

FEAR APPEALS FOR INCREASING INTENTIONS TO HAVE COLORECTAL CANCER
SCREENING AMONG HIGH-RISK ADULTS: MODERATING ROLE OF TRIPARTITE SELF-
CONSTRUAL



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การโน้มน้าวใจด้วยความกลัวเพื่อเพิ่มเจตนาในการไปตรวจคัดกรองมะเร็งลำไส้ในผู้ใหญ่ที่มีความเสี่ยง:
อิทธิพลกำกับของการนิยามตัวตนสามแบบ



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โรคมะเร็งลำไส้ใหญ่เป็นโรคที่อันตรายถึงชีวิต การตรวจคัดกรองหามะเร็งลำไส้ใหญ่ในช่วงแรกก่อนแสดงอาการถือเป็นหัวใจสำคัญในการรักษาที่มีประสิทธิภาพ การโน้มน้าวใจด้วยความกลัวเป็นวิธีการที่มีประสิทธิภาพในการโน้มน้าวใจให้บุคคลเข้ารับการคัดกรองมะเร็งลำไส้ใหญ่ การศึกษานี้จัดทำขึ้นเพื่อศึกษาซ้ำเกี่ยวกับความสอดคล้องกันของวัฒนธรรมที่แตกต่างในระดับบุคคลและประเภทของสารโน้มน้าวใจด้วยความกลัว ซึ่งเป็นงานวิจัยเชิงทดลองแบบแฟคทอเรียล (factorial design) โดยศึกษาใน 2 ปัจจัย คือ การนิยามตัวตน (Self-construal) ที่มีสามระดับ และประเภทของสารโน้มน้าวใจด้วยความกลัว 2 แบบ เพื่อหาอิทธิพลของทั้งสองปัจจัยที่มีต่อ การรับรู้ถึงภาวะคุกคาม ความรู้สึกกลัว เจตคติและเจตนาในการไปตรวจคัดกรองมะเร็งลำไส้ใหญ่ด้วยวิธีการตรวจเลือดแฝงในอุจจาระ (FIT test) ในคนไทย กลุ่มตัวอย่างเป็นผู้ที่มีอายุ 40-70 ปีอาศัยอยู่ในกรุงเทพมหานคร จำนวน 133 คน ถูกสุ่มเข้าหนึ่งในหกของเงื่อนไขการทดลองออนไลน์ จากการวิเคราะห์ข้อมูลด้วยสถิติการวิเคราะห์ความแปรปรวนร่วมพหุคูณ พบว่า ไม่พบความแตกต่างในแต่ละเงื่อนไขการทดลองอย่างมีนัยสำคัญที่ระดับ .05 อย่างไรก็ตาม ก็ไม่สามารถสรุปได้แน่ชัดเนื่องจากการตรวจสอบการจำกัดกระทำที่ไม่เป็นผลสำเร็จของทั้งการจำกัดกระทำการนิยามตัวตนและประเภทของสารโน้มน้าวใจด้วยความกลัว ผลจากการวิเคราะห์ความสัมพันธ์ด้วยโปรแกรม PROCESS พบว่ามีตัวแปรที่มีความสัมพันธ์กันอย่างมีนัยสำคัญ โดยเฉพาะตัวแปรการรับรู้ภัยคุกคามและตัวแปรที่เป็นผลจากการโน้มน้าวใจด้วยความกลัว แม้ว่าผลการวิจัยจะไม่เป็นไปตามสมมติฐานของงานวิจัย แต่สำหรับนักปฏิบัติการและนักวิจัยในอนาคตอาจจะได้รับข้อมูลเชิงลึกเกี่ยวกับการนำสารโน้มน้าวใจด้วยความกลัวไปใช้สำหรับการเปลี่ยนเจตคติและพฤติกรรมในการเพิ่มการตรวจคัดกรองมะเร็งลำไส้ใหญ่ได้

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Suprapa Sa-ngasri : FEAR APPEALS FOR INCREASING INTENTIONS TO HAVE COLORECTAL CANCER SCREENING AMONG HIGH-RISK ADULTS: MODERATING ROLE OF TRIPARTITE SELF-CONSTRUAL . Advisor: Asst. Prof. Watcharaporn Boonyasiriwat, Ph.D.

Colorectal cancer (CRC) is considered a threat to life. Early detection is key to effective treatment. Fear appeal is one of the most famous techniques to persuade people to uptake CRC screening. This current study attempted to replicate the congruent effect of cultural orientation at an individual level and fear message types. A 3 (self-construal) x 2 (self-threatened versus family-threatened) factorial research design was employed to examine the effect of tripartite self-construal and the types of fear message on the perceived threat, feelings of fear, attitude and intention toward CRC screening among Thais. One hundred and thirty-three adults aged between 40 and 70 who lived in Bangkok were then randomly assigned to one of six experimental conditions via online participation. The between-group Multivariate Analysis Of Covariance (MANCOVA) indicated no difference among experimental conditions. However, the results were not conclusive due to *failed manipulation checks on both self-construal and fear message type manipulations*. The result from PROCESS analysis on measured self-construal revealed some significant relationships among variables, especially the relationship between perceived CRC threat and fear appeal outcomes. Despite the non-significant results, practitioners and future researchers would gain insights about implementing fear appeal messages for attitude and behavioral change to promote CRC screening.

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Chapter 1

Introduction

Background of the study

Colorectal cancer (CRC) is one of the most fearful cancers and is the second leading cause of death worldwide. According to World Health Organization, it was estimated that more than 18 million people had developed CRC around the world, and 8.6 million deceased from it. CRC mainly occurs in males and the old, but there is concern that the young might suffer from CRC. In Thailand, CRC incidence has increased from year to year. According to the National Cancer Institute of Thailand (NCI), CRC has primarily caused health problems and motility in the Thai population. The institute surveyed the number of CRC patients and deaths from 2011 to 2014 and reported that CRC incidence and motility rate had sharply grown. 10,624 Thai patients suffered in 2011 and continued to 12,563 in 2014. More recently, in 2019, several new patients registered in the system of NCI vividly emphasized the growth of CRC (Cancer Registry Unit of Medical Digital Division of National Cancer Institute, 2020). For males, CRC is the first most common cancer, followed by liver and bile duct cancer, trachea, bronchus, and lung cancer. In addition, CRC is the second most diagnosed cancer among females after breast cancer, the most diagnosed cancer type. Apart from the growth of CRC incident rate, the institute expressed great concern and dismayed the society toward the mortality rate. They have warned that if the government did not launch any campaign to protect against CRC incidence, the CRC mortality rate was predicted to reach 3,000 deaths per year in the following year. They have informed that screening for CRC is one of the most effective strategies to protect against CRC death and increase the survival rate. To maximize the effectiveness of CRC treatment and enhance the survival rate, the CRC should be detected at its early development stage. American Cancer Society informs that the survival rate for CRC is 65% at five years following diagnosis and 58% at ten years.

According to the NCI of Thailand, the survival rate declines to 15-20% when the CRC is late diagnosed.

Nevertheless, NCI of Thailand has been shocked due to the neglect of early screening and detection among the Thai population. According to the institute report, the new CRC patients who entered the treatment with final-stage CRC cancer outnumbered other developmental stages. That brings about much concern to NCI of Thailand regarding what they could do to raise awareness and augment the survival rate. For these reasons, the Ministry of Public Health of Thailand launched the first service plan in 2018 to prevent CRC and motivate its citizens to attend an early CRC screening via the Fetal immunochemical Test for Hemoglobin (Fit test). That is, the financial support benefited the Thai population from this service plan. Those at risk, especially those aged 50-70 years, should attend the screening test gratuitously if there are any signs of health problems. Despite the support from the government, it was reported that the ignorance of CRC screening was still noticeable. From the provincial report of Kanchanaburi in 2018, one of the provinces in Thailand, it was apparent that less than 20% of those at risk of developing CRC (age 50-70) attended early CRC screening or FIT test. Therefore, it is crucial not only to launch financial support but also to motivate and persuade Thais to have a CRC screening.

The present study applies one of the most effective techniques to promote CRC screening via the FIT test, called the Extended Parallel Process Model of fear appeal (EPPM), which is considered the most recent and extensive model in fear appeal. Fear appeal is a persuasive message constructed to strike fear into message recipients by describing the frightful things that possibly happen to them if they do not follow what is recommended by messages (Witte, 1992). A fear appeal has been vastly applied in health communication to promote prevention as well as risk avoidance relating to health behaviors. Due to personality differences, it is suggestive that different types of fear messages might result in threat perception dissimilarly in

those with independence self-construal and dependence self-construal. Fear appeal studies have been famously conducted in a western setting. Sampson et al. (2001) have revealed their concern about using fear appeal in different cultures. They hypothesized that messages used in western countries (e.g., United States) that put individuals in fear by impressing possible harm to self might not be adequate to induce fear among easterners like the Chinese who place significance on other benefits. For that reason, cultural orientation or self-construal has become the center of interest in many following studies.

Nevertheless, previous studies have attempted to prove the proposition. Some studies had failed to investigate the moderation effect of self-construal when an individual appraised different message type (self-interest focus versus other-interest focus) (Jansen & van der Kroef, 2019; Jansen & Verstappen, 2014). This proposition's lack of replicability increases doubts about the self-construal effect on evaluating fear appeal components.

