

— CONFERENCE PROCEEDINGS —

THE INTERNATIONAL CONFERENCE ON GLOBAL ISSUES, TRENDS AND DIRECTIONS ACROSS DISCIPLINES

ICGD 2023

Theme: New normal opportunities
and challenges in 2023

— CONFERENCE PROCEEDINGS —

**THE INTERNATIONAL CONFERENCE
ON GLOBAL ISSUES, TRENDS
AND DIRECTIONS ACROSS DISCIPLINES**

ICGD 2023

Theme: New normal opportunities
and challenges in 2023

EDITORS

Dr. Phung Thai Minh Trang

Faculty of Finance - Banking, Hoa Sen University, Vietnam

Dr. Nguyen Thi Loan

Faculty of Social Science - Law, Hoa Sen University, Vietnam

MA. Ho Thi My Linh

Faculty of Languages - International Cultures, Hoa Sen University,
Vietnam

*All papers in the ICGD 2003 conference proceedings
have been peer-reviewed*

WELCOME TO THE INTERNATIONAL CONFERENCE ON
GLOBAL ISSUES, TRENDS, AND DIRECTIONS ACROSS
DISCIPLINES (ICGD), VIETNAM, 2023



On behalf of the international conference on global issues, trends, and directions across disciplines, I welcome you to the 2023 ICGD.

This year, the theme of 2023 ICDG is '*New Normal Opportunities & Challenges in 2023*'. The conference is co-hosted by Hoa Sen University in Vietnam and UNIMAS in Malaysia.

As an international academic platform, ICGD 2023 presents a unique opportunity for professionals, academicians, researchers, students, and enthusiasts to share ideas and understanding in a global setting.

This is the fifth year that we are holding one of our major annual events. The ICGD 2023 has made great progress in the last few years. The quality of papers this year is outstanding.

The conference attracts a number of presenters and participants, domestic and global, which focuses the latest advances in economics, finance, education, and social science theory and practice. It aims to facilitate research collaborations and to encourage the exchange of ideas among different disciplines.

I look forward to meeting you all and working with you over the next few days.

**President, Hoa Sen University
Assoc. Prof. Dr. Vo Thi Ngoc Thuy**

TABLE OF CONTENTS

1. MOTIVATORS FOR PURSUING A BUSINESS ADMINISTRATION DEGREE AT UNIVERSITIES IN HO CHI MINH CITY	1
<i>To Anh Tho, Giap Nguyen Vu Anh, Thai Kim Phong, Tran Thi Siem</i>	1
2. MỨC ĐỘ TỰ TIN VÀ QUYẾT ĐỊNH TÀI CHÍNH CỦA NHÀ ĐẦU TƯ CÁ NHÂN TẠI THỊ TRƯỜNG CHỨNG KHOÁN VIỆT NAM.....	17
<i>Đỗ Thị Thùy Linh, Phùng Thái Minh Trang</i>	17
3. ENTERPRISES IN THE AGRICULTURAL VALUE CHAIN: A CASE STUDY IN THE MEKONG DELTA REGION	35
<i>Mai Thi Anh Tuyet, Le Thu Thuy, Tran Hoang Minh</i>	35
4. MENTAL HEALTH AND PSYCHOSOCIAL WELL-BEING DURING AND AFTER COVID-19: A CASE STUDY OF WOMEN AND CHILDREN IN SON TRA DISTRICT, DA NANG CITY, VIETNAM.....	50
<i>Nguyen Vo Huyen Dung, Vo Hoang Bao An, Tran Thi Nhan Duyen, Luu Ngoc Bao Trang</i>	50
5. TOURIST AFFINITY AND ANIMOSITY: A STUDY INTO THEIR IMPACTS ON VIETNAMESE INDEPENDENT TOURISTS' DESTINATION CHOICES.....	66
<i>Dang Hung Vu, Pham Tran Truc Vien</i>	66
6. PREDICTORS OF TRAVELERS' OVERALL ASSESSMENT, PERCEIVED VALUE AND HOTEL ROOM PRICE: EVIDENCE FROM HOTELS ACROSS VIETNAM	87
<i>Phan Vo Minh Thang</i>	87
7. DISCOVERY OF NOVEL METAL-THIOSEMICARBAZONE COMPLEXES USING QSPR MODELING METHODS	108
<i>Huynh Ngoc Chau, Nguyen Minh Quang</i>	108
8. OVERCONFIDENCE IN FINANCIAL LITERACY AND RISK-TAKING BEHAVIOR: A STUDY OF THE VIETNAM STOCK MARKET	131
<i>Phung Thai Minh Trang</i>	131
9. RICE TRADE, NATURAL DISASTERS, AND INSTITUTION: AN APPROACH FROM THE GRAVITY MODEL.....	157
<i>Duc Nha Le, Nguyen Huu Hao, Vu Ngoc Phuong Thuy</i>	157
10. MALAYSIAN PRIME MINISTERS' TAGLINES AND RACIAL HARMONY MESSAGES	182
<i>Nazrinzulaiqa Hasbi, Su-Hie Ting</i>	182

11. FEAR CONTROL AND DANGER CONTROL IN RESPONSE TO LUNG CANCER RISK INFORMATION IN A POSTER.....	201
<i>Petronella Langita Felix, Su-Hie Ting</i>	201
12. ỨNG DỤNG TRỰC QUAN HÓA DỮ LIỆU VÀO GIẢNG DẠY: NGHIÊN CỨU TẠI TRƯỜNG TIỂU HỌC TÂN TẠO A	222
<i>Nguyễn Thu Hà, Phùng Thái Minh Trang</i>	222
13. INTERNATIONAL TRADE AND ENGLISH PROFICIENCY: EVIDENCE FROM THE GRAVITY MODEL OF VIETNAM AND TRADING PARTNERS	239
<i>Duc Nha Le, Tang Nhu Quynh, Phan Kim My Duyen, Luong Thi Huyen Tran</i>	239
14. NGHIÊN CỨU KHOA HỌC VÀ CÔNG NGHỆ Ở VIỆT NAM: HIỆN TRẠNG VÀ ĐỊNH HƯỚNG PHÁT TRIỂN	259
<i>Lương Ngọc Dung</i>	259
15. TÁC ĐỘNG CỦA QUAN HỆ MỸ - ÁN ĐỘ TỐI KHU VỰC ÁN ĐỘ DƯƠNG - THÁI BÌNH DƯƠNG (2014-2022) VÀ HÀM Ý CHÍNH SÁCH CHO VIỆT NAM	277
<i>Quách Thị Huệ, Ngô Tuấn Thắng</i>	277
16. SKILLED LABOR MIGRATION FROM VIETNAM TO ASEAN COUNTRIES: REALITY, CHALLENGES AND PROSPECTS	290
<i>Mai Mai</i>	290
17. THE RISKS AND IMPACT OF “DEBT-TRAP” IN CHINA’S BELT AND ROAD INITIATIVE	305
<i>Nguyen Thu Ha</i>	305
18. BELTS AND ROADS INITIATIVE AND ITS IMPACT ON ECONOMY AND POLITICS IN SOUTHEAST ASIA	316
<i>Nguyen Thu Ha</i>	316
19. MEDIATOR OF DEPRESSION IN THE RELATIONSHIP BETWEEN SELF-COMPASSION AND EATING DISORDERS	331
<i>Nguyen Thi Le Thu, Nguyen Minh Thanh, Nguyen Thi Loan</i>	331
20. MAPPING ASEAN COUNTRIES FOOD SECURITY USING FUZZY GUSTAFSON KESSEL CLUSTERING FRAMEWORK	343
<i>Azka Al Azkiya, M. Ficky Haris Ardiansyah, Sachnaz Desta Oktarina</i>	343
21. THE RISING ROLE OF INDIA IN THE INDO-PACIFIC FROM 2020 UNTIL PRESENT	354
<i>Huynh Nguyen Tam Anh</i>	354
22. SELECTING A FOREIGN STRATEGY OF CAMBODIA TO GREAT POWERS IN THE PERIOD OF 2010 - 2022: HEDGING, BANDWAGONING OR BALANCING	362

