (1996) about cigarettes smoking which also confirmed that self-efficacy was an important variable on fear persuasion.

Besides self-efficacy, more effective persuasion will come from coping response efficacy for Canadians and information about severity of threat for the Chinese. Since the Chinese belong to a high uncertainty avoidance culture and are more oriented towards an external locus of control, Chinese people might be more concerned on "how serious is the threat that I will face?" On the other hand, with high self-acceptance and more internal locus of control, the Canadians are more concerned with items such as "if the recommendation in the message will work well?" or "if I'm able to adopt this behavior?" Therefore, as we have mentioned in the literature review, people in different cultures react to fear appeal messages in different ways.

The final models for the Canadian and Chinese samples on the physical and social fear treatments show us specific pictures on fear-persuasion mechanisms in different cultures and provide some guidance for further research.

Another theoretical implication of this study is that the effectiveness of social fear appeal was tested. As mentioned in Chapter 2, in over forty years of fear-persuasion research, few studies have dealt with social fear, and empirical tests comparing social and physical fear are rare. This study has showed that it is meaningful to compare the effect

of the two types of fear appeals on different cultures, and no doubt the findings will contribute to further research.

The findings also have practical implications. It will be useful for public service organizations and government agencies when choosing appropriate fear messages to persuade different people to behave or not to behave in certain ways. Likewise, for example, if marketers introduce the credit card to the Chinese consumer using the fear advertising strategy, one emphasis could be on the severity of the risks of not having a credit card, such as money lost, being robbed, and so on.

6.2. Limitations and Future Research

Limitations

As in all studies, there exist some limitations. First of all, to match the equivalence for the cross-cultural comparison, only male smokers were chosen in this study due to the specific topic—smoking. In the Chinese society, female smokers are not respected, particularly, in the university. Women thus were not included in the present study. Undoubtedly, that some bias could arise due to the fact that many Canadian women also smoke particularly in the university. Therefore, it is hard to generalize our findings to women until more research including both men and women also confirm our results.

Second, to examine more in depth the cognitive mechanisms of fear-persuasion, cognitive variables such as severity of threat, probability of threat, coping efficacy, and self-efficacy should be included in the manipulation. This could thus provide a more

comprehensive picture of the study although it would be more complicated and would demand more requirements from researchers.

Third, the level of fear has been recognized as the most difficult aspect of the manipulation by the researchers in the fear persuasion area, particularly, the manipulation three levels of fear. In the present study, the manipulation only succeeded at high and low level of fear, but not at moderate level of fear. Furthermore, the context in the social fear manipulation was too general to create strong impact on the subjects. It might be a possible reason as to why the hypotheses about the social fear messages were not supported. Moreover, as Lavack (1997) questioned in her research, if different people may fear different things, then fear-persuasion may be topic oriented. The present study only chose smoking as a topic. To generalize our findings, other empirical work on other topics such as drinking and driving might be necessary.

These limitations may affect the generalizability of the results, but are also important in terms of pointing out research extensions or areas for future research.

Future Research

There are many opportunities for future research which stem from this study. Replications of this experiment using a variety of other topics, for example, drug use, drinking and driving, and dental hygiene could be a fruitful area of research, which would extend the generalizability of the study. Additionally, replicating the experiment using different media for example, television ads, would also be a meaningful study to achieve greater generalization.

The present study only chose Canadian and Chinese subjects to represent two different cultures. Future research could replicate the experiment on subjects from other

cultures, for example, other Asian countries and North American countries. That would add more to the body of knowledge of cross-cultural advertising research.

The target subjects of this study were smokers and fear appeals advertisements were used to persuade smokers to quit smoking. This raises another question: How can fear appeal ads persuade people, say non-smokers, to avoid the use of cigarette? Will the same mechanisms apply? Would the cultural differences still exist for non-smokers? These are all potential questions to be addressed in future research.

As already mentioned, further research can be designed to manipulate cognitive variables to further examine cultural differences on fear-persuasion mechanisms. This might provide an important contribution to academic research.

Finally, a causal model incorporating the causal paths suggested and interaction effects could be applied to further assess the relationships between the cognitive, attitudinal, and behavioral variables and the moderating effects of culture.

Conclusion

This exploratory study examined the effect of cultural differences on persuasion of fear appeals communication through an experimental design between the Canadian and Chinese subjects. The study for the first time built hypotheses and models on fear appeals and culture. We believe that the results will add to the body of knowledge in cross-cultural communications and fear-persuasion research. In spite of the complexities of the cross-cultural research methods and problems associated with data collection, research in this area is likely to grow. This is even more needed given the growing trend toward globalization. Hopefully, the theoretical contributions of this paper will be an important step to initiate a stream of cross-cultural studies on fear appeals.

REFERENCES

Abernethy, Avery M. & Teel, Jesse E. (1986). "Advertising Regulation's Effect Upon Demand for Cigarettes". *Journal of Advertising*, 5, pp.51-55.

Allberg, Walter Ray, (1989)."Enhancing Smoking Cessation Treatment Outcome: A Comparison Between Two Short-term Smoking Cessation Programs Based on Protection Motivation Theory", ", Unpublished Doctoral Dissertation, New Mexico State University (United State).

Beck, Kenneth H. and Clive M. Davis (1978). "Effects of Fear-arousing Communication and Topic Importance on Attitude Change". *Journal of Social Psychology*, 104, pp.81-95.

Beck, Kenneth H. and Arthur Frankel (1981). "A Conceptualization of Threat Communications and Protective Health Behavior". *Social Psychology Quarterly*, 11, pp.204-217.

Berger, E. (1952). "The relationship between Expressed Acceptance of Self and Expressed Acceptance of Others", *Journal of Abnormal and Social Psychology*, 47, pp.8778-882.

Berkowitz, Leonard and Donald R. Cottingham (1960). "The Interest Value and Relevance of Fear Arousing Communications", *Journal of Abnormal and Social Psychology*, 68(1), pp.37-43.

Bond, M. H. (1991). "Beyond the Chinese Face: Insight From Psychology", New York: Oxford University Press.

Bond, M.H., Leung, K. and Wan, K. (1982). "The Social Impact of Self-Effecting Attribution: the Chinese Case". *Journal of Social Psychology*, 118, pp.157-166.

Boster, Franklin J. and Paul Mongeau (1984). "Fear-Arousing Persuasive Messages", *Communications Yearbook*, 8, pp. 330-375.

Burnett , John J. (1981). "Internal-External Locus of Control as a Moderate of Fear Appeals". *Journal of Applied Psychology*, 66, pp. 90-393.

Burnett, John J. and Robert E. Wilkes (1980), "Fear Appeals to Segments Only", *Journal of Advertising Research*, 20, pp.21-24.

Burnett, John J. and Richard L. Oliver (1979). "Fear Appeal Effects in the Field: A Segmentation Approach", *Journal of Marketing Research*, 16, pp.181-190.