Literature review

CRC (CRC) and FIT test screening

According to the American Cancer Society, cancer that starts in the colon or rectum can variously be named colon cancer or rectal cancer, depending on where the cancer starts. The cancer is caused by the maldevelopment of the inner lining of the colon and rectum, called polyps. It requires many years for those polyps to grow into cancer. That is why the target of CRC risk is more likely to be the elderly group. Apart from age risk, CRC can be developed by various factors, including genetic transmission, consumption behavior (high fat and less high fiber consumption, alcohol drinking, smoking, and lack of physical exercise. Aged patients, however, most were found to suffer from CRC. One way to effectively prevent CRC is

screening. Two main screening techniques are implemented in Thailand: Fetal immunochemical Test for Hemoglobin (FIT test) and colonoscopy.

The FIT test is considered the primary technique to detect CRC. The technique is designed to investigate the feces for the hidden blood, which the naked eyes cannot observe. The test will show a positive test result if there is hidden blood. However, the positive test result may not accurately tell whether the cause of hidden blood is CRC. To diagnose CRC accurately, the individuals must go to colonoscopy.

Regarding to National Cancer Institute Thailand (NCI), the service plan aims to enhance Thai people to at least go to FIT test at first as the cost is not high and affordable to most of its population. Due to its lower cost, The National Health Security Office (NHSO) funded a huge healthcare budget and included FIT test screening for Thai people as one of their health rights.

The FIT test process may include several steps to achieve but not be complex as colonoscopy. An attendant must collect feces by himself or herself, and the National Cancer Institute of Thailand has established the appropriate collection instructions. The process includes 1) receiving a collection tool at the hospital, 2) collecting feces 3) taking that collected sample back to hospital staff.

The extended parallel process model of fear appeal (EPPM)

Fear appeal is one of the most famous techniques to change attitudes and behaviors toward health-related topics by introducing a feeling of fear. Various scholars had devoted themselves to comprehending how individuals processed fear and responded when the fear was aroused. In 1992, the Extended Parallel Process Model (EPPM) model by Witte thoroughly explored the cognitive processes of how individuals processed a fear appeal message which later led people to cope differently with a fear aroused. The model first noted the process leading to a

backfire of using fear-aroused messages along with the effectiveness of using the fear-induced method. The EPPM was built by integrating previously proposed fear appeal theories, including Fear-As-Acquired Drive Model, the Parallel Process Model and Protection Motivation Theory (Popova, 2012).

Components of fear appeal. According to EPPM, there are four primary constructs to understand fear processes, including the feeling of fear, two dimensions of treatment (severity and susceptibility), two dimensions of efficacy (self-efficacy and response efficacy), and two different types of fear responses (fear control and danger control). Feeling fear is seen as the core proposition of the fear appeal technique, referring to the negative emotion resulted from an individual's perception of a threat (Popova, 2012). *Fear* is measured directly through self-reports assessed by how much participants are frightened, scared, or anxious after receiving health-related threats (Popova, 2012). Nevertheless, indirect measure like physiological process assessed by skin conductance and heart rate is seen as an additional utility to explain fear (Ordoñana, González-Javier, Espín-López, & Gómez-Amor, 2009 as cited in Popova, 2012, p. 457). Although this measure might rule out demanding characteristics or social desirability, some scholars have been skeptical about its accuracy (Bradley & Lang, 2007, as cited in Popova, 2011). *Threat* refers to "A danger or harm that exists in the environment whether we know it or not" (Witte et al., 1996). The threat is always tangled with the perceived threat. Scholars have distinguished *threat* contained in message contents, including both intellectual and visual information from *the perceived threat*, which is the subjective evaluation of the threat messages (Popova, 2012). According to EPPM, the perceived threat is a cognitive process including two dimensions: perceived severity and perceived susceptibility. Perceived severity is a perception of the magnitude of that threat and anticipated consequences. That is, individuals are aware that the threat will cause much harm and serious to themselves. Perceived susceptibility is a perception that

individuals believe they are vulnerable to being harmed by that threat. It is mostly assessed by asking whether they are at risk for getting those health problems. Another essential construct in EPPM is *efficacy*. As conceptualized by EPPM, there are two types of efficacies: a message feature and cognitive perception. Efficacy as a messaging aspect includes response efficacy (a message accentuates the effectiveness of recommended action preventing the treatment) and self-efficacy (educated information about the competence of the audience to implement the recommended action). On the other hand, perceived efficacy is an individual cognitive process comprised of two dimensions: perceived self-efficacy and response efficacy. Perceived self-efficacy refers to whether individuals believe in their ability to perform the recommended behaviors (Witte et al., 1996), while perceived response efficacy is the extent to which individuals believe in the effectiveness of recommended behaviors in the messages.

Two processes in EPPM. Apart from explaining the constructs solely, each construct explains how people process fear messages differently. According to EPPM, two parallel processes were proposed to determine how individuals process fear and respond to those fear messages. The fear control process is the extent to which individuals attempt to control their fear when the perceived threat is high but perceived efficacy is low. According to Witte (1992), this leads to the mechanism of defensiveness such as denial, avoidance, and psychological reactance. This process explains why some fear-induced campaigns might backfire as the only motivation is dealing with and decreasing that induced fear instead of focusing on recommended behaviors. On the other hand, the danger control process is a desirable one. The process is how individuals perceive the high threat and efficacy. With danger control, fear and efficacy play a crucial role in whether individuals are willing to take action of what is recommended. That is, individuals believe they can follow suggested behaviors; they are more likely to engage in what is recommended via messages.

Popova (2012) has suggested that the overall threat score is deducted from the efficacy score to calculate whether participants engage in which process statistically. The positive result indicates that individuals employ danger control. If the result is negative, the individuals are in control of fear. Therefore, efficacy plays a crucial role in determining whether individuals might engage in maladaptive responses like defensiveness or adaptive ones.

Outcomes. According to EPPM, when individuals evaluate fear appeal, there are two appraisals of messages initiated by fear appeal and later result in one of three possible outcomes (Witte & Morrison, 2000). To clarify, individuals first evaluate and appraise the threat induced by the messages when encountering fear appeal. If they perceive that the threat is severe and they are vulnerable to it, they are motivated to process in the next appraisal, which is efficacy. After that, individuals appraise the efficacy and effectiveness of recommendations. Suppose they believe that recommended suggestions are practical and their ability to perform recommended actions. In that case, they will tend to accept that messages and engage in the danger control process driven by protection motivation. Finally, individuals will act to prevent that health issues. The desired outcome of the fear appeal, message acceptance, can be measured in respect of attitude, intention and behavioral change (Witte, 1992).

On the contrary, if threat messages succeed in inducing the perception of severity and susceptibility but fail to expose the efficacy and effectiveness of the suggestions, individuals would be motivated to avoid fear feeling by ignoring messages. The process that they engage in is fear control, in which they are only motivated to cope with their emotion of fear. Lastly and importantly, if individuals do not perceive that the threat is important and relevant, they will not engage in the further appraisal of the efficacy messages and neglect fear appeal messages eventually. In sum, if individuals do not perceive any threat from the messages, they

will not go through the subsequent process of cognition or emotion (Witte, 1992). Consequently, it is significant for campaign designers to create fear appeal messages with a high ability to arouse sufficient threat in the target audience or else those messages are considered defective (Witte, 1992).

Studies of the effectiveness of fear appeal messages

As suggested by EPPM, the effectiveness of messages potentially depends on the ability to depict the perception of high threat and high efficacy. Many campaign practitioners have inclined to focus more on constructing fear appeal messages based on important components suggested by EPPM (perceived threat and perceived efficacy) (Hale & Dillard, 1995). According to a meta-analysis study by Tannenbaum et al. (2015), various studies have supported that using high-fear and high-efficacy messages resulted in greater behavioral intention. Nevertheless, some scholars expressed concern about the effect of audience-based variables when receiving fear appeal messages. Especially, Witte, the EPPM developer, has noticed that individuals might not constantly evaluate the components of fear messages similarly. It may be caused by their different past experiences, personalities, and cultures (Witte, 1992). According to Cheah (2004), audience-based variables may accumulate or hinder the operationalization of fear appeal. The observation of massive failure from public health campaigns evidenced this proffer. Donohew et al. (1991) postulated that a public service announcement (PSA) failed to understand a target audience, bringing about PSA's meaninglessness. In agreement with this, Witte and Morrison (2000) examined the role of trait anxiety. They found that anxious individuals, compared to low-anxiety individuals when encountering fear messages, tended to process a threat from the messages more seriously. As a result, scholars and campaign developers should be aware of the messages' components and the target audience's individual differences.

Role of cultural orientation in the fear appeal process

Apart from personality traits, the cultural background of individuals is considered an essential factor in studying the operationalization of fear appeal. Many scholars have attempted to examine the differences between individualists and collectivists when they view the threat in fear appeal messages. Sampson et al. (2001) have been acknowledged as the first study, which notices that most target populations of fear appeal studies were from the specific nation in which individualist orientation was salient, i.e., the United States of America or the United Kingdom and the content of fear messages emphasized on the individuals. The basic assumption proposed by most fear appeal research has been that when one's health or security is a matter of concern, individuals are most persuaded by a message. In consequence, a threat to an individual might be adequate to depict much fear among members of individual cultures. However, the concern was that the threat might not be workable when applied in a collectivist culture. Since individuals with a collectivist orientation mainly value social patterns, including social approval, relationships or group benefits ((Markus & Kitayama, 1991). They eventually came up with the idea that messages focusing on different threats (self-targeted versus relational-targeted) might affect how members from different cultural orientations (individualism versus collectivism) appraised the fear appeal messages.