<i>Tran Thi Thuy, Vu Thi Anh Thu</i>	362
23. ÂM NHẠC TRONG GIÁO DỤC TOÀN DIỆN Ở BẬC ĐẠI HỌC	381
<i>Nguyễn Bách</i>	381
24. SPIRITUAL IMBALANCES IN THOMAS WOLFE’S <i>LOOK HOMEWARD, ANGEL: A BINARY OPPOSITES ANALYSIS</i>	400
<i>Ruibai Sun, Ambigapathy Pandian, Collin Jerome</i>	400
25. THE IMPACT OF OWNERSHIP STRUCTURE ON RISK OF COMMERCIAL BANKS IN VIETNAM	412
<i>Vo Hoang Diem Trinh, Le Thi Ngoc Nga</i>	412
26. A STUDY OF CONSUMER DEMAND ON THE CONTEMPORARY ARTSY CERAMIC PRODUCTS IN HO CHI MINH CITY, VIETNAM.....	425
<i>Ngo Ngan Ha, Tran Minh Nhut</i>	425
27. THE NON-LINEAR IMPACT OF SHORT-TERM DEBT ON TRADE CREDIT: EMPIRICAL EVIDENCE FROM VIETNAM.....	444
<i>Phan Tran Minh Hung, Do Thi Le Thu, Phan Nguyen Bao Quynh</i>	444
28. TƯƠNG LAI NGÀNH NGÂN HÀNG TRƯỚC SỰ PHÁT TRIỂN CỦA FINTECH	445
<i>Hồ Thị Vân Anh, Phạm Tú Anh</i>	445
29. THE IMPACT OF E-COMMERCE PLATFORMS ON CONSUMERISM AND CREDIT CARD-USING BEHAVIOR IN VIETNAM: THE CASE OF GEN Z	467
<i>Chung Hien Khang, Nguyen Thi Thao Nhi, Doan Thi Hien Ni, Duc Nha Le</i>	467
30. INTENTIONS OF ENTREPRENEURSHIP: A STUDY OF MILLENNIALS IN HO CHI MINH CITY	483
<i>Tran Thi Thu Hien, Dang Truong Thuy Anh, Truong Quang Vinh</i>	483
31. CONSUMER BEHAVIOR IN THE LUXURY FASHION MARKET: AN EMPIRICAL STUDY OF YOUNG VIETNAMESE CONSUMERS' PURCHASE INTENTION	496
<i>To Anh Tho, Nguyen Thi Ngoc Nhung, Vo Thi Anh Nguyet</i>	496
32. MODERATING THE ROLE OF ADVERTISING CHARACTERISTICS ON THE IMPACT OF TIME ORIENTATION, ATTITUDE, AND BEHAVIOR TOWARDS ONLINE ADVERTISING: APPLYING THE THEORY OF VALUE, ATTITUDE, AND BEHAVIOR....	512
<i>Ho Truc Vi, Vo Thi Ngoc Thuy, Phan Trong Nhan</i>	512
33. JOB SATISFACTION OF EMPLOYEES IN VIETNAM: THE ROLES OF ORGANIZATIONAL COMMITMENT, SUPERVISOR EMOTIONAL SUPPORT AND TRAINING	536
<i>Doan Thi Ngoc Thuy, Phan Minh Tuan, Do Huynh Lam Thinh</i>	536

34. EFFECT OF QUALIFIED AUDITOR’S OPINION ON LISTED COMPANY SHARES PRICES: EVIDENCE FROM HOSE	551
<i>Phung The Vinh, Lam Duc, Pham Quang Huy, Nguyen Huy Hoang, Le Huu Tan, Tran Ngoc Phuong Uyen, Bui Duy Thai Tin</i>	<i>551</i>
35. FROM FREE TO PREMIUM: THE MODERATING ROLE OF THE FREE MENTALITY IN THE PUSH-PULL-MOORING FRAMEWORK IN FREEMIUM SERVICES	583
<i>Phan Trong Nhan, Vo Thi Ngoc Thuy.....</i>	<i>583</i>
36. RESEARCH ON THE RELATIONSHIP BETWEEN ACCOUNTING INFORMATION AND THE PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES IN HO CHI MINH CITY.	601
<i>Pham Quang Huy, Phung The Vinh, Lam Duc, Bui Duy Thai Tin, Tran Phan Ngoc Anh, Tran Pham Thanh Quang, Nguyen Huy Hoang</i>	<i>601</i>

FEAR CONTROL AND DANGER CONTROL IN RESPONSE TO LUNG CANCER RISK INFORMATION IN A POSTER

Petronella Langita Felix*, Su-Hie Ting

Faculty of Language and Communication, Universiti Malaysia Sarawak
94300 Kota Samarahan, Sarawak

*Corresponding author: langitalangita@gmail.com

Abstract

Little is known about how people respond to health risk information and empirical findings on public responses to such information will lead to a better understanding of the kinds of information to include for better impact in public health intervention. The study examined the fear control and danger control in response to lung cancer risk information in a poster. The objectives of this study were to: (1) determine the magnitude of fear of lung cancer among the public, and (2) identify the fear control and danger control processes in response to a poster on lung cancer. The descriptive study involved semi-structured interviews with three participants from a family, aged 20 to 57. They were asked whether they were afraid of lung cancer before and after they viewed a poster on lung cancer produced by Malaysia National Cancer Institute. The results of the thematic analysis showed that fear control was more frequently expressed than danger control. Fear control was typified by a dismissive attitude towards lung cancer risk information, in which the participants were aware of lung cancer risk at a superficial level and failed to acknowledge the magnitude of the risk to their life. On the other hand, danger control themes could be seen in the participants' acknowledgement and understanding of the nature and seriousness of lung cancer, as well as their intention to perform measures to avoid or prevent the threat of lung cancer such as quitting smoking or avoiding passive smoking. The study provides empirical data to fill in the gap of knowledge on the prevalence of danger control and fear control in responses to health risk information.