Buss, A., & Royce, J. B. (1975). "Detecting Cross-cultural Commonalities and Difference : Intergroup Factor Analysis ", *Psychological Bulletin*, 82, pp. 128-136.

Chan, Chi-fai (1991). "The Anti-smoking Campaign in Hong Kong: Communication and Attitudinal Perspectives". *International Journal of Advertising*, 10, pp.349-357.

Chan D. K. (1994). "COLINDEX: "A Refinement of Three Collectivism Measures ", Individualism and Collectivism: Theory, Method, and Applications, Sage publications, pp.200-203.

Chebat, Jean-Charles, Laroche, Michel, and Filiatrault, Daisy Badura Pierre (1995). "Affect and Memory in Advertising: An Empirical Study of the Compensatory Processes", *Journal of Social Psychology*, 135(4), pp.425-437.

Chiu, L. H. (1992). "Self-esteem in American and Chinese (Taiwanese) Children", *Current psychology: Research and Reviews*, 11(4), pp.309-313.

Crittenden, Kathleen, S. (1991). "Asian Self-Effacement Attributional Patterns of Women University Students in Taiwan", *Gender and Society*, 5, pp.98-117.

Dabbs, J. M. and Leventhal, H. (1966). "Effects of Varying the Recommendations in a Fear-arousing Communication", *Journal of Personality and Social Psychology*, 4, pp 525-531.

Dembroski, Theodore M., Thomas M. Lasater, and Albert Ramirez (1978). "Communicator Similarity, Fear Arousing Communications and Compliance with Health Care Recommunications", *Journal of Applied Social Psychology*, 8, pp.254-269.

Dillard, James Prices (1994). "Rethinking the Study of Fear Appeal: An Emotional Perspective", *Communication Theory*, 4, pp.295-323.

Dziokonski, Walter and Weber, Stephen J. (1977). "Repression-sensitization, Perceived Vulnerability, and the Fear Appeal Communication", *Journal-of-Social-Psychology*, 102, pp.105-112.

Eagly, Alice H. and Shelly Chaiken (1993). The Psychology of Attitudes, Orlando, FL: Harcourt Brace Jovanovich.

Efran, J. S. (1964). "Some Personality Determinations of Memory for Success and Failure", Dissertation Abstract. Ohio State University.

Eppright, David R., Tanner, John F., Jr., and Hunt, James B. (1994). "Knowledge and the Ordered Protection Motivation Model: Tools for Preventing AIDs", *Journal of Business Research*, 30 pp.13-24.

Evans, R. I. Rozelle, R. M., Lasater, T. M., Dembrosky, T. M., and Allen, N. P. (1970). "Fear Arousal, Persuasion, and Actual versus Implied Behavioral Change", *Journal of Personality and Social Psychology*, 82, pp.220-227.

Feingold, Paul C. and Mark L. Knapp (1977). "Anti-Drug Abuse Commercials", *Journal of Communications*, 27, pp.20-28.

Farley, F. H. and Mealies, W. L. (1972). "Fear and Locus of Control", *Psychology*, 9, pp.10-12.

Frandsen, K. (1963). "Effects of Threat Appeals and Media of Transmission", *Speech Monographs*, 30, pp.101-104.

Guagnano, Greg, Curt Acredolo, Gelenn Hawkes, Steve Ellyson, and Nang White (1986). "Locus of Control : Demographic Factors and Their Interactions"., *Journal of Social Behavior and Personality*, 1, pp.365-380.

Gudykunst, W. B. and Ting-Toomey, S. (1988). "Culture and Interpersonal Communication", Newbury Park, CA: Sage.

Haefner, D. (1965). "Arousing Fear in Dental Health Education", *Journal of Public Health Dentistry*, 25, pp.140-146.

Hall, E. T. & Hall, M. R. (1990). Understanding Cultural Difference: Germans, French and Americans. Yarmouth, ME: Intercultural Press.

Hamid, Nicholas P. (1994). "Self-monitoring, Locus of Control, and Social Encounters of Chinese and New Zealand Student", *Journal of Cross-cultural Psychology*, 25, pp.353-368.

Han, Sang-Pil and Shavitt. Sharon (1994). "Persuasion and Culture: Advertising Appeals in Individualistic and Collectivistic Societies", *Journal of Experimental Social Psychology*, 30, pp.326-350.

Health Canada, (1994). Survey on Smoking in Canada. Summary Highlights Cycle 3,1 (Nov).

Hewgill, Murray A. and Gerald R. Miller (1965). "Source Credibility and Response to Fear-Arousing Communication", *Speech Monographs*, 32, pp.95-101.

Higbee K. (1969). "Fifteen Years of Fear Arousal: Research on Threat Appeals", *Psychological Bulletin*, 72, pp.426-444.

Hill, Ronald P., (1988) "An Exploration of the Relationship Between AIDS-Related Anxiety and the Evaluation of Condom Advertisements", *Journal of Advertising*, 17, pp.35-42.

Ho, Robert (1998), "The Intention to Give Up Smoking: Disease Versus Social Dimensions", *Journal of Social Psychology*, 138(3), pp.369-380.

Hofstede, G (1980). "Culture's Consequences: International Differences in Work-related Values", Beverly Hills, CA: Sage.

Hofstede, G (1983). "Dimensions of National Culture in Fifty Countries and Three Regions", In J. Deregrowski et al. (Eds.), *Explication in Cross-cultural Psychology*. Lisse, The Netherlands: Swets and Zeitlinger.

Hofstede, G and Bond, M. H. (1984). "Hofstede's Culture Dimensions: An Independent Validation Using Rokeach's Value Survey", *Journal of Cross-Cultural Psychology*, 15, pp.417-433.

Hong Kong Council on Smoking and Health (1998), *http://www.onfo.gov.hk.*

Hu, The-Wei, Sung, Hai-Yen, and Theodore e. Keeler (1995). "Reducing Cigarette Consumption in California: Tobacco Taxed vs. an Anti-smoking Media Campaign". *American Journal of Public Health* 85, pp.1218-1222.

Hui , C. H. and H. C. Traiandis (1986). "Individualism-collectivism: A Study of Cross-Cultural Researchers", *Journal of Cross-Cultural psychology*, 17,pp. 225-248.

Janis Irving (1967). "Effects of Fear Arousal on Attitude Change: Recent Developments in Theory and Experimental Research," *Advances in Experimental Social Psychology*. Vol.3 New York: Academic Press,

Janis Irving & Feshbach, Seymour (1953)."Effects of Fear-arousing Communications", *Journal of Abnormal and Social Psychology*, 48, pp 78-92.

Janis Irving and Feshbach, Seymour (1954). "Personality Differences Associated with Responsiveness to Fear-Arousing Communications", *Journal of Personality*, 23, pp.154-166.

Janis Irving and Robert F. Terwilliger (1962). "An Experimental Study of Psychological Resistances to Fear Arousing Communications," *Journal of Abnormal and Social Psychology*, 65, pp.403-410.