They conducted the study by investigating cultural level (collectivism vs. individualism) and individual level (allocentric vs. idiocentric). In study 2, different fear messages about AIDS aimed to persuade participants to use more condoms. They hypothesized that messages containing self-threat would be more effective in introducing fear among participants who were more idiocentric (more individualist orientation). In contrast, family-targeted messages would arouse more fear among individuals who were allocentric (more collectivist orientation) as measured by the individual-collectivism (INDCOL) scale (Hui, 1988). The participants were separated in

order to identify allocentric or idiocentric orientation by tertile split to evaluate high allocentric, which was the bottom third part according to the INDCOL scale and high idiocentric, which referred to the top third part resulted from the INDCOL scale. The researchers dropped the middle part because it was pretty mixed and ambiguous. The messages were manipulated using story-based messages about the girl named Mary, who has been infected with AIDS after unprotected sexual intercourse. For self-targeted message, the emphasis is on harmful consequences to her owner's self such as 'she might die from it or 'she ashamed from it.' On the other hand, the family-targeted message focused on her family's negative consequences, such as 'the honor of the family was ruined' or 'her friends would look down on her family.

The result of this study presented the interaction of message type and cultural orientation. That is, family-threatened messages aroused a greater fear for individuals with collectivist orientation than reading a self-threatened message; on the other hand, individuals with individualist orientation reported more fear after reading the self-threatened message. However, the hypothesis about an intention to engage in recommended behaviors was not supported. Individuals from collectivist and individualist societies did not differ when reporting intention to engage in health behaviors even if they received messages (self-threatened versus family-threatened) that matched their orientation. Nevertheless, their research has testified to the indispensability of message-based and audience-based variables during the operationalization of fear appeal, which was the threat focusing on the messages and self-construal in this case. In line with consumer behavior, Wang and Mowen (1997) stated that messages would be most impactful if they could evoke consumers to concern more about themselves when processing the message, especially how consumers see themselves concerning others (connected self-schema). According to Wang and Mowen (1997), individuals with separated self-schema prefer a message

with separated appeal themes, whereas individuals with connected self-schema favor messages presenting connected appeal themes.

The contribution from Sampson and colleagues (2001) has dramatically impacted the subsequent fear appeal studies, which emphasized the effect of cultural orientation on threat perception when individuals encounter fear appeal messages. There is support from the late study of Chung and Ahn (2013). Their study showed that self-reference messages offered the disadvantages of smoking to self were accepted more among individualistic participants. In contrast, other-reference messages stimulated more message acceptance among collectivist participants. Apart from message acceptance, other dependent variables, including perceived severity and ad liking, were found to have no difference based on types of fear message and cultural orientation. Apart from a perceived severity, message acceptance was another dependent variable to test the interaction. The result supported the hypothesis that fear-aroused messages would work differently in different individuals. Other-related messages might work well in introducing fear when individuals tend to be concerned with maintaining connectedness to others, like in collectivist orientation. On the other hand, individuals focusing on self-interest, like individualists, were more aroused and accepted the message content when they encountered self-reference messages.

However, the theoretical idea has faced some replication crises. Jansen and Verstappen (2014) conducted an experimental study according to this postulate. They used the similar story-based message used by Sampson and colleagues (2001) to increase the behavior of condom use. The story was about Maria, who got infected with chlamydia. In a self-targeted threat condition, the message contained negative consequences from chlamydia infection on fertilization. In contrast, in family-targeted threats, the message showed how her family felt heartbreaking because they could not become a grandparent as they wished. The dependent

variables included perceived threat (perceived severity and susceptibility), perceived response efficacy, fear aroused, danger control intention and defensive avoidance. The result could not establish any interaction between different types of messages and cultural differences.

The result is consistent with Jansen and Kroef's (2019) study. The study also failed to investigate the interaction between self-targeted messages versus family-targeted messages on perceived severity, perceived susceptibility and perceived response efficacy, fear control, and danger control. They have attempted to examine the interaction of cultural orientation and message types by using six cultural dimensions proposed by Hofstede (2001). Despite the failure of interaction between individualism and collectivism, they have found that a short-term versus long-term dimension could partly explain the interaction between self-targeted versus family-targeted messages and cultural orientation.

The two studies added to the doubts about the moderation role of cultural orientation in the relationship between self-threatened versus other-threatened messages and threat perception. Consequently, the current study has endeavored to complete the gap between those previous studies. One possible factor that might actuate the collapse of hypothesized relationships is the broad definition of cultural differences using an individualism-collectivism dimension. In line with Wosinska et al. (2000), extensively comprehending cultural differences requires examining individuals at the level of subjective cognition and society structures or practices. Accordingly, this current study has applied the self-construal to scrutinize the effect of an individual's self-view on others.

Self-construal

As mentioned earlier, the main reason self-construal can be adequately applied in the recent study is that self-construal describes individuals. At the same time, individualism-collectivism (IND-COL) is a dimension to detail cultures. Markus

and Kitayama (1991), who first introduced *self-construal*, have remarked that there was a different self-view construction between members of Eastern and Western cultures. The term self-construal was contrived to describe when the members of Americans and Japanese construe and make meaning of themselves. Therefore, self-construal is the extent to which the persons identify the self or give a self-meaning, especially it commonly means how persons view themselves about others (Markus and Kitayam, 1991). They supposed two important self-construal, which are independence and interdependence self-construal.

Independence self-construal (IndSC). While InterSC individuals centralize an ability to fit in the groups as a source of self-esteem, individuals with independence self-construal emphasize being unique or different as a basis of self-esteem feeding. Internal traits that are durable across a situation are crucial, and the ability to maintain the same person across the situation is considered mature. Wherefore, those with IndSC always construe themselves in the separation of others. The self is seen as competent, wholesome, and autonomous without the presence of others. Nevertheless, interpersonal relationships are seen as necessary, but significant others become important when they can benefit individuals. In addition, social comparison serves as a confirmation of one being unique (Markus & Kitayama, 1991).

Interdependence self-construal (InterSC). Interdependence self-construal deals with viewing oneself as a part of social units such as family and environment and one's behaviors are determined by thoughts, feelings and actions of others in the social relation. The fundamental of interdependence is a feeling of connectedness. Moreover, the crucial basis that feeds self-esteem among InterSC individuals is an ability to harmonize with or fit in a social group since being adaptable to various situations and being able to express emotional regulation indicates the maturity of individuals. Conclusively, those with an InterSC emphasize interpersonal relationships and are bothered by the feeling of how they would

contribute to the groups. Others are viewed as a source of self-defining, and social comparison primarily became crucial in determining whether one can meet the obligations during those relationships (Markus & Kitayam, 1991).

Many scholars have tried to probe different self-construal effects on various human behaviors. Cross et al. (2011) have scrutinized previous research on the role of self-construal in human cognition, emotion, motivation and behaviors. For example, the study by Kühnen and colleagues in 2001 found that the manipulation of self-construal provoked participants with InterSC priming to define themselves as more context-dependent than those with IndSC priming. Another example of the self-construal effect on cognition was in the study of Wang and Ross (2005). They have implemented self-construal priming in Europe Americans and Asian American participants. Their study showed that participants primed with IndSC were likelier to recall memories focusing on individual issues.

In contrast, InterSC-primed participants were likelier to think of group-focused memories and social interaction. Stapel and Koomen (2001) study examined the moderator role of self-construal in social comparison processes. The study exhibited that they tended to distinguish themselves from compared targets when IndSC primed participants; on the other hand, activated participants with InterSC tended to liken themselves to the comparison targets.

Tripartite Self-Construal: The distinction of interdependent self-construal. Markus and Kitayama (1991) later scrutinized the distinction of self-construal postulated since some scholars had noticed the varieties within interdependent self-construal. Essential differences illustrated this theoretical understanding in the way that interdependent self-construal members in the collectivist society described themselves and the different ways men and women in western society construed themselves (Cross & Madson, 1997; Mamat et al., 2014). Mamat et al. (2014) have supported the evidence of variability of interdependent

self-construal within Chinese culture. Those two studies showed that western women tended to construct their self-view based on their close relationships with others. On the other hand, western men construed themselves from a different perspective. Cross and Madson (1997) also observed that this form of self-view construction among women in western society was dissimilar to the form of self-viewing in Eastern society, emphasizing more group membership or social roles. Later, Cross et al. (2000) noted that using a group-oriented perspective might not be adequate to describe the notion of relationship orientation. Therefore, they furthered their study on this divergence of interdependent self-construal and introduced relational-interdependent self-construal and collective-interdependent self-construal as two varieties of interdependent self-construal.

Relational-interdependent self-construal or relational self-construal (RelSC), for short, is an extent to which individuals make meaning of themselves or define themselves based on a close relationship, yet not specific to a particular relationship (e.g., I am a mother or a good son). In contrast, collective-interdependent self-construal (Coll-InterSC) is the extent to which individuals construct themselves in terms of particular large collectives or social groups (e.g., I am Thai or I am a student) (Cross et al., 2000). In other words, dyadic or person-to-person relationships (me and you) are the focus when relational self-construal is salient; on the other hand, a sense of group membership or identification with a particular collective group (we-ness) is emphasized if collective self-construal is activated. Despite this distinction between these two components, various scholars had always neglected when self-construal was studied. Although Markus and Kitayama (1991) included a close relationship as one of the social groups in the definition of interdependent self-construal, Cross (2009) has persisted in distinguishing interdependent self-construal as RelSC and Coll-InterSC because it is important and valuable for studying individual differences.