Keywords: lung cancer, danger control, fear control, Extended Parallel Process Model

1. INTRODUCTION

Cancer accounted for one in six deaths as of 2020, making it the leading cause of death around the world (World Health Organization [WHO], 2022). Lung cancer is the second most common type of cancer worldwide with 2,206,771 incidences in 2020 (*Lung Cancer Statistics*, n.d.).

Lung cancer caused approximately 1,796,144 deaths, which is about 18% of total deaths from cancer in the same year (Sung et al., 2021). In Malaysia, trachea, bronchus and lung cancer are the third most common types of cancer according to the Malaysian National Cancer Registry Report (MNCR) 2012-2016, accounting for 13.5% of 115,238 total cancer incidences in the country (Ab Manan et al., 2019).

To raise awareness of lung cancer among the public, the risk information of lung cancer has been actively communicated to the public through various channels such as newspapers, posters, banners, radio, and television. In Malaysia, the types of information on lung cancer communicated to the public in posters focused on the risk factors to raise awareness of the threat of passive smoking or second-hand smoking (Jerome & Ting, 2017; Jerome & Ting, 2019). In Jerome and Ting's (2017) study, five posters on lung cancer, cervical cancer, and cancer (in general) were displayed in Sarawak General Hospital and verbal and visual elements in the posters were analysed based on multimodality and persuasive communication frameworks. Logos was the main appeal to create public awareness of early detection and treatment of cancer using facts rather than emotional appeal. The four hospital posters analysed by Jerome and Ting (2019) contained pictures of blackened rotten lungs to frighten smokers into quitting smoking. In other words, the risk information on lung cancer communicated to the public contained statistical and solution-focused fear appeal messages.

Fear appeal refers to persuasive messages developed to scare people by describing terrible things that may happen to them if they do not perform recommended actions to conquer a threat (Witte, 1992). Some people may believe the persuasive messages and take appropriate action to remove the danger, and this is referred to as danger control. On the other hand, other people may deny the truth of the messages in order to feel less threatened by the danger, and this is referred to as fear control (see detailed explanation in the Theoretical Framework of Study section).

Thus far, most studies addressed the output of fear control or danger control processes in response to fear appeal such as inducing behavioural change and the effectiveness of fear appeal in health communication (Chen & Chen, 2023; Cho & Salmon, 2006, 2007; Periyayya & Wee, 2014; Zarghami et al., 2021). These studies were not on lung cancer. For example, Chen and Chen (2023) carried out a study on factors that influence health protective motivation towards COVID-19 involving 1676 respondents in February 2020 in China. The study found that perceived severity and susceptibility could lead to fear of COVID-19 infection but

perceived response efficacy and self-efficacy induced confidence in the impact of protective actions. Cho and Salmon (2007) presented a conceptual framework for factors that influence intended and unintended effects of health communication campaigns. Zarghami et al.'s (2021) study on 215 smokers found that smokers who were not ready to quit smoking were influenced by messages that highlighted health threats posed by smoking and ability of smokers to take health protective measures. Perceived efficacy was the most important for smokers who were ready to quit smoking. Zarghami et al.'s (2021) study was conducted using the Extended Parallel Process Model as the guiding framework, and showed that the lung cancer awareness and smoking cessation programmes need to be designed differently to cater to smokers' readiness for change.

The review of literature reveals that the area that has been less researched is the characteristics of fear control and danger control processes in response to fear appeal messages, especially in Malaysia. It is important to study how people respond to health risk information in order to understand whether fear appeal evokes fear control process or danger control processes. Understanding how people process and respond to risk information will reveal whether fear control or danger control is the more common response and the findings contribute towards the improvement or development of health communication strategies which may effectively motivate people to practice healthy lifestyle and subsequently reduce the risk of cancer. Our comprehensive literature search showed that there are currently no published findings on how fear appeal is used as a health communication strategy to raise public awareness.

Therefore, this study examined the fear control and danger control responses to lung cancer risk information in a poster. The objectives of this study were:

1. to describe the magnitude of fear of lung cancer among the public, and
2. to describe the fear control and danger control processes in response to fear appeal message.

2. LITERATURE REVIEW

In health communication, the effectiveness of fear appeal messages is determined by whether the message audiences respond through fear control or danger control processes (Witte, 1992). Several past studies have found that people who respond to fear appeal through fear control processes are less likely to change their behaviour towards a threat (e.g., lung cancer), while people who are under the danger control process have a greater likelihood of behaviour change.

Firstly, Cho and Salmon (2006) studied the effects of fear appeal among 274 undergraduate students in the United States who were in different stages of behavioural change. The study also included a pilot study to assess the impact of fear appeal in encouraging preventive behaviours against skin cancer among the college students. The results of the study found that people who were in the precontemplation stage or pre-awareness stage were more likely to have defensive and fatalistic thoughts towards health recommendations messages (Cho & Salmon, 2006). After exposure to fear appeal, those in precontemplation stage also exhibited negative attitudes towards the messages that resulted in less likelihood of having the intention to engage in recommended behaviour, and they were less motivated to perform the recommended preventive actions (Cho & Salmon, 2006). Cho and Salmon (2006) also found that fear appeal induced defensive avoidance, fatalism, and hopelessness among those in precontemplation stage. This meant that those in precontemplation stage were more likely to assess fear appeal messages by fear control. On the other hand, people who already had the intention to engage in or had previously engaged in preventive behaviour displayed a positive attitude towards health recommendation messages, and they were more likely to engage in recommended behaviour with high motivation to perform recommended actions (Cho & Salmon, 2006). In other words, people who were already engaging in or had engaged in behavioural changes were more likely to respond to fear appeal messages through danger control. Therefore, it was found that fear appeal impacted individuals differently and the effects depended on an individual's perception of the risk. Therefore, fear appeal needs to be studied together with perceived risk or threat.

Meanwhile, in Iran, Zarghami et al. (2021) explored 215 smokers' perception about their own susceptibility, severity, response efficacy, self-efficacy, and readiness to quit when faced with risk of lung cancer by using the EPPM. Zarghami et al. (2021) found a significant relationship between perceived susceptibility and perceived response efficacy. This meant that people with high perceived risk of lung cancer were more likely to believe that smoking cessation could reduce the risk of the disease. At the same time, Zarghami et al. (2021) found an association between perceived severity and perceived response efficacy, meaning that people with low perceived survivability from lung cancer were inclined to believe that quitting smoking could improve their chance of survival if they are diagnosed with lung cancer. In other words, individuals were more likely to engage in adaptive behaviours like taking actual health protective measures such as quitting smoking when both threat and efficacy appraisal were high. There was also a substantial relationship between high readiness to quit smoking and

perceived self-efficacy, and between high readiness and perceived severity. However, Zarghami et al. (2021) found no significant relationship between high readiness and perceived threat ($p > 0.05$). This meant that the readiness to quit smoking was unlikely to be influenced by the magnitude of fear towards lung cancer when the smokers are ready to quit smoking. The findings of this study were in line with the EPPM framework, whereby Witte (1992) stated that high threat and efficacy appraisals will induce behavioural changes among individuals faced with threat, but Zarghami et al. (2021) found that this was only applicable for people with low readiness to quit smoking. In future studies it is important to find out participants' readiness to take specific health protective measures to understand the impact of perceived threat and efficacy.