Johnson, Lester W. (1986). "Advertising Expenditure and Aggregate Demand for Cigarettes in Australia", *International Journal of advertising*. 5, pp.45-58.

Karlins M. and H. I. Aberlson (1970). Persuasion, 2nd ed, New York: Springer Publishing.

Keller, Punam, A. and Block, Lauren G. (1996). "Increasing the Persuasiveness of Fear Appeals: The Effect of Arousal and Elaboration" *Journal of Consumer Research,* 22, pp.448-459.

King, Karen W. and Reid, Leonard N. (1990). "Fear Arousing Anti-drinking and Driving PSAs: Do Physical Injury Threats Influence Young Adults", *Journal of Current Research and Issues in Advertising,* 12, pp.155-175.

Lao, Rosina (1978). "Levenson's IPC Scale: A Comparison of Chinese and American Students", *Journal of Cross-Cultural Psychology,* 9, pp.113-122.

LaTour, Michael S. and Robert E. Pitts (1989). "Using Fear Appeal in Advertising for AIDs Prevention in the College-Age Population", *Journal of Health Care Marketing,* 9, pp.5-14.

Lavack, Anne Marie (1997) "Fear Appeals in Social Marketing Advertising", Unpublished Doctoral Dissertation, The University of British Columbia (Canada), 1997.

Leventhal, Howard. (1970). "Findings and Theory in the Study of Fear Communications" in Advances in Social psychology. L. Berkowitz, ed., Academic Press, New York,

Leventhal, Howard and P. Niles (1964). "A Field Experiment on Fear Arousal with Data on Validity of Questionnaire Measure", *Journal of Personality,* 32, pp.459-479.

Leventhal, Howard, and Robert Singer, and Susan Jones (1965). "Effects of Fear and Specificity of Recommendation Upon Attitudes and Behavior", *Journal of Personality and Social Psychology,* 2(1), pp.20-29.

Leventhal, Howard, and Trembly, G. (1968). "Negative Emotion and Persuasion", *Journal of Personality,* 36, pp.154-168.

Leventhal, Howard, and Watts, J. (1966). "Source of Resistance to Fear-Arousing Communications on Smoking and Lung Cancer", *Journal of Personality,* 34, pp.155-175.

Leventhal, Howard and S. I. Perloe, (1962), "A Relationship Between Self-esteem and Persuasibility ", *Journal of Abnormal and Social Psychology,* 64, pp.385-388.

Levenson, H. (1973). "Reliability and Validity of the I. P. and C Scales: A Multidimensional View of Control ", Paper presented at the meeting of Americium Psychological Association, Montreal September.

Maddux, James E. and Ronald W. Rogers (1983). "Protection Motivation and Self-Efficacy: A Revised Theory of Fear Appeals and Attitude Change", *Journal of Experimental Social Psychology*, 19, pp.467-479.

Marsellar, A. J. and Hsu, F. L. K. (1985). Culture and Self: Asian and Western Perspectives, London: Tavistock Publications.

Millman, S. (1968). "Anxiety, Comprehension and Susceptibility to Social Influence", *Journal of Personality and Social Psychology*, 9, pp.251-256.

Miller, Gerald R. and Murray A. Hewgill (1966). "Some Recent Research on Fear-Arousing Message Appeals", *Speech Monographs*, 33, pp.377-391.

McGuire, W.(1968). "Personality and Susceptibility to Social Influence", in E. Borgatta and W. Lambert, eds. Handbook of personality Theory and Research, Chicago: Rand McNally.

McGuire, W., J. (1976). "Some Internal Psychological Factors Influencing Consumer Choice", *Journal of Consumer Research*, 2, pp.320-319.

O'Keefe, Timothy M. (1971). "The Anti-smoking Commercials: A Study of Television's Influence", *Public Opinion Quarterly*, 35, pp.242-248.

Paschal, B. J. and Kuo, Y. y. (1973). "Anxiety and Self-concept among American and Chinese College students", *College Student journal*, 7(4), pp.7-13.

Powell, Frredric and Gerald R. Miller (1967). "Social Approval and Disapproval cues in Anxiety-Arousing Communications" *Speech Monographs*, 34, pp.152-159.

Ramirez, A., and Lasater, T. M. (1977). "Ethnicity of Communicators, Self-esteem, and Reactions to Fear-arousing Communications", *Journal of Social Psychology*, 102, pp.79-91.

Ray, Michael L. and William L. Wilkie (1970). "Fear: The Potential of an Appeal Neglected by Marketing", *Journal of Marketing*, 34, pp.54-62.

Redding, S. G. (1980). "Cognition as an Aspect of Culture and Its Relation to Management Processes: an Exploratory View of the Chinese Case", *The Journal of Management Studies*, 8, pp.126-148.

Rippetoe, Patricia A., and Ronald W. Rogers (1987). "Effects of Components of Protection-Motivation Theory on Adaptive and Maladaptive Coping with a Health Threat" *Journal of Personality and Social Psychology*, 52, pp.596-604.

Robberson, Margaret R. and Rogers, Ronald W. (1988). " Beyond Fear Appeals: Negative and Positive Persuasive Appeals to Health and Self-Esteem. " *Journal of Applied Social Psycholoy*, 18, pp.277-287.

Rogers, Ronald W. and C. William Deckner. (1975) "Effects of Fear Appeals and Psychological Arousal Upon Emotion, Attitudes and Cigarette Smoking" *Journal of Personality and Social Psychology* 32, pp. 220-230.

Rogers, Ronald W. (1975). "A Protection Motivation Theory of Fear Appeals and Attitude Change", *Journal of Psychology*, 91, pp.93-114.

Rogers, Ronald W. (1983) "Cognitive and Physiological Processes in Fear Appeals and Attitude Change: A Revised Theory of Protection Motivation", in *Social Psychophysiology*. J. Cacioppo and R. Petty, eds., The Guilford press, New York, pp.153-174.

Rogers, Ronald W. and C. Ronald Mewborn (1976). "Fear Appeal and Attitude Change: Effects of a Threat's Noxiousness, Probability of Occurrence and Efficacy of Coping Responses" *Journal of Personality and Social Psychology*, 34, pp 54-61.

Rogers, Ronald W. and Donard L. Thistlethwaite (1970). "Effects of Fear Arousal and Reassurance on Attitude Change", *Journal of Personality and Social Psychology*, 15(3), pp.227-233.

Rogers, R. W., Deckner, C. W., and Mewborn, C. R. (1978). "An Expectancy-value Theory Approach to the Long-term Modification of Smoking behavior", *Journal of Clinic Psychology*, 34, pp.562-566.

Rosenberg, M. (1965). "Society and Adolescent Self-image", Princeton, NJ: Princeton University Press.

Roser, Connie and Thompson, Margaret (1995). " Fear Appeals and the Formation of Active Publics", *Journal of Communication*, 45, pp.103-121.