Scholars have studied the effect of relational self-construal, which would show a different influence from collective self-construal on a human. Stapel and Van der Zee (2006) study investigated the effect of independent, collective, and relational self-construal. They concluded that when making self-construal salience, it determined different social comparison processes, which were a self-enhancement pattern, a complementarity pattern and an imitation pattern. When Independent self-construal was activated, individuals tended to assimilate information toward a promising comparison target while contrasting information toward an unfavorable one. This process is called self-enhancement. That is, relational self-construal stimulated the complementarity pattern of social comparison. The pattern deals with the coordination and regulation of interpersonal interactions. Lastly, the pattern that was activated during collective self-construal salience was the imitation pattern. The pattern is how individuals resemble other in-groups such as emotion, foot movement, tone of voice and facial expression to fit in the group. Specifically looking into the effect of RelSC on a social decision, Cross et al. (2000) carried out an experimental study and found out that students who had scored high on relational self-construal assessment were more likely to take desires and wishes of family members and friends into account when making decisions about how they would spend their summer holiday.

At this point, the evidence supported the importance of the tripartite self-construal. Consequently, the current study has determined to comprehensively investigate the effect of self-construal on the threat appraisal process when confronting different fear messages.

Self-construal manipulation. Self-construal also grants scholars to flourish ultimate research on the self-construal effect by priming manipulation. Experimental manipulation can reassure the casual hypotheses which link to consequences when self-construal is activated (Cross et al., 2011). Cross and colleagues (2001) also assert

that priming techniques might be advantageous to escort self-construal as experimental manipulation because priming makes self-knowledge linked to one of InterSC or IndSC salient and accessible. This promise has been confirmed by many scholars studying the priming effect and noted that priming switches on mental representations framing interpretative processes of the following information; as a result, when one is primed by one particular concept, the activation of other concepts relating to that in memory also occurs (Chartrand & Bargh, 1999; Higgins, 1996). Although scholars operate various priming techniques to examine interdependent and independent self-construal effects, e.g., pronoun circling, similarities and differences with family and friends tasks or Sumerian warrior tasks, there is a limited priming technique for separately investigating relational and collective self-construal because it is ambiguous of dimension in interdependent self-construal which would be chosen as priming.

Up until then, Stapel and Van Der Zee (2006) have revised the manipulation that was once proposed by Brewer and Gardner (1996) and accomplished the manipulation producing distinction between relational and collective self-construal. The result from the manipulation check, which intentionally examines the value salience participants held after the manipulation, provided the support of the ability to separate three distinct self-construal. In the independent priming condition, participants significantly had a higher value of being a unique person than in relational and collective priming conditions. Furthermore, the participant had a higher value of being with others in relationships than independent and collective priming conditions. Lastly, the value of being part of a group was significantly increased in the collective priming condition.

Research gap on fear appeal messages moderated by self-construal

Due to several proposed ideas as a theoretical basis of the current study, a section providing a link to those ideas would be needed. Firstly, conforming to fear

appeal scholars, constructing fear appeal messages should consider components of messages and characteristics of message recipients. If fear messages cannot arouse enough fear, the following process to appraise efficacy from messages will not have occurred further. Some fear appeal studies have taken culture into account. They have postulated that internalized cultural orientation or self-construal (interdependent versus independent self-construal) would affect how individuals perceive the threat from different types of fear appeal messages (self-threatened versus family-threatened messages). Individuals with InterSC might perceive more threat from the messages which focus on a threat to family or significant others.

In contrast, those with IndSC would feel threatened if the messages emphasized the danger of self. Earlier studies have strived to produce a supportive hypothesis; unfortunately, some doubts were added due to the failure to explain the effect of interaction between types of fear messages on threat perception (e.g., Jansen & Verstappen, 2014; Jansen & Kroef, 2018). Nevertheless, should this proposed idea be ignored?

The objective of the study

The current study aims to examine this different effect by conducting an experiment to causally explain the interaction effect of the type of fear and type of self-construal on the perceived threat, which later importantly impacts an intention. Unlike the previous study of Sampson et al. (2001), which uses the bipartite premise of independence versus interdependence, the tripartite self-construal, which consists of independent self-construal, relational self-construal and collective self-construal, has been intensively employed to explain the self-construal effect. According to Cross et al. (2000), interdependent self-construal, which mainly assesses a collective sense, might not express well the ability to capture the dimension of close relationships. They introduced *interdependent relational self-construal* or *relational self-construal* to refer to a term focusing on close relationships and distinguished this

from group membership focus which was later called *collective interdependent self-construal* or *collective self-construal*. In line with this idea, Yuki et al. (2005) reported that Eastern Asian members were more likely to center on relational ties while Western members were based on collective ones.

This result supports the idea that close relationships are the main emphasis in Asia, the research setting of this current study. The present study, therefore, employed this tripartite self-construal framework to assure its ability to apprehend the effect of self-construal in the relationship between types of fear messages and threat perception toward CRC cancer which would finally result in behavioral intention to attend the FIT test to prevent CRC incident. It would bring about research questions of the current study as follows:

1. Would Individuals with different types of self-construal (independent, relational, and collective) perceive different types of fear messages differently in terms of threat (self-threatened versus family-threatened)?
2. When individuals with different types of self-construal consider fear messages that match their activated self-construal, would they fear more, have a more positive attitude toward recommendations and express more intention to adopt recommended behavior?

Hypotheses

The first set of hypotheses postulates the interaction relationship of fear message type and self-construal priming on the perceived threat. Based on Witte et al. (2001), different cultural orientations might indirectly influence outcomes from the fear appeal technique, especially through perceived threat or perceived efficacy. In this current study, perceived efficacy is controlled at a high level to test only produced effect on threat perception. Furthermore, the hypothesis tested the interaction effect between types of messages and self-construal. Hypothesis b examines the difference between relational self-construal and collective self-construal. According to Cross et al. (2000), individuals with relational self-construal define or make meaning of themselves based on close relationships. Therefore, Hypothesis b is expected to capture the different effects of relational self-construal

priming compared to collective self-construal priming on the perceived threat to test the effectiveness of the tripartite self-construal model (independent, relational, and collective self-construal)

Hypothesis 1a: Participants who receive different types of fear messages would report **threat perception** differently depending on self-construal priming.

Hypothesis 1b: In relational self-construal priming, participants who receive a family-threatened message would report **higher threat perception** than those in collective priming with the family-threatened message.

The second set of hypotheses proposes that when individuals with different self-construal are confronted with fear appeal messages matching their self-construal, it will result in outcomes such as intention or attitude through the process of threat appraisal. Therefore, Sampson et al. (2001) have hypothesized that fear appeal messages that match the self-construal of recipients would result in stronger intention, attitude and fear arousal through threat perception and efficacy. Importantly, it should be noted that these outcomes are under the control of high perceived efficacy in this study.

Hypotheses 2a: Participants who receive different types of fear messages would report **fear experiences** differently depending on self-construal priming.

Hypothesis 2b: In relational self-construal priming, participants who receive a family-threatened message would report **a higher fear experience** than those in collective priming with the family-threatened message.

Hypotheses 3a: Participants who receive different types of fear messages would report **attitudes toward FIT test screening** differently depending on self-construal priming.

Hypothesis 3b: In relational self-construal priming, participants who receive a family-threatened message would report **a more positive attitude** toward FIT test screening than those in collective priming with the family-threatened message.

Hypotheses 4a: Participants who receive different types of fear messages would report **the intention to attend FIT test screening** differently depending on self-construal priming.

Hypotheses 4b: In relational self-construal priming, participants who receive a family-threatened message would report **higher intention to attend FIT test screening** than those in collective priming with the family-threatened message.

Research model

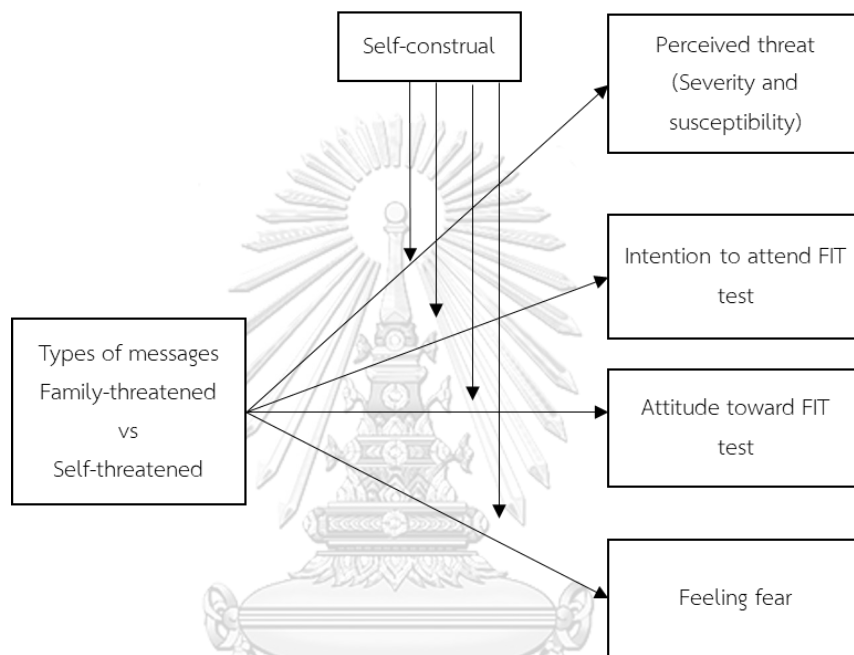


Figure 1 Research Model

จุฬาลงกรณ์มหาวิทยาลัย

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Variables

1. Independent variable was two types of fear appeal: a self-threatened and family-threatened message
2. Moderator: tripartite self-construal priming: independent, relational, and collective priming
3. Dependent variables are perceived threat, fear aroused, attitude toward FIT test and intention to attend FIT test.