Then, Chen and Chen (2023) studied the danger control and fear control in reaction to public health emergencies among 1,676 participants in China during the COVID-19 outbreak throughout February of 2020. Fear control was defined as information avoidance while danger control was defined as protective actions (Chen & Chen, 2023). The results of the national survey revealed that threat appraisal (perceived susceptibility and severity) could lead to fear that positively affected danger control process (Chen & Chen, 2023). Meanwhile, efficacy appraisal (perceived self- and response efficacies) elicited hope and was negatively associated with avoidance towards information, which resulted in protective actions. This meant that participants with high threat and efficacy appraisal were more likely to assess public health emergencies through fear control. On the other hand, people were more likely to assess the emergencies through danger control when self- and response efficacies were low. Chen and Chen's (2023) findings showed that it is important to study perceptions of threat and efficacy together in order to understand how people respond to danger control or fear control.

Lastly, the ongoing Malaysian anti-smoking campaign, dubbed the "*Tak Nak*" campaign, was assessed by Periyayya and Wee (2014) by using the EPPM to test the effectiveness of health risk information communicated. Periyayya and Wee (2014) aimed to examine the effectiveness of social fear appeal (low threat and efficacy information) and physical fear appeal (high threat and efficacy information) among 189 college students. The participants were split into three focus groups. Group A was exposed to advertisement containing social fear appeal message (i.e., stained teeth), while Group B was presented with physical fear appeal message (i.e., brain haemorrhage) (Periyayya & Wee, 2014). Meanwhile, Group C acted as a control group that was exposed to an advertisement with the "*Tak Nak*" symbol (i.e., a crushed cigarette) with information on the dangers of smoking which was expected to evoke a very mild sense of fear

(Periyayya & Wee, 2014). As a result, Group A had low threat appraisal (mean score of 2.6) compared to efficacy appraisal (3.6), which implied that Group A experienced danger control in response to the social fear appeal message (Periyayya & Wee, 2014). On the other hand, Periyayya and Wee (2014) found that Group B experienced greater threat appraisal (4.4) compared to efficacy appraisal (3.5) in response to the physical fear appeal message, indicating that the group was in fear control state. Lower mean scores for both threat and efficacy appraisals (1.6 and 1.9 respectively) were recorded for control Group C in response to the mild “*Tak Nak*” thematic advertisement, implying that Group C were in no-response position (Periyayya & Wee, 2014). Thus, the findings supported the predictions of the EPPM by proving that efficacy construct influenced how people process fear appeal – either through danger control or fear control. The synthesis of findings shows that Periyayya and Wee’s (2014) results concurred with the findings reviewed earlier to show that threat and efficacy perceptions are linked to danger control and fear control responses.

In summary, the findings from these studies highlight that the effectiveness of fear appeal messages depends on the individual's perception of the risk, and they may respond to fear appeal messages in two ways, namely, fear control and danger control. The level of threat and efficacy appraisal also plays a vital role in determining the effectiveness of the message in encouraging behavioural change. Fear appeal messages, based on the EPPM (Witte, 1996), may induce fear control or danger control processes in individuals, and those who respond by danger control are more likely to engage in behavioural change or preventive behaviour. Zarghami et al.’s (2021) study found that smokers were more likely to perform adaptive behaviours such as quitting smoking when both threat and efficacy appraisals were high. However, Chen and Chen (2022) revealed that people were more likely to respond to public health emergencies through fear control due to high threat and efficacy appraisals. In the meantime, Periyayya and Wee (2014) revealed that social and physical fear appeal messages impacted individuals differently, whereby those exposed to physical fear appeal were more likely to engage in danger control process while social fear appeal induced fear control process due to the low threat value in the message. Therefore, fear appeal has a crucial role in communicating health risk information to the public as it determines the effectiveness of the information to motivate behavioural change like making healthier lifestyle choices.

3. THEORETICAL FRAMEWORK OF STUDY

The theoretical framework of this study is taken from the Extended Parallel Process Model (EPPM). To address how and when fear appeal effectively and successfully works to promote rightful behaviours and why fear appeal may fail, Witte (1992) developed the EPPM based on the existing fear appeal theories, especially the danger control and fear control framework by Leventhal in 1970. Figure 1 shows the constructs of the EPPM (Witte, 1996) which shows the fear control and danger control processes in response to fear appeal.