Rousseau, Diane (1997). "Effectiveness of Fear Appeals in Anti-smoking Advertisements", Unpublished Master Thesis, Department of Marketing, Concordia University (Canada).

Sastry, Jaya and Ross, C. E. (1998). "Asian Ethnicity and the Sense of Personal Control", *Social Psychology Quarterly*, 61, pp.101-120.

Schoenbachler, Denis D. and Whittler, Tommy E. (1996). "Adolescent Processing of Social and Physical Threat Communications", *Journal of Advertising*, 25, pp.38-54.

Schwartz, S. H., (1994), "Beyond Individualism/Collectivism: New Culture Dimensions of Values", in *Individualism and Collectivism: Theory, Method, and Applications*, Sage Publications pp.85-119.

Shelton, Mary L. and Rogers, Ronald W., (1981), "Fear-Arousing and Empathy-Arousing Appeals to Help: The Pathos of Persuasion", *Journal-of-Applied-Social-Psychology*, 11, pp.366-378.

Smart, Reginal G. and Dianne Fejer (1974). "The Effects of High and Low Fear Messages About Drugs" *Journal of Drug Education*, 4, pp.225-236.

Sturges, J. W. and Rogers, R. W. (1996). "Preventive Health Psychology From a Developmental Perspective: An Extension of Protection Motivation Theory", *Health Psychology*, 16, pp.158-166.

Sutton, Stephen (1982). "Fear Arousing Communications: A Critical Examination of Theory and Research", *Social Psychology and Behavioral Medicine*, pp.303-337.

Tanner, John F. Ellen Day, and Melvin R. Crask (1989). "Protection Motivation Theory: an Extension of Fear Appeal Theory in Communication" *Journal of Business Research* 19, pp.267-276.

Tanner, John F. Jr., James B. Hunt, and David R. Eppright (1991). "The Protection Motivation Model: A Normative Model of Fear Appeals" *Journal of Marketing*, 55 (July), pp.36-45.

Ting-Toomey, S. (1991). "Intimacy Expression in Three Cultures: France, Japan, and the United States", *International Journal of Intercultural Relations*, 15, pp.29-46.

Toffoli, R. (1997). "The Moderating Effects of Culture on Cognitive Responding Mechanisms Toward Advertising Message Sidedness", Unpublished Doctoral Dissertation, Department of Marketing, Concordia University (Canada).

Triandis, H. C. (1989). "The Self and Social Behavior in Differing Cultural Contexts", *Psychological Review*, 96 (3), pp.506-520.

Witte, Kim (1992). "Putting the Fear Back into Fear Appeal: The Extended Parallel Process Model", *Communication Monographs*, 56, pp.285-290.

Witte, Kim (1993). "Message and Conceptual Confounds in Fear Appeal: The Role of Threat, Fear and Efficacy", *Southern Communication Journal*, 58, pp.147-155.

Witte, Kim (1994). "Fear Control and Danger Control: A Test of the Extended Parallel Process Model (EPPM), *Communication-Monographs*, 61, pp.113-134.

Witte, Kim (1998). "Fear as Motivator, Fear as Inhibitor: Using the Extended Parallel Process Model to Explain Fear Appeal Successes and Failures" Handbook of Communication and Emotion: Research, Theory, Application and Contexts. American Press. pp.423-450.

Witte Kim and Morrison, K. (1995). "The Use of Scare Tactics in AIDS Prevention: the Case of Juvenile Detention and High School Youth." *Journal of Applied Communication Research*, 23, pp.128-142.

Zandpour, Fred and Harich, R. Katrin (1996). "Think and Feel Country Clusters: A New Approach to International Advertising Standardization", *International Journal of Advertising*, 15, pp.325-344.

Zhang, Y. and Gelb, D. B. (1996), "Matching Advertising Appeals to Culture: The Influence of Products' Use Conditions", *Journal of Advertising*, 25(Fall), pp.29-46.

APPENDICES

APPENDICES

PRETEST QUESTIONNAIRE

Here is an anti-smoking advertisement. We want to know your opinions about this ad. For each of the following, please circle the number that best describes how much you agree or disagree with the statement.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
The ad made me feel fearful.	1	2	3	4	5	6	7
The ad made me feel worried.	1	2	3	4	5	6	7
The ad made me feel anxious.	1	2	3	4	5	6	7
The ad made me feel threatened.	1	2	3	4	5	6	7
The ad made me feel scared.	1	2	3	4	5	6	7

Thank you for your cooperation!

您怎样看待下面的反吸烟广告？针对下面的句子，请选择适当的号码以表明您对它的认同程度。

我认为这个广告令人	极不同意	不同意	稍不同意	中性	稍同意	同意	极同意
害怕	1	2	3	4	5	6	7
着急	1	2	3	4	5	6	7
忧虑	1	2	3	4	5	6	7
有威胁	1	2	3	4	5	6	7
恐惧	1	2	3	4	5	6	7