Operational definition

1. A fear appeal message: the fear appeal message in the study is composed based on the extended parallel process model (EPPM): EPPM has two important components: perceived threat and efficacy. In the present study, the fear appeal messages are about the threat of CRC and how to prevent it through annual screening called the FIT test. Moreover, the messages are emphasized self-threatening content in which individuals would be impacted by CRC, while in the family-threatening message, the content is about how the family would be influenced if somebody in the family is diagnosed with CRC.
2. Tripartite self-construal: self-construal is the extent to which the persons identify the self or give a self-meaning, especially it commonly means how persons view themselves in relation to others (Markus and Kitayam, 1991). The three main types of self-construal, including independent, collective, and relational self-construal, will be manipulated as priming to study its effect on dependent variables. The priming is pronoun finding tasking adapted from the study of Stapel and van der Zee (2006) and Oyserman et al. (2009)
3. Perceived threat: the perceived threat is the subjective evaluation of the threat messages (Popova, 2012). In this study, the perceived threat is how they evaluate a fear message about CRC. The perceived threat is assessed by Risk Behavior Diagnosis scale, which was developed by Witte et al. (1996). The score ranges from 1 to 7. A high score indicates a high perceived threat.
4. Fear aroused: Fear refers to a feeling of being frightened, scared or anxious after receiving health-related threats (Popova, 2011). In the current study, fear aroused is from receiving a message that emphasizes the harm of CRC and would be assessed by the scale used by Dillard and Peck (2000). The possible score ranges from 1 to 7. A high score on this scale means fear is highly aroused.
5. Behavioral intention: the intention refers to the intention to perform what is suggested by the fear appeal message, which is attending a FIT test screening. In this study, the intention indicates how much they show intention to attend

the FIT test. It is assessed by asking them if they are planning to attend the FIT test in the next four weeks. The possible score is 1 to 7. The high score indicates a stronger intention to attend the FIT test.

6. Attitude: attitude is an internal evaluation toward CRC screening, which refers to FIT test screening. In this study, attitude toward the FIT test is assessed by the semantic differential scale. The possible score ranges from 1 to 7. The high score indicates a favorable attitude toward the FIT test.

Anticipated benefits

1. To obtain an empirical notion about the effect of different types of messages and self-construal on desired outcomes, including feeling fear, attitude and intention purposed by EPPM.
2. To gain practical benefits in promoting health behaviors by enhancing the effectiveness of the fear appeal message. The PSA practitioners aiming to promote health-related behaviors might be benefited from creating a meaningful campaign to persuade individuals who focus on what is best for their relationship with significant others.

Chapter 2

Methodology

The current study employs an experimental design to examine the interaction effect of types of fear messages (self-threatened versus family-threatened) and self-construal (independent, relational, and collective) on fear appeal outcomes. So, the total conditions in this study are 6, including 1 (independent self-construal priming & self-threat message), 2 (independent self-construal priming & family-threat message), 3 (relational self-construal priming & self-threat message), 4 (relational self-construal priming & family-threat message), 5 (collective self-construal priming & self-threat message), 6 (collective self-construal priming & family-threat message).

Participants

The participants of the study included those who were more than *40 to 70 years* old to fit with the risk target of developing CRC. Although a guideline established by the National Cancer Institute of Thailand suggested that individuals aged 50 or older should attend the annual screening, those aged from 40 years old ought to attend the screening as well. The information about colorectal development from the department of radiology at Chulalongkorn University shows that the incidence of CRC increasingly develops when they are in their 40's. Early detection is a key to preventing CRC.

The participants are employees working at Chulalongkorn University and district offices in Bangkok as a convenient sampling. Moreover, due to the high possibility of dropping out of an online survey, snowball sampling is another method to reach participants. Since the study was an online experiment, the total response rate was 237 participants. Then, considering all inclusion and exclusion criteria, the final number of participants was 134. This amount of sample size was sufficient based on a recommendation from the G*power program and Hair et al. (2014), who suggested that the minimum cell size is 20 observations per cell. This current study has six conditions with at least 20 observations in every condition. The participants must fulfill the inclusion criteria as follows:

Inclusion criteria

1. Participants must be in their 40-70 years of age. There were 16 participants whose age did not fulfill this criterion.
2. Participants were willing to participate in the current study. There were 26 responses stating they did not want to participate in the current study.
3. Participants must not attend FIT test screening prior to the study. There were 18 participants who have attended FIT test screening before.
4. Participants currently live in Bangkok. There were 5 participants who did not currently live in Bangkok.

After considering inclusion criteria, there were 67 responses ruled out.

Consequently, there were 170 responses left. Then, there were still exclusion criteria to consider as follows.

Exclusion criteria

1. Participants must complete all manipulations and at least one of the dependent variable measures. There were 36 incomplete responses that were ruled out.
2. After informing the hypothesis of the study, participants must permit the researcher to use their data for a further analysis process. There were none of the participants who did not allow to use their data further.

Finally, the total number of participants that were used to analyze was 134.

Protection and human right

Even if the participants of the study are not considered a sensitive sample group, their rights must be protected as follows:

1. The primary step is that the study is required to be approved by the Institutional Review Board (IRB), which is the very first procedure to protect participants' rights.
2. Participants voluntarily choose to quit or participate in the study of their own will, and there would not be any consequences to any aspect of their lives.
3. The information received from participants will be confidentially kept, and only the researchers of the study can access it. Additionally, the results from

the data analysis will be presented as an overall image. After the study is ended, information and data from participants will be kept for three years, and then it will be destroyed. Nevertheless, the information or data will be kept longer if it is needed for further academic use with the permission or approval of participants.

4. It is necessary to ensure that the participants will not be harmed psychologically or physically after participating in the study. Due to the content of fear appeal messages, some participants may encounter a threat to life and might experience uncomfortable moments during the experiment. To relieve discomfort, the research will explain the importance of using that kind of scary message. Participants will be allowed to leave the study without any consequences. If their discomfort is still carrying on, they can use the service from Chula Wellbeing Center without any cost.
5. At the end of the experiment, a debriefing will be carried out to expose the true purpose of the study. When they have described it, participants will be asked for permission to use the data.

Developing measurements and manipulations

Pilot 1: fear component construction

So as to maximize threat as well as efficacy perception and ensure that self-threatened and family-threatened messages equivalently introduce threat, 30 samples whose age range from 40-70 years would be questioned via the online platform "what are the greatest fears to you and to significant others if you are diagnosed with CRC cancer?". Then, the answers would be analyzed and used to construct the threat component of fear messages.

In order to analyze the result of pilot 1, the content analysis was carried out. The objective of pilot 1 was to comprehend the fear that was impacted by CRC, and that fear would be applied to create the message in data collection. The fear from pilot one was divided into personal fear (the fear they would be impacted directly from getting CRC) and family-related fear (the fear their families would be impacted when they were diagnosed with CRC). Firstly, the statements from participants were

categorized and then ranked in their frequency when quoted participants. Then, after constructing relative and cumulative relative frequency, the fears that entered 75 percent of cumulative relative frequency would be selected. In summary, the self-created fears of getting CRC include fear of physical pain from CRC and its treatment, fear of CRC treatment cost and fear of death from CRC in Table 1.

Table 1

An absolute frequency, accumulative frequency, and accumulative relative frequency of the topmost quoted self-threatened fears of CRC (n=76)

Self-threatened fear	Absolute frequency	Relative frequency	Cumulative relative frequency %
1. fear of physical pain from CRC and its treatment	24	31.57895	31.57895
2. fear of death from CRC	19	25	56.57895
3. fear of treatment cost	14	18.42105	75
4. Not related	6	18.42105	
5. Fear of knowing	3	7.894737	
6. Others	3	3.947368	
7. Fear of psychological impact	2	3.947368	
8. Fear of ineffective cancer treatment	2	2.631579	
9. Fear of endless cancer treatment	2	2.631579	
10. Fear of life changing	1	2.631579	
Total	76	100	

For family-related fears, three fears that were most quoted were fear that they would burden their families, such as families might take care of them a lot or would help them financially, fear that their families would have a psychological impact from that bad news or even when participants' health was getting worse, and fear of family losing their ways due to the lack of a tower of strength (see Table 2.)

Table 2

An absolute frequency, accumulative frequency, and accumulative relative frequency of the topmost quoted family-threatened fears of CRC (n=62)

Family-threatened fear	Absolute frequency	Relative frequency	Cumulative relative frequency %
1. fear of being a burden to family	28	45.16129	43.54839
2. fear of family's mental illness from their health getting worse	12	19.35484	64.51613
3. fear of family's losing their ways after they were gone	10	16.12903	80.64516
4. fear of passing cancer to their children	3	4.83871	
5. fear of family's collapse	3	4.83871	
6. fear of untimely death from beloved family	3	4.83871	
7. no fear	3	4.83871	
8. not related	2	3.225806	
9. Fear of being neglected	2	3.225806	
Total	62	100	

Pilot 2: validate manipulations and measures

While Pilot1 is operated for the purpose of careful message construction, Pilot 2 has been done to ensure the effectiveness of the threat and efficacy component of fear appeal messages, manipulation of self-construal along with measure validation. Forty-nine participants who are 40-70 years old are recruited as the pilot sample to complete an online experiment platform via Quatrics. Firstly, participants are asked for permission to participate in the study. Participants must answer the self-construal scale first. Afterward, they are randomly assigned to one of six conditions (independent priming x a self-threatened message, relational priming x a self-threatened message, collective priming x a self-threatened message, independent priming x a family-threatened message, relational priming x a family-threatened message, collective priming x family-threatened message). After the randomization, participants are required to complete a pronoun finding task, which is obscured as a language task, to clear their minds before they have to complete other questions. Then, participants are required to read fear messages in the form of flyers. Next, they need to answer questions based on dependent measurements, manipulation checks and demographical information about themselves. Then, participants would be asked for E-mail and names as a token of appreciation. They can choose whether they would like to receive it or not. In the end, the participants were thanked with offered information about CRC and screening processes.