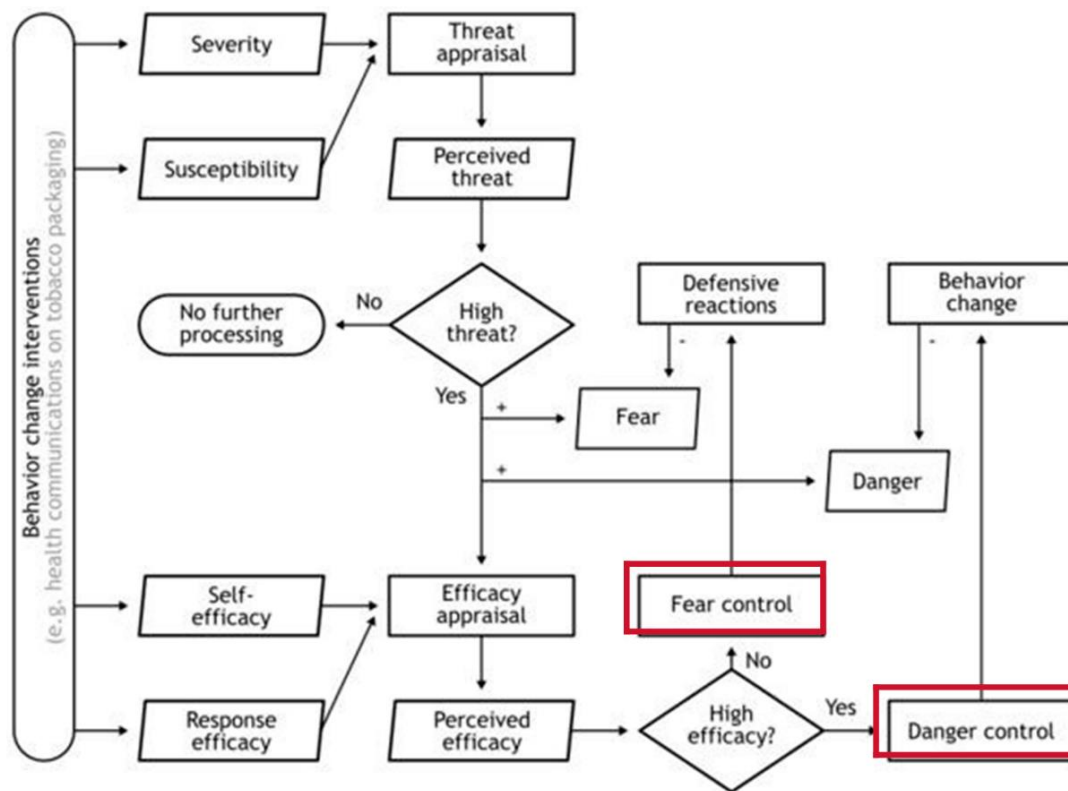


Figure 1. Extended Parallel Process Model (Witte, 1996) shows fear and danger control processes in response to fear appeal

Fear control is an emotional process which triggers the defensive motivation due to a high level of fear, and during this process, an individual thinks of ways to cope and reduce fear of a threat (Witte, 1996). One form of fear control process according to Gross (1998) is cognitive appraisal which involves reinterpreting the meaning of a given threat to minimise fear and anxiety. An example of cognitive appraisal towards lung cancer risk messages involves denial of the danger, that is, fear control. People convince themselves that they have little to low risk of developing cancer, or that they are not likely to get the disease because they have good genes.

Witte and Allen (2000) stated that fear control process involves avoiding or denying threat to minimise fear and anxiety, as well as defensive avoidance. Defensive avoidance means that an individual will avoid the source of fear or anxiety (Witte & Allen, 2000). For instance, an individual undergoing fear control process will avoid risk information on lung cancer to avoid dealing with anxiety caused by the information. Another form of fear control process is seeking social support which provides comfort and reassurance from friends and family (Witte & Allen, 2000). For example, an individual will talk to the people they are close with to feel better about being faced with the risk of lung cancer.

Next, danger control is a cognitive process that evokes protection motivation, in which individuals will think of strategies to avoid or minimise the threat (Witte, 1996). Witte and Allen (2000) defined danger control as the process of acknowledging and understanding the nature and seriousness of a threat, assessing one's capability to manage the threat, and implementing mitigating measures to avoid the threat or get ready for the possibility of threat occurrence. People often actively seek information to gain an understanding of a potential threat before taking action to manage or reduce a threat (Cho & Salmon, 2007). For example, when an individual is diagnosed with cancer, danger control processes motivate them to make lifestyle changes to reduce the risk of cancer recurrence, and to seek information on treatment options (Cho & Salmon, 2007). Another example of danger control in response to lung cancer risk information is that individuals will perform recommended actions (e.g., smoking cessation, lung cancer screening) to prevent or minimise the risk of lung cancer.

4. METHODOLOGY

This study used a descriptive research design to assess the fear control and danger control responses to health risk information. Descriptive research is deemed purposeful to describe the characteristics of a population or area of interest (Isaac & Michael, 1995) and comprehend how people behave in real-life situation (McCombes, 2019) accurately and systematically.

Three participants from a family, aged between 20 and 57 years old, were interviewed. Participants were asked about their age and smoking status which included passive smoking before proceeding with fear assessment. Participant A (mother) is a 51-year-old housewife with no smoking history but lives with smokers. Participant B (son) is a 20-year-old male smoker who also lives with a smoker. Participant C (father) is a 57-year-old male with no history of smoking but lives with smokers.

The instrument to elicit fear control and danger control responses is a poster on lung cancer risk information taken from the website of Malaysia's National Cancer Institute as shown in Figure 2. The poster consists of fear appeal messages in the form of lung cancer risk (including statistics) and symptoms. The poster stated that lung cancer is the second most common type of cancer among Malaysian men, and smokers had about 15 to 25 times the risk of lung cancer compared to non-smokers. The poster also stated that the signs of lung cancer are prolonged coughing, blood in cough, difficulty breathing, chest pain, loud breathing or hoarse voice, fatigue, nausea/vomit/thirst/constipation/confusion due to high level of calcium in blood, easily tired or breathless when performing daily activities (*Kanser Paru-Paru*, n.d.).



Figure 2. Poster on the risk and symptoms of lung cancer, taken from the National Cancer Institute website (*Kanser Paru-Paru*, n.d.)

To elicit the responses to the poster, an interview guide was formulated. The semi-structured interview questions were as follows:

1. Are you afraid of lung cancer? Why?
[Researcher shows poster to participant]
2. Is there anything new that you learned from this poster?
3. Are you afraid of lung cancer? Why?

Question 1 served the purpose of assessing the participants' current or initial level of fear of lung cancer. Question 2 and Question 3 were asked after the participants read the poster in Figure 1. Question 2 assessed whether the participant gained new knowledge on the risk and symptoms of lung cancer from the poster. Question 3, which is a repetition of Question 1, served the purpose of assessing whether the risk information in the poster appealed to the participants' emotions or fear. In other words, Questions 1 and 3 are like the pre- and post-questions to study responses to the poster.

Participants were recruited through the purposive sampling of Malaysians aged 18 years and older. Participants were individually briefed about the aim and objectives of the study before asking if they were interested to participate in the study. Once they agreed and consented to participate, researcher immediately conduct interview on the spot, considering the study only involved simple questions. Interview sessions were conducted in participants' chosen language, either Malay, English, or Iban. When the participants gave short or one-word answers, the researcher was prompted by asking follow-up questions to encourage participants to speak of their fear of lung cancer and how they perceive the threat. Each interview session was audio recorded by using the researcher's own mobile phone. The audio recordings were then transferred to the researcher's storage (laptop or tablet). Audio recordings were listened to and transcribed verbatim, then translated into English language for analysis.

For analysis procedure, the participants' responses were analysed based on the constructs of Extended Parallel Process Model (EPPM) as defined by Witte (1996), to determine whether the participants experienced fear control or danger control process. The analysis framework for thematic analysis of this study is shown in Table 1. Thematic analysis was performed on the participants' response to lung cancer risk information prior to reading the poster as well as after reading the poster. Responses were colour-coded in the transcription, based on the themes of fear control (yellow highlight) and danger control (green highlight). Data were tabulated according to the themes and subthemes.