谢谢您的合作！
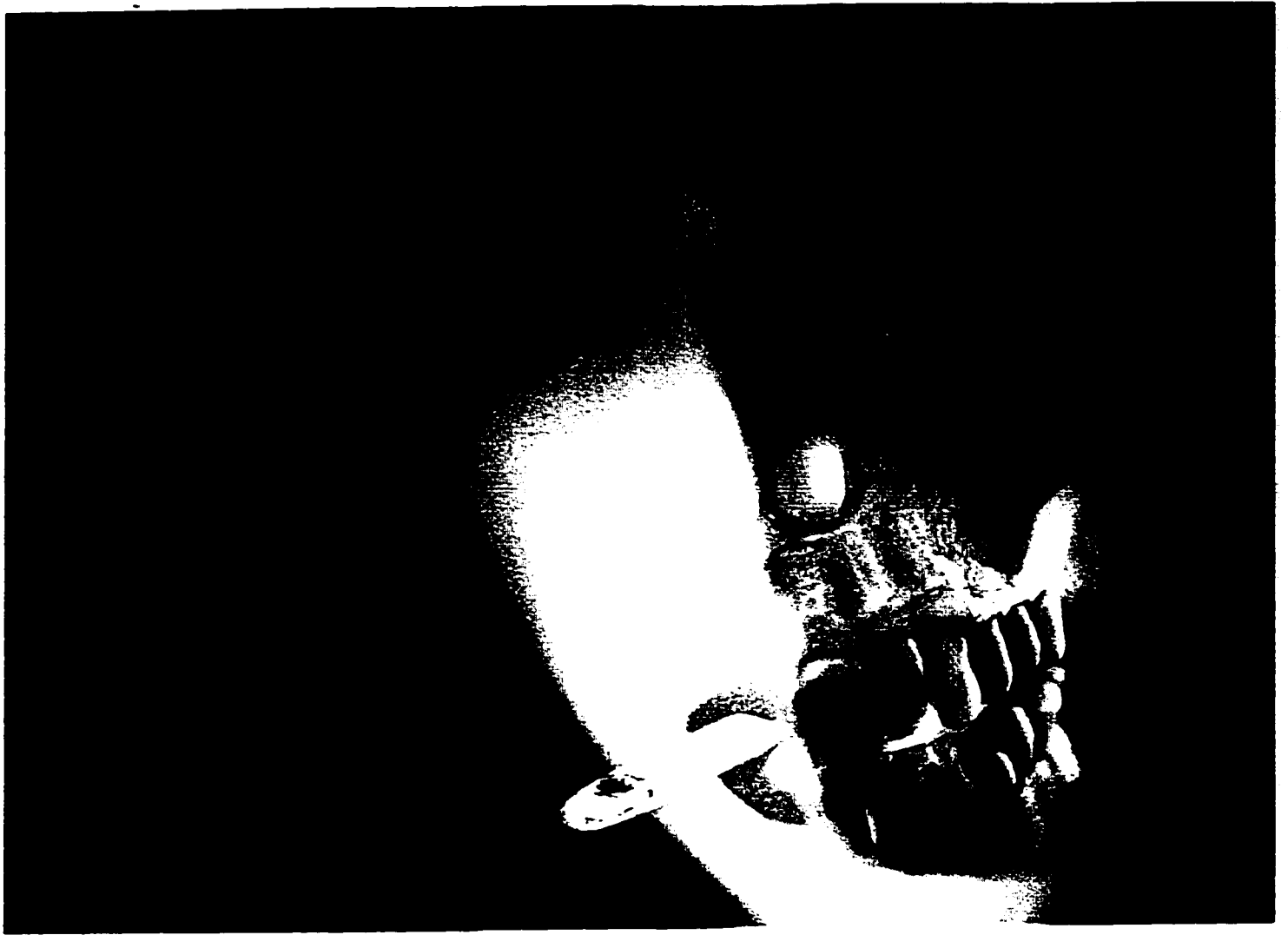
WHERE THERE'S SMOKE...
THERE'S

Lung Cancer...
Heart Disease...
Early Death...

Cigarette smoking will **shorten** your life

FOR YOUR OWN GOOD — STOP SMOKING

WHERE THERE'S SMOKE...
THERE'S

Asthma...
Bronchitis...
Emphysema...

Cigarette smoking is **dangerous** to your life

FOR YOUR OWN GOOD — STOP SMOKING

WHERE THERE'S SMOKE...
THERE'S

Coughing...
Wheezing...
Weakness...

Cigarette smoking is **bad** for your health

FOR YOUR OWN GOOD — STOP SMOKING

WHERE THERE'S SMOKE.... THERE'S

Bad Breath...
Smelly Clothes...

You will be **rejected** by others
because of your smoking

FOR EVERYBODY'S GOOD — STOP SMOKING

WHERE THERE'S SMOKE....
THERE'S

Yellow Teeth...
Weary Face...

**You will be avoided by others
because of your smoking**

FOR EVERYBODY'S GOOD — STOP SMOKING

WHERE THERE'S SMOKE...
THERE'S

Polluted Air...
Secondhand Smokers...

You will be **unwelcomed** by others
because of your smoking

FOR EVERYBODY'S GOOD — STOP SMOKING

哪里有吸烟，哪里就会有:

肺癌，心脏病，短寿

吸烟将缩短您的生命

为了您的健康--请戒烟

哪里有吸烟，哪里就会有:

哮喘，肺气肿

吸烟将危害您的生活

为了您的健康--请戒烟

哪里有吸烟，哪里就会有：

咳嗽，喘息，虚弱

吸烟不利于您的健康

为了您的健康--请戒烟

哪里有吸烟， 哪里就会有:

口臭，难闻的服饰

你将会因吸烟而被他人厌恶

为了你和他人 – –请戒烟

哪里有吸烟，哪里就会有:

黄牙，憔悴的面容

你将会因吸烟而被他人疏远

为了你和他人－－请戒烟

哪里有吸烟， 哪里就会有：

不洁的空气，被动吸烟者

你将会因吸烟而不受他人的欢迎

为了你和他人－－请戒烟
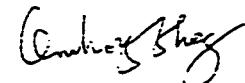
Concordia
U N I V E R S I T Y

Dear Student:

   As part of the requirement of my Master of Science in Administration at Concordia University, I'm doing a research project on smoking messages, with the aim of educating people to stop smoking. To obtain the data for this research, it is necessary to have a sample of individuals examine an advertisement and respond to a questionnaire. This will just take 15 minutes of your time. Your cooperation in completing this task would be greatly appreciated.

   Please note that your participation is completely voluntary and anonymous, and that you may stop at any time. All your responses will be kept strictly confidential and will only be used for statistical purposes.

   I thank you for your participation, and hope that you will enjoy filling the questionnaire.

Qiuhong Zhang
M.Sc.A. Student
Concordia University

Michel Laroche, Supervisor
Professor of Marketing
Concordia University

Tel: 514-848-2942

Section A

First we would like to know your habit about smoking and some demographic information. This is only for classification purpose. Please check the appropriate answers.

How many cigarettes do you smoke per day?

☐ Smoke only at special occasions; ☐ 1-10; ☐ 11-20; ☐ 21-30; ☐ 31 or more

How many years have you been smoking?

☐ Less than 1 year; ☐ 1-2 years; ☐ 3-5 years; ☐ 6-9 years, ☐ Over 10 years

Did you ever try to quit smoking?

☐ Never; ☐ 1-2 times; ☐ 3-5 times; ☐ 6-9 times, ☐ More than 10 times

What is your age ?_____.

What is your mother tongue ?_____.

Now, we would like to have your attitudes toward smoking. For each of the following questions, please circle the number that best describes how much you agree or disagree with the statement (1 means you disagree completely and 7 means you agree completely).

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
Sometimes circumstances make it imperative to smoke.	1	2	3	4	5	6	7
I think it is very acceptable to smoke.	1	2	3	4	5	6	7
I enjoy the feeling of smoking.	1	2	3	4	5	6	7
Smoking is an important part of my life..	1	2	3	4	5	6	7
Smoking reflects how I see myself.	1	2	3	4	5	6	7
People who smoke harm themselves and others.	1	2	3	4	5	6	7
Cigarette smoking is not a very wise behavior.	1	2	3	4	5	6	7
Smoking should be banned in all public facilities.	1	2	3	4	5	6	7

Following is an ad, which we would like you to read carefully. We want your honest opinion about it. Please spend a minute or two reading through it completely.

When you finish reviewing the ad, please proceed to answer the questions in the following pages.

Thank you for your cooperation.

Section B

First, we would like to know your evaluation of the advertisement that you just saw. Please evaluate the ad on the three scales below by circling a number between 1 and 7 for each question.