Self-construal manipulation. Self-construal manipulation is developed based on the pronoun circling task considered as language priming to capture three different self-construal, which are independent, relational, and collective self-construal from the study by Stapel and Van der Zee (2006). The original pronoun circling task requires participants to circle all pronouns (i.e. 'I, me or myself' for independent priming, 'We, us or ourselves' for collective priming and 'I with you, you and me or you with me' for relational priming) in the passage relating to the trip to the city. The task which requires individuals to circle pronouns relating to 'I' or 'We' would activate a way of thinking about oneself or others (Oyserman & Lee, 2008). Subsequently, Oyserman et al. (2009) have attempted to investigate the effect of the pronoun circling task by creating a variety of contents apart from the story about the

trip to the city; moreover, those tasks were implemented on various platforms such as paper-based priming, computer screen, and audio. Their study found an essential result that different contents and platforms did not affect the result of the pronoun priming task.

The current study aimed to search for a suitable and effective pronoun circling task which has not been applied in the Thai context before, and the concern was raised. In the current study, the passages used were adapted to be easily accessible to an aged person. Furthermore, the pronoun circling was changed to the pronoun finding task due to the limitation of the online experiment. The priming was believed to be accomplished because the main feature of this priming was the accessibility of a meaningful environment (in this case, the passage). The story in the passages composed by the researcher with the help of the expert based on the definition of each self-construal to assure the strength of manipulation. That was, instead of using only language priming (repetition of pronouns), the content was another important feature aiding the effectiveness of the priming. As noted in the culture-as-situated-cognition-model, individuals tended to be sensitive to meaningful environment features, which included languages, contents, and processes (Oyserman et al., 2009). In personal priming, the story was about the advantages of being alone and autonomy, whereas in relational priming, the core story illustrated the happiness of being with a beloved one and doing something for him/her. Finally, in collective priming, the story focuses on doing something for a group of friends. Owing to the different language systems between Thai and English, the forms of particular first-person pronouns in English are changed according to their function and position in sentences (i.e. 'I' when functioning as a subject, 'me' as a function of an object or 'my or mine' showing possessive function while in Thai, a single form of pronouns was used regardless their different function and position, for example, 'I' is equivalent to 'ฉัน' or Chan' in the Thai language. When Thais use 'ฉัน' as subject or object, the form 'ฉัน' is still exactly the same, but in some particular functions, such as to show possessive function, the additional word or connector 'ของ or khong' is applied to show possession with the pronoun like 'ของฉัน' means 'my' (Katsura & Rungrojsuwan, n.d.). Therefore, when translated into Thai, participants must just find the pronouns

have to be highlighted without any connectors. In order to avoid misunderstanding from the complexity of the task, the instruction of finding pronouns is shifted to 'find the particular words instructed by the instructions' The instruction is the same in all three conditions, but dissimilar in different instructed words *'Please read the following paragraph carefully, after that, please count all the words (instructed words which are varied in three conditions) found within the paragraph.'*

A set of words would be dissimilar in different self-construal priming conditions. That is, for independent priming, words expressing independent priming within a passage include 'I,' 'me,' 'my,' 'myself,' or just the word 'ฉัน' in Thai. In relational priming, the words are 'you and me,' 'you with me,' or 'I with you,' but in Thai, the words expressing that exact meaning of relational self was various, including 'ฉันและเธอ' 'ฉันกับเธอ' 'เรา' 'เราทั้งสอง' และ 'เราสองคน.' Lastly, words for collective priming are 'we,' 'us,' 'our,' or 'ourselves' or just the word 'พวกเรา' in Thai. In personal priming, the story was about the advantages of being alone and autonomy, whereas in relational priming, the core story illustrated the happiness of being with a beloved one and doing something for him/her. Finally, in collective priming, the story focuses on doing something for a group of friends.

Self-construal scale. Owing to the concern that the priming might not be effectively primed as it is an online experiment where the researcher could not completely control compounding variables like in the lab experiment, the researcher decided to use a self-construal scale as another plan if the priming could not affect participants' perceptions. The self-construal scale was adapted from Self-construal Scale (Singelis, 1994), the Relational, Individual, and Collective self-aspects (RIC) Scale (Kashima & Hardie, 2000) and the Relational-Interdependent Self-Construal (RISC) (Cross et al., 2000). The researcher and the expert selected items from those scales based on the definition of each self-construal. The reason that those original scales were not used is that the length which might not be proper for participants of older age to complete and would affect the results. As a result, the scale used in the current study consists of 15 items, five items for each self-construal.

Fear message manipulation. Then, they were instructed to read a message about the dangerous effect of CRC on themselves or their family. The fear message

contents include two main components based on EPPM, which are *threat components*: susceptibility and severity, and *efficacy components*: response efficacy and self-efficacy. Firstly, threat components are comprised of susceptibility and severity. For susceptibility, the message should contain the details that initiate the feeling of being at risk of getting CRC. The risk factors, including age, hereditary and other possible factors, were mentioned, and information was formed based on reliable sources: National Cancer Institute of Thailand, Rojanasiraprapa (2019) and Arundorn and Sukuntapan (2013, March 1). For severity, the message should be related to jeopardy caused by CRC. Critically, this is the part where it should be manipulated as self-threatened or family-threatened content and information. As mentioned in pilot 1, the contents were created based on results from content analysis. Therefore, the result from the pilot one, together with the information from a colorectal study in Thailand by Yodkonkij (2005), was used to construct the severity component. In self-threatened message condition, consequences of CRC on one, self-including physical pain, high possibility of death and high treatment cost, were mentioned. On the other hand, in family-threatened message condition, the aftermaths of CRC on the family include physical and financial burdens on family, mental illness and lack of a tower of strength. Regarding the component of efficacy in a message, the efficacy component is expected to be controlled as moderately high. The efficacy component is designed by providing the fact about the accuracy of the FIT test to increase perceived response efficacy and how convenient the method is based on the result from the study of Wattanawongwibul (2019) and Rojanasiraprapa (2019)

After that, they must complete questions to indicate their threat and efficacy perception, fear feeling toward CRC cancer, attitude toward the message and intention to perform recommended action. Finally, they would complete manipulation check questions for self-construal priming as well as the impact they perceived from the fear message.

Result from pilot 2

From pilot 2, the results include the reliability of the self-construal scale and dependent measures and the effectiveness of independent variable manipulations (self-construal and fear messages).

participants' demographical information. There were 49 participants in pilot 2. The average age was 52.4 years old ($SD = 10.42$). There were 33 females and 16 males participating the pilot 2. The demographic information of participants consisted of the marital stage, number of children, occupation, average income per month and family history of CRC. All information was shown in Table 3 regarding self-construal priming and fear message conditions.

Results from manipulations and measures. After screening out, the data from pilot two were analyzed by ANOVA, T-test, and Cronbach alpha's test. The reliability of all measures is presented in the Measures of dependent variables section. For self-construal manipulation, there are nine items for manipulation check to assess the effectiveness of manipulation, 3 for each self-construal priming: independent, relational, and collective self. Firstly, the researcher analyzed acquired data by ANCOVA to investigate the effect of demographical information, and there was no effect of any demographics. Then, the analysis of ANOVA was carried out to determine that participants in different conditions would have higher scores on different scales dissimilarly. That is, participants who were primed by the independent self condition would have a higher score on the independent manipulation check's scale, while those in the relational priming condition would have a higher score on the relational manipulation check's check. Finally, participants in the collective priming condition would show a higher score on the collective manipulation check scale.

Table 3

Demographical information of participants (N=49)

characteristic	Independent priming		Relational priming		Collective Priming		Self-threatened message		Family-threatened message	
	N	%	N	%	N	%	N	%	N	%
Total (n=49)	16	34.69	17	32.65	16	34.69	25	51.02	24	48.98
Gender										
Female	9	56.25	12	70.59	12	75.00	18	72.00	15	62.50
Male	7	43.75	5	29.41	4	25.00	7	28.00	9	37.50
Marital stage										
Single	4	25.00	5	29.41	8	50.00	8	32.00	9	37.50
Married	12	75.00	10	58.82	8	50.00	16	64.00	14	58.33
Divorced	0	0	2	11.76	0	0	1	4	1	8.50
Children										
No children	10	50.00	6	35.29	7	43.75	9	36.00	14	58.33
one child	3	18.75	5	29.41	0	0	4	16.00	4	16.67
Two children	3	18.75	5	29.41	5	31.25	7	28.00	6	25.00
Three children	0	0	1	5.88	3	18.75	4	16.00	0	0
Four children	0	0	0	0	1	6.25	1	4.00	0	0
Career										
Unemployed	1	6.25	1	5.88	3	18.75	3	12.00	2	8.33
Government employee	7	43.75	10	58.82	7	43.75	11	44.00	13	54.17
Private company employee	2	12.50	1	5.88	2	12.50	3	12.00	2	8.33
Own business	2	12.50	3	17.65	2	12.50	4	16.00	3	12.50
Others	4	25.00	2	11.76	2	12.50	4	16.00	4	16.67
Average salary per month										
Less than 10K	1	6.25	1	5.88	1	6.25	1	4.00	2	8.33
10k-30k	2	12.50	4	23.53	4	25.00	5	20.00	5	20.83
30.1k-50k	5	31.25	8	47.06	8	50.00	9	36.00	11	45.83
50.1-70k	5	31.25	3	17.65	3	18.75	7	28.00	4	16.67

More than 70k	3	18.75	1	5.88	0	0	3	12.00	1	8.50
Family history about CRC										
No history	13	81.25	16	94.12	14	87.50	21	84	22	91.67
1 member with CRC history	3	18.75	0	0	2	12.50	4	16.00	1	8.50
3 members	0	0	1	5.88	0	0	0	0	1	8.50

Note. $N = 49$ divided into 3 self-construal priming X 2 conditions of fear message manipulation. Participants were on average 52.4 years old ($SD = 10.42$).