Table 1. Analysis framework for responses to fear appeal based on EPPM (Witte, 1996)

Process	Definition	Example
Fear control	Emotional process that triggers the defensive motivation by minimising fear (Witte, 1996).	<p>An individual thinks of ways to cope and reduce fear of threat (Witte, 1996). For example:</p> <ul style="list-style-type: none"> ● Denying/indifferent towards risk of threat. ● Making excuses about threat. ● Hesitant to address the threat. ● Superficial (on-surface/not in depth) description of threat. ● Cognitive appraisal (Gross, 1998) by <u>convincing oneself that they have low risk of cancer</u>, for example, due to good genes. ● Defensive avoidance (Witte & Allen, 2000) by avoiding cancer risk information to <u>avoid dealing with fear/anxiety induced by the information</u>. ● Seeking social support (Witte & Allen, 2000) by talking to people they are close with to feel better about the threat of cancer.
Danger control	Cognitive process that evokes protection motivation by minimising threat (Witte, 1996).	<p>An individual thinks of strategies to prevent or mitigate the threat (Witte, 1996). For example:</p> <ul style="list-style-type: none"> ● Acknowledging and understanding the <u>characteristics and severity</u> of a threat (Witte & Allen, 2000). ● Assessing capability to <u>manage threat</u> (Witte & Allen, 2000) or the <u>efficacy of recommended actions</u> (Rogers & Mewborn, 2000) ● Performing mitigating measures or recommended actions to <u>avoid</u> threat or <u>get ready for possibility</u> of threat occurrence (Witte & Allen, 2000). ● Actively seeking information to gain understanding about potential threat <u>before taking mitigating actions</u> (Cho & Salmon, 2007).

We acknowledge the limitations of the study in the small sample size and the use of purposive sampling instead of random sampling, and these limit the generalisability of the findings. The semi-structured interview guide resulted in participant responses which varied in the manner of expression but it was chosen to allow flexibility in sharing of views. The bias that might result from the variability of responses was handled by having a clear analysis framework (Table 1) which was refined and improved during the repeated analysis to ensure reliability in the analysis and coding of fear control and danger control elements. The two researchers

repeatedly checked the coding on their own, and compared their coding to ensure shared interpretation of the interview transcripts. The semi-structured interview guide, the analysis framework (Table 1) and the findings of this study (Table 2) will be integrated to produce a questionnaire for future studies involving a larger group of participants.

5. RESULTS

The thematic analysis on the interview sessions with the three participants revealed themes of fear control and danger control. Fear control theme was portrayed by two themes, namely, lack of depth in discussing risk or severity of lung cancer, and dismissive attitude towards lung cancer risk information. Danger control was reflected in two themes, namely, acknowledging and understanding the nature and seriousness of lung cancer, and performing mitigating measures to avoid or prevent threat. All three participants have heard of most, if not all, risk information found in the poster before they looked at it. However, how they respond to risk information was different from one another. Prior to presenting the risk information poster, both themes of fear control and danger control were reflected in the participants' responses.

Table 2 documented two themes under fear control identified through the interview, namely, superficial description of lung cancer, and dismissive attitude towards lung cancer risk information. Superficial description of lung cancer manifested as a superficial justification for fear of lung cancer, and a simplistic explanation of the risk and severity of lung cancer. Meanwhile, dismissive attitude was directed towards knowledge of lung cancer prior to the interview, and also after acquiring new knowledge from the poster.

Table 2. Themes of fear control and danger control in response to lung cancer risk information

	Theme	Response
Fear control	Superficial description	"I mean, it is lung cancer, definitely going to be bad. Like... there is no way it is not bad." - Participant B
		"Who is not scared? Everyone is scared [of lung cancer]." - Participant C
"Aaa if according to my knowledge, [I] may have the risk lah, because I live with smokers." - Participant C		
<i>(After reading poster)</i> "More scared lah, since now I know the signs [of effects]." - Participant C		
	Dismissive attitude	<i>Participant B stated that he is aware of the all the information on the poster. This was followed by dismissive reaction to risk information as shown in dialogue below:</i> Question [Q]: After looking at this poster... Are you afraid of lung cancer? Participant B [B]: Yeah. Q: Is it the same or more afraid? B: I mean... yes. Q: More afraid? B: No. Q: The same [level of fear]? B: It is fear. There is nothing else to it.
		<i>When asked on the knowledge of lung cancer risk, Participant C said:</i> "I do not know the symptom." <i>However, after reading the risk information poster, the following response emerged:</i> Participant C [C]: Mmm... this, nausea, vomitting, and constipation. Question [Q]: That's all? C: Yes.

Danger control	Taking action to mitigate/prevent risk of threat	"Yes [I am afraid of lung cancer]. That is why when [my sons] smoke, [I] tell them [to smoke] outside [the house]." - Participant A
	Understanding severity of threat	"If you get sick, you cannot do anything." - Participant A
		"... you have to be admitted to the hospital... [get] chemotherapy, and radiotherapy for a long time." - Participant A
		<i>(After reading poster)</i> "It is a disease... a prolonged disease that takes time to heal." - Participant A
		<i>(After reading poster)</i> "Sometimes it is hard to heal." - Participant A
		<i>(After reading poster)</i> "It is [a disease that makes you] depend on the hospital [care]." - Participant A

5.1. Fear control

Fear control is an emotional process that triggers defensive motivation in which an individual figures out ways to cope or minimise the fear of threat (Witte, 1996). The findings of the present study found two themes for fear control, namely, superficial description of threat and dismissive attitude towards threat.

The first theme under fear control is superficial description of the risk or severity of lung cancer. Participants B and C described the threat based on general knowledge without going into details of how the threat can possibly affect their life. In other words, they touched on basic knowledge of lung cancer or the obvious nature of lung cancer.

Participant B admitted that he was afraid of lung cancer because "it is bad" without elaborating further on why or how it is bad for them. For instance, the following response emerged from the interview with Participant B prior to reading risk information poster:

"I mean... it is lung cancer, definitely going to be bad. Like... there is no way it is not bad."

The excerpt above reflected Participant B's simplistic understanding of the severity of lung cancer by only describing that lung cancer symptoms and effects would be "bad" without the intention to explain how it may affect own life. Meanwhile, Participant C showed simplistic understanding on the risk of lung cancer, evident in the following excerpt:

“Aaa if according to my knowledge, [I] may have the risk lah, because I live with smokers.”

Participant C was aware that living with smokers put him at greater risk of lung cancer and despite this, Participant C did not elaborate any further on how the risk would affect his life. Additionally, Participant C had generalised and simplistic description of fear, as shown in the following excerpt:

“Who is not scared? Everyone is scared [of lung cancer].”

Participant B and Participant C’s responses prior to reading the poster showed that they had superficial general knowledge on the risk factor and severity of lung cancer. After looking at the poster (Figure 1), Participant C claimed to have increased fear towards lung cancer:

“More scared lah, since now I know the signs [of effects].”

However, Participant C only provided a general description on fear of lung cancer albeit being asked elaborative questions to determine the magnitude of fear they experienced before and after reading the poster.

The second theme under danger control is a dismissive attitude towards risk information, which was expressed by Participant B and Participant C in response to the poster on lung cancer risk information. Participant B stated that he was aware of all the information displayed on the poster. The researcher asked whether the poster affected Participant B’s fear of lung cancer, but he remained indifferent towards the risk of lung cancer. The discussion between researcher and Participant B went as shown in the following excerpt:

Question [Q]: After looking at this poster... Are you afraid of lung cancer?