Repulsive	1	2	3	4	5	6	7	Appealing
Not Likeable	1	2	3	4	5	6	7	Likeable
Offensive	1	2	3	4	5	6	7	Tasteful
Disturbing	1	2	3	4	5	6	7	Pleasing
Incredible	1	2	3	4	5	6	7	Credible
Implausible	1	2	3	4	5	6	7	Plausible
Untrustworthy	1	2	3	4	5	6	7	Trustworthy

Now we are interested in knowing how the ad made you FEEL. For each of the following, please circle the number that best describes how much you agree or disagree with the statement.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
The ad made me feel fearful.	1	2	3	4	5	6	7
The ad made me feel worried.	1	2	3	4	5	6	7
The ad made me feel anxious.	1	2	3	4	5	6	7
The ad made me feel threatened.	1	2	3	4	5	6	7
The ad made me feel scared.	1	2	3	4	5	6	7

4

Now we are interested in your opinions of the ad. For each of the following questions, please circle the number that best describes how much you agree or disagree with the statement.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
It required a lot of effort to follow the ad.	1	2	3	4	5	6	7
The ad irritated me.	1	2	3	4	5	6	7
The ad was unrealistic.	1	2	3	4	5	6	7
The ad was dull and boring.	1	2	3	4	5	6	7
The ad was insulting my intelligence.	1	2	3	4	5	6	7
I felt the ad was pushy.	1	2	3	4	5	6	7
I felt the ad was in poor taste.	1	2	3	4	5	6	7
The ad make me think about my life.	1	2	3	4	5	6	7

Now we would like to know your attitude toward smoking. For each of the following questions, please circle the number that best describes how much you agree or disagree with the statements.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
Sometimes circumstances make it imperative to smoke.	1	2	3	4	5	6	7
I think it is very acceptable to smoke.	1	2	3	4	5	6	7
I enjoy the feeling of smoking.	1	2	3	4	5	6	7
Smoking is an important part of my life.	1	2	3	4	5	6	7
Smoking reflects how I see myself.	1	2	3	4	5	6	7
People who smoke harm themselves and others.	1	2	3	4	5	6	7
Cigarette smoking is not a very wise behavior.	1	2	3	4	5	6	7
Smoking should be banned in all public facilities.	1	2	3	4	5	6	7

Next, we are interested in your intentions for quitting smoking. Please indicate your intention regarding quitting in the future, by reading each statement and circling the number that best describes how much you agree or disagree with the statement.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
At present, I have no intention of decreasing the number of cigarettes that I smoke each day.	1	2	3	4	5	6	7
At present, I have no intention to quit smoking completely.	1	2	3	4	5	6	7
I am still undecided about quitting smoking.	1	2	3	4	5	6	7
Within a week or two, I plan to quit cigarette smoking for a day.	1	2	3	4	5	6	7
I intend to cut down on the number of cigarettes that I smoke.	1	2	3	4	5	6	7
I will give up cigarette smoking completely someday.	1	2	3	4	5	6	7
I'm strongly motivated to stop smoking.	1	2	3	4	5	6	7

Now, we are interested in knowing about other information about your smoking behavior. For each of the following statements, please circle the number that best describes how much you agree or disagree with the statement.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
For people like myself, it is difficult to avoid cigarette use.	1	2	3	4	5	6	7
I don't have enough confidence to give up smoking.	1	2	3	4	5	6	7
I'm not able to stop smoking.	1	2	3	4	5	6	7
Quitting smoking is very uncomfortable for me.	1	2	3	4	5	6	7
By not smoking, people avoid some health problems.	1	2	3	4	5	6	7
Avoiding cigarettes is a great way to promote health.	1	2	3	4	5	6	7
Stopping smoking will prevent others from suffering because they are close to you.	1	2	3	4	5	6	7
You will be more socially acceptable if you stop smoking.	1	2	3	4	5	6	7
The likelihood that the problems mentioned in the message will happen is high.	1	2	3	4	5	6	7
If I continue smoking, I will develop the same problems as in the ad in the years ahead.	1	2	3	4	5	6	7
Smoking will lead to an increased risk of very serious problems.	1	2	3	4	5	6	7
The problems associated with smoking are very severe.	1	2	3	4	5	6	7
The health problems associated with smoking are very dangerous.	1	2	3	4	5	6	7
The problems resulting from smoking must not be neglected.	1	2	3	4	5	6	7

Section C

Each of the following statements represents a commonly held opinion. There are no right or wrong answers. We are interested in the extent to which you agree or disagree with such matters of opinions. Please indicate your choice by circling one number following each statement on the scale shown below.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I would help, within my means, if a relative told me that he (she) is in financial difficulty.	1	2	3	4	5	6	7
Children should live at home with their parents until they get married.	1	2	3	4	5	6	7
When faced with a difficult personal problem, it is better to decide what to do yourself, rather than follow the advice of others.	1	2	3	4	5	6	7
I like to live close to my good friends.	1	2	3	4	5	6	7
It does not matter to me how my country is viewed in the eyes of other nations.	1	2	3	4	5	6	7
One of the pleasures of life is to be related interdependently with others.	1	2	3	4	5	6	7
What happens to me is my own doing.	1	2	3	4	5	6	7
What I look for in a job is a friendly group of co-workers.	1	2	3	4	5	6	7
I would rather struggle through a personal problem by myself, than discuss it with my friends.	1	2	3	4	5	6	7
Aging parents should live at home with their children.	1	2	3	4	5	6	7
The most important thing in my life is to make myself happy.	1	2	3	4	5	6	7
When faced with a difficult personal problem. One should consult widely with one's friends and relatives.	1	2	3	4	5	6	7
Aging parents should have their own household.	1	2	3	4	5	6	7
One of the pleasure of life is to feel being part of a large group of people.	1	2	3	4	5	6	7
I tend to do my own things, and most people in my family do the same.	1	2	3	4	5	6	7
I like to live in cities, where there is anonymity.	1	2	3	4	5	6	7

With respect to the following statements, indicate how you feel that each statement is true of yourself. Circle the number of each scale that best matches your answer. Please note that there is no right or wrong answer for any statement. The best answer is what your feel is true of yourself.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I feel that people are apt to react differently to me than they would normally react to other people.	1	2	3	4	5	6	7
I live too much by other people's standards.	1	2	3	4	5	6	7
When I'm in a group I usually don't say much for fear of saying the wrong things.	1	2	3	4	5	6	7
Even when people do think well of me, I feel sort of guilty because I know I must be fooling them—that if I were really to be myself, they wouldn't think well of me.	1	2	3	4	5	6	7
I sort of only half-believe in myself.	1	2	3	4	5	6	7
I don't say much at social affairs because I'm afraid that people will criticize me or laugh if I say the wrong thing.	1	2	3	4	5	6	7
When I have to address a group, I get self-conscious and I have difficulty saying things well.	1	2	3	4	5	6	7
I feel self-conscious when I'm with people who have a superior position to mine in business or at school.	1	2	3	4	5	6	7
I'm not afraid of meeting new people. I feel that I'm a worthwhile person and there's no reason why they should dislike me.	1	2	3	4	5	6	7
I'm quite shy and self-conscious in social situations.	1	2	3	4	5	6	7
I feel that I'm a person of worth, on an equal place with others.	1	2	3	4	5	6	7
I am frequently bothered by feelings of inferiority.	1	2	3	4	5	6	7
I don't worry or condemn myself if other people pass judgement against me.	1	2	3	4	5	6	7
I'm satisfied with my present situation.	1	2	3	4	5	6	7
I'll continue to grow best by being myself.	1	2	3	4	5	6	7
I always do things confidently and positively.	1	2	3	_4	5	6	7
I believe that I have the ability to deal with my daily work.	1	2	3	4	5	6	7