Unfortunately, ANOVA revealed that there were no significant differences in means of self-construal manipulation check measures due to three different priming of self-construal, as illustrated in Table 4. Participants who were randomized in the independent condition had a higher score on the independent manipulation check's scale than those in the relational and collective priming condition, but not significantly ($M = 15.86$, $SD = 3.12$), $F(2, 46) = 0.28$, $p = .76$. Participants in relation priming condition showed higher score on relational manipulation check's scale than those in independent and collective priming condition, but not significantly ($M = 16.53$, $SD = 4.40$, $F(2, 46) = 0.75$, $p = .48$). Unlike in independent and relational priming condition, participants in collective priming did not show a highest score on collective manipulation check's scale ($M = 14.19$, $SD = 3.64$, $F(2, 46) = 0.453$, $p = .64$). From the ANOVA analysis result, there was no significant difference found. There are various reasons to explain that phenomenon. Firstly, the sample size in this pilot may not be enough, so it is expected that when the data collection is carried out with larger sample size, it will result in differences from the pilot. Second, the priming embedded in the online experiment might not be effective enough. The researcher and the expert were looking at the content of the priming again and agreed to adjust some content in the priming story. The researcher has earlier mentioned another plan if the priming might not be effective enough. The self-

construal scale would be used to help identify the self-construal of each participant as an independent variable.

Table 4

Result from ANOVA analysis for self-construal manipulation check in pilot 2

Measure	Independent		Relational		Collective		F (2, 46)	sig
	M	SD	M	SD	M	SD		
Independent	15.86	3.12	16.19	3.37	14.06	2.69	.28	.76
Relational	15.24	3.37	16.53	4.40	15.18	4.49	.75	.48
Collective	14.86	2.70	14.88	4.30	14.19	3.64	.45	.64

Fear message manipulation. For fear of message manipulation that has been operated as self-threatened and family-threatened messages, the T-test was applied to investigate the differences in manipulation check measures. It was found that 25 participants in family-threatened condition significantly rated that the message threatened their families ($M= 10.80$, $SD= 3.14$) higher than 24 participants in self-threatened condition ($M= 7.80$, $SD= 3.41$), $t(47)= 0.949$, $p= 0.002$. However, there was no significant difference in perception between family-threatened condition ($M= 10.58$, $SD= 3.00$) and self-threatened condition ($M= 9.52$, $SD= 3.11$) when rating that the message threatened their own self, $t(47)= 1.00$, $p= 2.30$. This could be argued that even though participants in the family-threatened condition received the information that emphasized on consequences of CRC on families, they could not avoid thinking that they would be harmed from CRC as well. That is, they cannot separate themselves from others like the definition of relational and collective self. That was why they rated that the message was threatened to themselves as much as participants in those in self-threatened conditions. Regarding efficacy, both message condition showed high score on efficacy component manipulation (self-threatened message: $M= 11.80$, $SD= 1.60$, $n= 25$; family threatened message: $M= 12.75$, $SD= 1.36$, $n= 24$). From the result of pilot 2, it could be concluded that the

fear message manipulation was successfully manipulated and could be carried out in data collection without any revision.

Procedure

The main experiment is run by Quatrics, allowing the experiment to take place online with randomizing features. Participants o completed the experiment. There were steps in this study as follows:

1. The participants are first greeted and asked to complete the informed consent.
2. Participants had to answer questions in order to screen those participants who were eligible to participate. The question includes 'Have you ever gone through a FIT test screening before,' 'Are you currently living in Bangkok?' and 'how old are you.'
3. Participants must answer 15 questions to identify their self-construal before being manipulated.
4. They are randomly assigned to six different conditions (independent priming x a self-threatened message, relational priming x a self-threatened message, collective priming x a self-threatened message, independent priming x a family-threatened message, relational priming x a family-threatened message, collective priming x family-threatened message).
5. The participants are required to complete the pronoun finding a task in the Quatrics program, which was modified from the study of Stapel and Van der Zee (2006) and Oyserman et al. (2009), as well as the Different/Similarity task modified from Trafimow (1991) to activate tripartite self-construal. In the pronoun finding task, participants must find instructed words and answer how many instructed words were found in the passage. Then, participants are directed to think about what makes them different from or similar to friends and family. Then, they have to list differences or similarities in the provided boxes.
6. The participants are then instructed to read either a self-threatened message or a family-threatened message on the topic of CRC.

7. Participants must finish the questions measuring threat and efficacy perception, fear feeling toward a message, attitude toward recommended actions and intention to perform recommended action.
8. Two sets of questions appeared on the screen for manipulation check purposes to make sure that self-construal and message appraisal were successfully activated.
9. Then, participants would answer questions about demographical information.
10. Participants would indicate whether they require to receive a *token of appreciation* for completing the survey or not. If you want to get the *token of appreciation*, they will be asked to fill in further information about their address and contact so that the researcher can send them a *token of appreciation* via mailing.
11. Lastly, experimenters will take a step to debrief the participants about all procedures and thank them for participating in the experiment. In debrief section, participants will be offered a set of information supporting the risk factors of getting CRC, including age and how to prevent CRC by FIT test screening to reassure that they would access to further information about this, so the aroused fear would be reduced. The set of information is from reliable sources, which are online blogs from Thaihealth, Chulalongkorn hospital and National Cancer Institute. They will be asked whether they allow the researcher to use data for analysis or not as well.

Materials

Self-construal scale

The self-construal scale is used to identify participants' self-construal before being primed. The self-construal scale was adapted from Self-construal Scale (Singles, 1994), the Relational, Individual, and Collective self-aspects (RIC) Scale (Kashima & Hardie, 2000) and the Relational-Interdependent Self-Construal (RISC) (Cross et al., 2000). In order to interpret it, according to the Relational, Individual, and Collective self-aspects (RIC) Scale by Kashima and Hardie (2000), each respondent's three subscale scores would be compared and identified which subscale has the

highest score. Then, each participant will be divided into three categories (independent, relational or collective) according to the highest subscale. The scale consists of 5 items on each subscale: independent, relational, and collective. *The independent subscale* consists of 5 items based on the definition of autonomy, uniqueness, and a clear boundary of self from others (Markus & Kitayama, 1992). Basically, after the reliability test in pilot 2, 2 items in the independent subscale were removed because of a low Corrected Item Total Correlation (CITC). The Corrected item-total Correlation (CITC) was analyzed by using *critical r* value ($r = .25$, $df = 60$, $p < .05$, 2-tailed). Therefore, Cronbach's alpha estimate of 3 items was .62. To enhance Cronbach's alpha of the subscale, the researcher selected two more items to fit the definition for further data collection. All items were translated and validated by the expert. The example items include 'I enjoy being unique and different from others in many respects.' and 'I do my own thing, regardless of what others think.'

The *relational subscale* comprises five items covering the definition of ties with specific others, quality of the close relationship, interpersonal relatedness, and intimacy (Kashima & Hardie, 2000). Moreover, Cross and colleagues have affirmed that close relationships are an important part of personality and self-concept. From pilot 2, reliability test analysis of this subscale revealed Cronbach's alpha estimate for three items was .62. 2 items were deleted due to a Corrected Item Total Correlation (CITC). Therefore, two more items were added to develop Cronbach's alpha estimate in the next data collection. The example items are 'In general, my close relationships are an important part of my self-image.' and 'I would feel proud if my closed ones have accomplished their important goals.' The collective subscale contains five items emphasized on the definition of group affiliation, in-group norms, roles and status characterized by collectives (Kashima & Hardie, 2000). After the analysis of reliability in pilot 2, 1 item was removed due to a low CITC. The Cronbach's alpha estimate of the 4-item subscale was .68, so another item was included in the subscale. The example items are 'I will sacrifice my self-interest for the benefit of the group I am in.' and 'I would respect decisions made by the group even though I disagree with them.'

The reliability of the self-construal scale of the data collection was also carried out. There were five items for assessing the independent self. After the reliability analysis, there was 1 item whose Corrected item-total Correlation coefficients (CITC) did not pass using the critical r value as the cut-off. The critical r value was .143 for a one-tailed test at .05 significant level. Therefore, the Cronbach's alpha of 4 items for independent self-scale was .82. The Corrected item-total Correlation coefficients (CITC) ranged from .51-74.

For the relational self-scale, there were five items. The CITC of all items passed the critical r-value. The Cronbach's alpha was .90. and The CITC ranged from .61-.84. Like the Relational self-scale, the collective self-scale consisted of 5 items. The CITC of all items also passed the critical r-value. The Cronbach's alpha was .89. and The CITC ranged from .69-.79.