Participant B [B]: Yeah.

Q: Is it the same or more afraid?

B: I mean... yes.

Q: More afraid?

B: No.

Q: The same [level of fear]?

B: It is fear. There is nothing else to it.

Participant B persistently answered all questions with a single word or sentence, and admitted that his level of fear remained similar after reading the risk information in the poster. Additionally, the response *“I mean... yes.”* to a comparative question and the sentence *“There*

is nothing else to it.” implied that Participant B was not interested in discussing the threat of lung cancer.

Meanwhile, Participant C admitted that he did not know anything about the symptoms of lung cancer prior to reading the poster, as quoted in the following excerpt:

“I do not know the symptoms.”

However, after reading the poster, Participant C stated that the symptoms of lung cancer that he was not aware of before were only nausea, vomiting, and constipation:

Participant C [C]: Mmm... this, nausea, vomiting, and constipation.

Question [Q]: That’s all?

C: Yes.

The contradicting statements before and after reading the poster suggest that Participant C had dismissive attitude towards the knowledge of lung cancer by portraying lack of interest in discussing about it. With reference to the poster in Figure 1, the symptoms of lung cancer included prolonged coughing, blood in cough, difficulty breathing, chest pain, loud breathing or hoarse voice, fatigue, nausea/vomit/thirst/constipation/confusion due to high level of calcium in blood, easily tired or breathless when performing daily activities (*Kanser paru-paru*, n.d.). Out of the symptoms listed, Participant C stated that he never heard of only three of the symptoms, that is, nausea, vomiting, and constipation; this reflected pre-existing knowledge on the other symptoms. However, the failure or lack of interest to name any of the known symptoms showed that Participant C was dismissive towards the knowledge of lung cancer acquired prior to the interview. The dismissive attitude is likely due to low perceived susceptibility of lung cancer despite living among smokers.

All in all, Participant B and Participant C’s lack of interest in addressing threat support Witte and Allen’s (2000) statement that an individual in fear control may portray behaviours of defensive avoidance whereby they avoid cancer risk information to avoid dealing with fear or anxiety evoked by the information.

5.2. Danger control

The theme of danger control only emerged from the interview with Participant A. Danger control, according to Witte (1996), is a cognitive process in reaction to fear appeal messages which induced protection motivation. Witte (1996) stated that individuals in danger control process will think of strategies to mitigate the threat. The results of this study showed that

danger control manifests as intention to take action to mitigate or prevent risk of threat, and effort to understand the severity of threat.

The first theme under danger control was taking action to mitigate or prevent risk of threat. Before reading the risk information in the poster, Participant A claimed that she took action to prevent the risk of lung cancer, whereby she prohibited smoking inside the house. Participant A stated:

"Yes [I am afraid of lung cancer]. That is why when [my sons] smoke, [I] tell them [to smoke] outside [the house]."

Participant A recognised tobacco smoking as the most common risk factor for lung cancer. She prohibited her husband and son from smoking in the house to reduce her own risk of getting lung cancer. The response reflects danger control as defined by Witte and Allen (2000).

The second theme of danger control identified through the interview was understanding the severity of threat, which was recorded in Participant A's responses before and after she read the lung cancer poster. The following excerpts showed Participant A's acknowledgement and understanding of lung cancer risk in terms of severity:

*"If you get sick, you cannot do anything."
"... you have to be admitted to the hospital... [get] chemotherapy, and radiotherapy for a long time."*

After reading the poster, Participant A clarified that she had heard of the common signs of lung cancer, namely, coughing, phlegm, shortness of breath, and chest pain. When asked whether the level of fear towards lung cancer changed after reading the poster, Participant A stated that she *"just fear it (lung cancer),"* which showed that the level of fear towards lung cancer was already high. Participant A justified her fear of lung cancer based on the severity of lung cancer and its treatment procedures. Participant A's responses portrayed knowledge on the treatment option for cancer and how the treatment processes usually go on for an extended period. Participant A acknowledged the severity of lung cancer by depicting the disease as immobilising, and requiring hospitalisation (as shown in the following excerpts):

*"It is a disease... a prolonged disease that takes time to heal."
"Sometimes it is hard to heal."
"It is [a disease that makes you] depend on the hospital [care]."*

Overall, the findings showed only Participant B remained indifferent towards the risk information presented in the poster, while the other participants expressed greater fear of lung

cancer. Participant A expressed danger control in response to risk information while, Participants B and C expressed fear control. Based on the responses of three participants, fear control is more frequent than danger control in a lung cancer poster.

6. DISCUSSION AND CONCLUSION

The study found that fear control was slightly more common than danger control, based on the responses of three participants. Considering only one in three participants responded to the risk information poster by danger control, perhaps the poster had low to mid efficiency in inducing behavioural changes. The fear control was expressed by smokers who might be in denial of the dangers of smoking to their health, and they did not wish to acknowledge the real danger of lung cancer as indicated in the lung cancer poster. The study showed that the magnitude of fear increased among the smokers after they viewed the lung cancer poster, but the fear level stayed about the same for the non-smoker. As for fear control, the study revealed the prevalence of a simplistic understanding of the risks associated with lung cancer. Additionally, the participants displayed a dismissive attitude towards fear appeal, and lacked interest to discuss the lung cancer risks and how lung cancer can potentially affect their lives. On the other hand, the study showed that danger control is reflected in the participant's intention to take action to reduce lung cancer risk, and it begins with an acknowledgement of the risk and severity of lung cancer as well as the impact of lung cancer diagnosis and treatment on their life.

The findings provide an example of how danger control can occur in certain individuals who have a good understanding of the severity of the threat and the available prevention and mitigation measures. This result is in line with the findings of Cho and Salmon (2006) and Zarghami et al. (2021), which is people who are more knowledgeable about a health risk (i.e., ready to quit smoking due to awareness of health threat, intended to or already engaging in recommended behaviours) are more likely to engage in danger control. In the present study, Participant A demonstrated a good understanding of the severity of lung cancer and its treatment procedures. It was likely that the knowledge and understanding had contributed to Participant A's decision to take action to mitigate the risk of lung cancer by prohibiting smoking inside the house as she was in danger of getting lung cancer from being a secondary smoker.