Finally, please circle a number on the scale to indicate your agreement or disagreement with the following statements.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I feel like what happens in my life is mostly determined by powerful people.	1	2	3	4	5	6	7
To a great extent my life is controlled by accidental happening.	1	2	3	4	5	6	7
When I make plans, I'm almost certain to make them work.	1	2	3	4	5	6	7
Often there is no chance of protecting my personal interests from bad luck happenings.	1	2	3	4	5	6	7
Although I might have good ability, I won't be given leadership responsibility without appealing to those in positions of power.	1	2	3	4	5	6	7
My life is chiefly controlled by powerful others.	1	2	3	4	5	6	7
It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune.	1	2	3	4	5	6	7
I can pretty much determine what will happen in my life.	1	2	3	4	5	6	7
I'm usually able to protect my personal interests.	1	2	3	4	5	6	7
When I get what I want, it's usually because I worked hard for it.	1	2	3	4	5	6	7
My life is determined by my own actions.	1	2	3	4	5	6	7
When I get what I want, it's usually because I'm lucky.	1	2	3	4	5	6	7

Thank you again!

Concordia
U N I V E R S I T Y

亲爱的同学：

　　按照 Concordia 大学管理科学硕士学位的要求，我正在做一项关于反吸烟广告的研究。鉴于此，我们需要一定数量的人来检验广告并回答问卷。整个过程大约需要１５分钟。我们真诚地欢迎你们参与这项研究工作。

　　请注意，您的参与是完全自愿和不记名的，您可以随时退出。所有您的回答将被严格保密，并将仅用于统计分析。

　　谢谢您的参与，希望您有一个愉快的实验。

张秋江
商业管理系
Concordia 大学

Michel Laroche
导师，市场学教授

Concordia 大学

Montreal, Quebec, Canada

电话：(514) 848-2942

首先，我们希望了解您吸烟的习惯及有关人文信息，以用于分类分析，请您选择适当的回答。

您每天抽多少支烟？

(a). 仅在特殊场合下吸烟；(b). 1~10支；(c). 11~20支；(d). 21~30支；(e). 多于31支.

您吸烟有多少年了？

(a). 不到1年；　　　　(b). 1~2年；(c). 3~5年；　　(d). 6~9年；　　(e). 超过10年.

您曾经试过戒烟吗？

(a) 没有；　　　　　　(b). 1~2次；(c). 3~5次；　　(d). 6~9次；　　(e). 超过10次.

您的年龄：_____．

您的母语：_____．

其二，我们希望了解您对于吸烟的态度。对于下面每一个问题，请选择适合您情形的数码以表明您的认同程度（1表示完全不同意，7表示完全同意）．

	极不同意	不同意	稍不同意	中性	稍同意	同意	极同意
有时周围的环境使得人们必须吸烟。	1	2	3	4	5	6	7
我认为吸烟是很可以接受的。	1	2	3	4	5	6	7
我喜欢吸烟的感觉。	1	2	3	4	5	6	7
吸烟是我生活中重要的一部分。	1	2	3	4	5	6	7
吸烟反映我对自己的看法。	1	2	3	4	5	6	7
吸烟的人伤害自己和他人。	1	2	3	4	5	6	7
吸烟不是很明智的行为。	1	2	3	4	5	6	7
所有公共场合应该禁止吸烟。	1	2	3	4	5	6	7

===

下页是一幅广告，我们希望您能仔细看一下。我们需要您关于广告的真实看法。请用一到二分钟留览整个广告。当您看完了广告，请您回答一系列有关广告的问题。

首先，我们想知道您对于您刚看过的广告的评价。请选择适当的号码来评价这个广告。

令人反感的	1	2	3	4	5	6	7	有吸引力的
令人讨厌的	1	2	3	4	5	6	7	令人喜欢的
冒犯人的	1	2	3	4	5	6	7	有品味的
令人不安的	1	2	3	4	5	6	7	令人愉快的
难以置信的	1	2	3	4	5	6	7	值得信任的
没有道理的	1	2	3	4	5	6	7	似乎有理的
不可靠的	1	2	3	4	5	6	7	可靠的

现在，我们想了解您在读广告时的感觉。针对下面每一个句子，请选择适当的号码以表明您对它的认同程度。

	极不同意	不同意	稍不同意	中性	稍同意	同意	极同意
广告让我觉得害怕。	1	2	3	4	5	6	7
广告让我觉得着急。	1	2	3	4	5	6	7
广告让我觉得忧虑。	1	2	3	4	5	6	7
广告让我觉得有威胁。	1	2	3	4	5	6	7
广告让我觉得恐慌。	1	2	3	4	5	6	7

下面，我们想了解您对于广告的看法。对于下列问题，请选择一个您认为最合适的号码以表明您对它的认同程度。

	极不同意	不同意	稍不同意	中性	稍同意	同意	极同意
这广告理解起来很费力。	1	2	3	4	5	6	7
这广告令我生气。	1	2	3	4	5	6	7
这个广告是不真实的。	1	2	3	4	5	6	7
这个广告枯燥无味。	1	2	3	4	5	6	7
这个广告视我无知。	1	2	3	4	5	6	7
我觉得这个广告是多此一举。	1	2	3	4	5	6	7
我觉得这个广告品味不高。	1	2	3	4	5	6	7
这个广告令我对自己的生活进行思考。	1	2	3	4	5	6	7

现在，我们希望了解您对于吸烟的态度。对于下面每一个问题，请选择适合您情形的数码以表明您的认同程度。

	极不同意	不同意	稍不同意	中性	稍同意	同意	极同意
有时周围的环境使得人们必须吸烟。	1	2	3	4	5	6	7
我认为吸烟是很可以接受的。	1	2	3	4	5	6	7
我喜欢吸烟的感觉。	1	2	3	4	5	6	7
吸烟是我生活中重要的一部分。	1	2	3	4	5	6	7
吸烟反映我对自己的看法。	1	2	3	4	5	6	7
吸烟的人伤害自己和他人。	1	2	3	4	5	6	7
吸烟不是很明智的行为。	1	2	3	4	5	6	7
所有公共场合应该禁止吸烟。	1	2	3	4	5	6	7