The slightly more prevalent fear control (compared to danger control) among the smokers who were not ready to quit smoking is understandable as they preferred to live in denial of the dangers posed by lung cancer. This is in reference to Zarghami et al. (2021) who found that smokers with low readiness to cease smoking were influenced by perceived threat and

perceived efficacy whereas perceived threat was less important to smokers with high readiness to cease smoking. The emphasis on the lung cancer poster could lead to perceptions of fear control because smokers feel uncomfortable reading the descriptions of physical harms, namely, the symptoms of lung cancer. They subconsciously deny that they might experience these symptoms and therefore respond with fear control to counter the physical fear appeals in the lung cancer poster shown to them in the present study. In Periyayya and Wee's (2014) study, an interesting finding emerged, that is, physical fear appeal would most likely result in fear control. The findings of the present study supported this as Participants B and C remained indifferent to the dangers of lung cancer, on top of exhibiting a dismissive attitude towards the risk information presented in the poster. Both of them were smokers, and may not intend to quit smoking. People who had no intention to change their behaviour towards a threat were more inclined to assess fear appeal using fear control and prone to exhibit negative attitude towards the threat (Cho & Salmon, 2006). The main implication drawn from the present study, taking into account past related findings, is that lung cancer risk messages should still use fear appeal but should also highlight efficacy of treatment and early detection procedures to instil confidence and hope in smokers to take health protective measures. When there is only danger appeal information in lung cancer posters, this may "incapacitate" the smokers into taking action as they resign themselves to their future impact of their lifestyle as smokers.

However, a limitation of the study is that the perceived self- and response efficacies of the participants were not assessed, and only the impact of perceived threat (susceptibility and severity) on how people react to fear appeal was examined. Further studies should examine whether people who have a good understanding of the severity of a threat and available prevention and mitigation measures are more likely to engage in danger control. Another area of research on lung cancer is whether smokers are inclined to downplay risks by resorting to fear control rather than danger control, compared to non-smokers.

Acknowledgement

This research is funded by the Translational Research Grant (TRG) awarded by the Sarawak Digital Economy Corporation Bhd (SEDC), IRG/F07/SDEC/85162/2022.

REFERENCES

Ab Manan, A., Basri, H., Kaur, N., Abd Rahman, S. Z., Amir, P. N., Ali, N., Raman, S., Bahtiar, B., Ramdzuan, N. S. M., Syed Soffian, S. S., Othman, R., Othman, N. A., & Abdul Aziz,

- A. (Eds.). (2019). *Malaysia national cancer registry report (MNCR) 2012-2016*. Ministry of Health Malaysia.
- Chen, L., & Chen, M. (2023). Danger control and fear control during public health emergencies: Considering the roles of fear and hope in the EPPM across different levels of trust. *Risk Analysis*, *43*(5), 928-942. <https://doi.org/10.1111/risa.13985>
- Cho, H., & Salmon, C. T. (2006). Fear appeals for individuals in different stages of change: Intended and unintended effects and implications on public health campaigns. *Health Communication*, *20*(1), 91-99. https://doi.org/10.1207/s15327027hc2001_9
- Cho, H., & Salmon, C. T. (2007). Unintended effects of health communication campaigns. *Journal of Communication*, *57*(2), 293-317. <https://doi.org/10.1111/j.1460-2466.2007.00344.x>
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, *2*(3), 271-299.
- Isaac, S., & Michael, W. B. (1995). *Handbook in research and evaluation: A collection of principles, methods, and strategies useful in the planning, design, and evaluation of studies in education and the behavioral sciences*. Edits publishers.
- Jerome, C., & Ting, S. H. (2017). Multimodal analysis of persuasive strategies in cancer risk messages in posters. *International Conference on Development, Environment and Society (ICDES) 2017: Towards an Inclusive and Sustainable Future*.
- Jerome, C., & Ting, S. H. (2019). What's in a message: A systemic functional analysis of cancer prevention messages. *International Journal of Applied Linguistics*, *32*(1), 57-75. <https://doi.org/10.1111/ijal.12380>
- Kanser paru-paru*. (n.d.). National Cancer Institute; Ministry of Health Malaysia. Retrieved March 14, 2023, from <https://nci.moh.gov.my/index.php/ms/main-menu-2/poster/414-kanser-paru-paru>
- McCombes, S. (2019, May 15). *Descriptive research design*. Scribbr. <https://www.scribbr.com/methodology/descriptive-research/>
- Periyayya, T., & Wee, V. E. K. (2014). Testing the effectiveness of health risk messages: Threat and efficacy processing. *Social and Management Research Journal (SMRJ)*, *11*(1), 101-118.
- Sung, H., Ferlay, J., Siegel, R. L., Laversanne, M., Soerjomataram, I., Jemal, A., & Bray, F. (2021). Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality

- worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians*, 71(3), 209-249. <https://doi.org/10.3322/caac.21660>
- WCRF International (n.d.). *Lung cancer statistics*. <https://www.wcrf.org/cancer-trends/lung-cancer-statistics/>
- Witte, K. (1992). Putting the fear back into fear appeals: The extended parallel process model. *Communication Monographs*, 59(4), 329-349. <https://doi.org/10.1080/03637759209376276>
- Witte, K. (1996). Fear as motivator, fear as inhibitor: Using the extended parallel process model to explain fear appeal successes and failures. In Anderson, P. A. & Guerrero, L. K. (Eds.), *Handbook of communication and emotion* (pp. 423-450). Academic Press. <https://doi.org/10.1016/B978-012057770-5/50018-7>
- Witte, K., & Allen, M. (2000). A meta-analysis of fear appeals: Implications for effective public health campaigns. *Health Education & Behavior*, 27(5), 591-615.
- Zarghami, F., Allahverdipour, H., & Jafarabadi, M. A. (2021). Extended parallel process model (EPPM) in evaluating lung Cancer risk perception among older smokers. *BMC Public Health*, 21(1). <https://doi.org/10.1186/s12889-021-11896-1>

Conference Proceedings
The International Conference on Global Issues
Trends and Directions across Disciplines
ICGD 2023 Theme: New normal opportunities and challenges in 2023

Hoa Sen University

VIETNAM NATIONAL UNIVERSITY HO CHI MINH CITY PRESS

Headquarters:

Room 501, VNUHCM Headquarter, Linh Trung Ward, Thu Duc District, HCMC

Phone: 028 62726361

E-mail: vnuhp@vnuhcm.edu.vn

Website: www.vnuhcmpress.edu.vn

Publication Director

Dr DO VAN BIEN

Editor

SIN KE DUYEN

Proofreader

NHU NGOC

Book Cover Designer

HOA SEN UNIVERSITY

Associate Partner of Organising Manuscript and Responsible for Copyright
HOA SEN UNIVERSITY

First edition. Capacity: 7.30MB, Size: 21 x 30 cm. Registration Number of Publication Plan: 1508-2023/CXBIPH/1-24/ĐHQGTPHCM. Publication Decision Number 178/QĐ-NXB by VNUHCM Press issued on 08/8/2023. Posted at www.vnuhcmpress.edu.vn. Legal deposit in 2023. ISBN: **978-604-73-9869-0**.

Copyright of works has been protected by Publication Law and Vietnam Intellectual Property Law.

All forms of publication, copying and distribution of content are strictly prohibited without the consent of the author and the Publisher.

PROTECT COPYRIGHT TOGETHER FOR GOOD BOOK