下面，我们想了解您关于戒烟的打算。请选择一个您最认同的数码以表明您在将来戒烟的打算。

	极不同意	不同意	稍不同意	中性	稍同意	同意	极同意
目前，我不打算减少每天吸烟的数量。	1	2	3	4	5	6	7
目前，我不打算彻底戒烟。	1	2	3	4	5	6	7
我还没有决定是否戒烟。	1	2	3	4	5	6	7
在一，二届内，我计划戒烟一天。	1	2	3	4	5	6	7
我准备减少吸烟的数量。	1	2	3	4	5	6	7
总之，我会最终彻底戒烟。	1	2	3	4	5	6	7
我强烈地感到应该戒烟。	1	2	3	4	5	6	7

现在，我们想了解您关于吸烟的其他情况。对于下面的句子，请选择一个最能反映您认同程度的号码。

	极不同意	不同意	稍不同意	中性	稍同意	同意	极同意
戒烟对于我来说是困难的。	1	2	3	4	5	6	7
我没有足够的信心戒掉烟。	1	2	3	4	5	6	7
我无法戒掉烟。	1	2	3	4	5	6	7
戒烟对于我是非常不舒服的。	1	2	3	4	5	6	7
人们不吸烟可以防治一些疾病的发生。	1	2	3	4	5	6	7
避免吸烟是增进健康的有效方法。	1	2	3	4	5	6	7
禁烟将使你身边的人免于吸烟带来的痛苦。	1	2	3	4	5	6	7
戒烟将使你更被社会所接受。	1	2	3	4	5	6	7
广告中提及的危害发生的可能性很高。	1	2	3	4	5	6	7
如果我继续抽烟，几年内将会引发广告中提及的同样问题。	1	2	3	4	5	6	7
吸烟将增加发生严重健康问题的风险。	1	2	3	4	5	6	7
与吸烟有关的问题是很严重的。	1	2	3	4	5	6	7
由吸烟产生的健康问题是非常危险的。	1	2	3	4	5	6	7
吸烟带来的问题是不容忽视的。	1	2	3	4	5	6	7

第二部份

下列句子中，每一句代表一个普遍持有的态度，这些态度没有对错之分。您也许会同意一些而不同意另一些，我们想知道您对每句的同意程度，请在下面选择适当的号码。如果您觉得所示的号码不能充分表达您的意见，请选择与之最接近的一个。

	极不同意	不同意	稍不同意	中性	稍同意	同意	极同意
假如我的亲戚经济拮据，我会在我能力范围内尽力帮助他。	1	2	3	4	5	6	7
子女应与父母同住，直到子女们结婚为止。	1	2	3	4	5	6	7
当面临个人难题时，最好应由自己决定而不是依照他人的建议。	1	2	3	4	5	6	7
我喜欢住在与朋友近的地方。	1	2	3	4	5	6	7
我不在意其他国家的人怎样看我的国家。	1	2	3	4	5	6	7
能与其他人相互联系是生命里的一件乐事。	1	2	3	4	5	6	7
任何发生在我身上的都是我个人的事，与他人无关。	1	2	3	4	5	6	7
我在工作中寻求友好合作的集体。	1	2	3	4	5	6	7
我宁愿独立应付自己的难题，而不愿与朋友们讨论。	1	2	3	4	5	6	7
年迈的父母应与他们的子女同住。	1	2	3	4	5	6	7
令自己幸福是我生命中最重要的事情。	1	2	3	4	5	6	7
面临个人难题时，应广泛征求亲朋好友的意见。	1	2	3	4	5	6	7
年老的父母应有他们自己的住所。	1	2	3	4	5	6	7
生命的乐趣之一是成为大集体中的一员。	1	2	3	4	5	6	7
我会处理自己的事情，我的家人也大多如此。	1	2	3	4	5	6	7
我喜欢居住在没有人认识我的城市里。	1	2	3	4	5	6	7

针对下面的句子，请选择适当的号码以表明您对它的认同程度。这里没有"正确"与"错误"的回答。您的真正感受就是好的回答。

	极不同意	不同意	稍不同意	中性	稍同意	同意	极同意
我感觉人们对我的反映与对其他人的反应通常不同。	1	2	3	4	5	6	7
我太多地生活在其他人的标准之下。	1	2	3	4	5	6	7
在集体中我经常因害怕讲错话而不讲话。	1	2	3	4	5	6	7
当人们认为我很好时我似乎感到很负罪，因为，我知道我一定是在欺骗他们。如果我是真实的我，他们一定不会认为我很好。	1	2	3	4	5	6	7
我似乎只有一半相信我自己。	1	2	3	4	5	6	7

5

	极不同意	不同意	稍不同意	中性	稍同意	同意	极同意
在社会活动中我不大讲话，因为我担心如果我讲错了，人们会批评或嘲笑我。	1	2	3	4	5	6	7
当我必须在集体中讲话时，自我意识使我很难正常发挥。	1	2	3	4	5	6	7
当我与那些生意上或学校里比我地位高的人交往时，我会意识到自我。	1	2	3	4	5	6	7
我不害怕会见陌生人，因我觉得我是个值得交往的人，人们没有理由不喜欢我。	1	2	3	4	5	6	7
我在社交场合相当害羞而且自我意识很强。	1	2	3	4	5	6	7
我认为我是一个有价值的人并与他人平等。	1	2	3	4	5	6	7
我还常被自卑感困扰。	1	2	3	4	5	6	7
如果其他人有对我不利的评价，我并不因此而烦恼或自责。	1	2	3	4	5	6	7
我满意我目前的状况。	1	2	3	4	5	6	7
我将继续坚持自我地生活。	1	2	3	4	5	6	7
我经常积极而自信地做事。	1	2	3	4	5	6	7
我相信我有能力处理自己的日常工作。	1	2	3	4	5	6	7

最后，针对下面的句子，请选择适当的号码以表明您的认同程度。

	极不同意	不同意	稍不同意	中性	稍同意	同意	极同意
我认为我生活中发生的事情大多是由有权力的人所决定的。	1	2	3	4	5	6	7
我的生活在很大程度上被偶然事件所控制。	1	2	3	4	5	6	7
当我制订计划时，我大多相信它是可行的。	1	2	3	4	5	6	7
我经常无法避免不运气。	1	2	3	4	5	6	7
尽管我能力很强，但如果没有那些有影响力的人帮助，我便没有机会担负领导工作。	1	2	3	4	5	6	7
我的生活在很大程度上被其他有权势的人所控制。	1	2	3	4	5	6	7
对我而言，提前计划常是不明智的，因为许多事情最终不过是取决于好运气或不运气罢了。	1	2	3	4	5	6	7
在很大程度上，我能决定我的生活将是怎样。	1	2	3	4	5	6	7
我还常能够保护我的个人利益。	1	2	3	4	5	6	7
我能得到我想要的东西还常是因为我努力去做的缘故。	1	2	3	4	5	6	7
我的生活是由我自己的行为决定的。	1	2	3	4	5	6	7
我能达到我的目的大多是因为我的运气好。	1	2	3	4	5	6	7

谢谢您的合作！

6