Self-construal priming tasks

The pronoun priming task was modified to use as a web-based experiment. The pronoun circling task was replaced with pronoun finding on Quatrics. As mentioned earlier about the development of self-construal manipulation, the story based on the definition of each self-construal and language repetition ('I,' 'You and I,' and 'We') would be operated as priming. For independent priming, the story is about spending time with 'myself' and doing something for 'myself.' The concurrence of the word 'Chan,' which means 'I,' is presented. For relational priming, the story is about spending quality time with 'the loved one.' The repetition of the word expressing the concept of 'you and I' is offered in the story. For collective priming, the story is about spending time with a group of friends. The repeat of the word 'we' is presented. The full version of the three priming stories is shown in the appendix section. After reading, participants were required to count the word that represented

After conducting pilot 2, the ineffective pronoun priming task was presented. Accordingly, the researcher decided to add another self-construal priming after the pronoun priming task to strengthen the effectiveness of self-construal priming in main data collection. This task is Different/Similar task developed by Trafimow and colleagues (1991). In the current study, the Different/Similar task has been modified to activate tripartite self-construal (independent, relational and collective). The

original task is commonly used to activate independent and collective self-construal. In the current study, the participants will be asked to think about what makes them different from family and friends for 2 minutes and type down what they expect to do (for independent self). Other participants will be asked to choose one of the closest people (could be one of family members or friends, or colleagues) to them and think about what makes participants similar to the closest one for 2 minutes, then type down what they expect to do (for relational self). Another group of participants will be asked to think about what makes them similar to family and friends, then directed to type down what they expect to do (for collective self).

Fear appeal messages

The fear messages are manipulated as another independent variable. The fear messages are developed following the proposed principles from EPPM. The important components include severity, susceptibility, self-efficacy, and response efficacy. There were two sets of fear messages varied in two different conditions: self-threatened and family-threatened conditions. For the most part, susceptibility and self-efficacy, and response efficacy were similar in the two conditions, but severity components are manipulated to be different. The details were discussed earlier in the developing manipulations and measures section.

So as to induce enough threat, a fear message must comprise of severity and susceptibility of CRC. The information about CRC was adapted from the CRC study in Thailand by Yodkonkij (2005). In the self-threatened message, the severity of the message was from the fact that CRC was a dangerous disease that causes individuals to suffer a lot of pain and might suffer to death. Due to the spread of cancer in the rectum, the whole digestive system was affected. Patients might not be able to live normally. Apart from physical pain, patients might be struggling to live with mental problems from being sick. The family-threatened message, however, emphasized what families related to CRC patients would encounter during patient care, such as tiredness, stress or facing financial problems. Moreover, to induce the feeling of susceptibility, the self-threatened message stated the fact about the age that is at risk of developing CRC. The family-threatened message, on the other hand, notifies that CRC is hereditarily transmitted among families.

Regarding the efficacy in this study, the efficacy component is expected to be controlled as moderately high (average score should be higher than 7). The efficacy component is designed by providing the fact about the accuracy of the FIT test to increase perceived response efficacy and how convenient the method is based on the result from the study of Wathanawongpiboon (2019). The efficacy components in both fear message condition (self-threatened and family threatened) was the same (see appendix for further information). From pilot 2, it was found that manipulation check on efficacy component from both fear message condition is as high as required (self-threatened message: $M= 11.80$, $SD= 1.60$, $n= 25$; family threatened message: $M= 12.75$, $SD= 1.36$, $n= 24$)

Measurement of dependent variables

Measurement development. Before data collection, pilot two was carried out to test the scale reliability. All the measurement used was translated into Thai and verified their face validity by content and language expert. Then, it was tried out among 49 Thai participants aged more than 45 for reliability.

The Cronbach's alpha estimate of perceived susceptibility and severity was .949 and .912, respectively. For the perception of susceptibility, the Corrected item-total Correlation coefficients (CITC) ranged from .80 to .94. For the perception of severity. The Corrected item-total Correlation coefficients (CITC) ranged from .79 to .85. For perceived efficacy, Cronbach's alpha estimate was .84, and the Corrected item-total Correlation coefficients (CITC) ranged from .58 to .76.

The Cronbach's alpha estimate of feeling fear was .83, with CITC ranging from .56 to .77.

The Cronbach's alpha estimate of the 10-item attitude scale was .90, with CITC ranging from .48 to .75

Lastly, Cronbach's alpha estimate of behavioral intention was .95, with CITC ranging from .87 to .91.

Perceived threat. To assess the perception of threat among participants, the researcher used the adapted version of the Risk Behavior Diagnosis scale, which Birmingham, and colleagues (2015) developed according to the Extended Parallel Process Model. The threat perception consists of 2 main constructs: perceived

susceptibility and severity. Therefore, there were eight items on the scale: four for each, and it was measured on a 7-Likert scale (i.e., '*I am at risk for getting CRC*'; '*It is possible that I will get CRC*'; '*CRC is a serious threat.*' *The higher score suggests a higher threat perception toward a fear message, whereas the lower score suggests the opposite.* The Cronbach alpha estimate of the scale in the current study was .89. The Corrected item-total Correlation coefficients (CITC) ranged from .56 - .76.

Perceived efficacy. Although the perceived efficacy in the current study is not treated as the dependent variable, it is required to indicate that participants are engaged in the danger control process, which was a desirable and effective outcome after reading fear appeal message according to EPPM. There are four items adapted from Birmingham and colleagues (2015) consisting of perceived response efficacy and perceived self-efficacy. The perceived efficacy was measured on a 7-Likert scale ranging from "strongly disagree to strongly agree." (i.e., 'after reading the message, I think I am able to attend CRC screening via FIT test'; after reading the message, I think attending CRC screening via FIT test is effective to prevent CRC.' The higher score refers to a higher efficacy perception toward recommendations in a fear message; on the other hand, the lower suggests the opposite. The Cronbach alpha estimate of 4 items in the current study was .92. The Corrected item-total Correlation coefficients (CITC) ranged from .79 - .84.

Fear feeling. The feeling of fear is used to assess fear experienced retrieved from Dillar and Peck's study (2000). The questions consist of 3 items include "the message used in this study made me feel afraid.", "The message used in this study made me feel fearful," and "the message used in this study made me scared." These three items are assessed on a 7-point scale ranging from "strongly disagree to strongly agree." *The higher score indicates a higher level of feeling fear toward a fear message, while the lower score indicates the opposite.* The Cronbach's alpha estimate reported in the current study was .93. The Corrected item-total Correlation coefficients (CITC) ranged from .82 - .85.

Attitude toward attending FIT test screening. The attitude toward attending to FIT test screening was measured on a 7-Likert scale ranging from "1= strongly disagree to 7= strongly agree". The scale was adapted from the study of Khashij and

colleagues (2018). There were originally consisted of 5 items. The example item from their scale was "Uptake fecal occult blood test for you is pleasant" and "Uptake fecal occult blood test for you is embarrassing." The pattern of it was the constant initial sentence following the change of adjectives. Therefore, in the current study, another five adjectives were added so that they would overspread the components of attitude in terms of both cognitive and affective, making the scale ten items. Positive and negative statements were comprised on the attitude scale. There were six positive statements that provided normal scoring, including items 2,6,7,8,9,10 and 4 negative statements which entailed reversed scoring, including 1,3,4,5. The higher score indicates a positive attitude toward attending the FIT test, but the lower score indicates a negative attitude toward attending the FIT test screening. However, in the data collection, item 2 was removed due to the lower CITC than the cut-off value (Critical r at 1.43). Therefore, the Cronbach's alpha estimate of 9-item for attitude measure in the current study was .70. The Corrected item-total Correlation coefficients (CITC) ranged from .21 - .51.

Behavioral intention. The 3 items to assess intention was adapted from the study of Sampson and colleagues (2001). The intention scale was ranging from 1 to 7 assessed by 2 questions (i.e. '*I plan to attend FIT test to prevent myself from CRC in the next 4 weeks*'; '*I want to prevent myself from CRC by attending FIT test in the next 4 weeks.*'). The answer ranging from 1 is equal 'definitely no' and 7 is 'definitely yes'. *The higher score suggests higher intention to attend FIT test screening while the lower score suggests the opposite.* The Cronbach's alpha estimate reported in current study was .95. The Corrected Item-Total Correlation coefficients (CITC) ranged from .88 - .92.

Manipulation check

Messages component. The manipulation check measures are asked after participants answer all dependent measure. They cover the following details.

Threat component. After reading the fear message (self-threatened or family-threatened), to guarantee that participants really read and comprehend the message, eight questions are used to assess as a manipulation check. There are two of them used as a memory check whether they are able to remember what is said. The questions are a yes-no question asking, 'the passage talks about the bad consequences on family when you develop CRC.' and 'The passage talks about the bad consequences on yourself when you develop CRC.' The participants must answer these two questions correctly; therefore, the data would be further analyzed. Another six questions are managed to assess the perception that they get from reading the passage. To check whether participants perceive the message to be harmful differently, they are asked to indicate that 'in the message, CRC is a threat to yourself (or your family) and 'in the message, you (or your family) will be impacted when you develop CRC.' on a 7-scale ranging from (1=totally disagree – 7=totally agree). Moreover, to make sure that the message contains enough efficacy components, participants are needed to indicate that 'in the message, CRC can be prevented by FIT test screening' and 'in the message, attending FIT test to prevent CRC is easy for you.' on a 7-scale ranging from (1=totally disagree – 7=totally agree).

Self-construal priming effect. To confirm that self-construal is literally activated, participants have to indicate how much they agree with nine statements on a 7-Likert scale ranging from 1= totally disagree to 7= totally agree. Those statements are adapted from the manipulation check used in the study of Stapel and Van Der Zee (2006) to assess the value activated from the self-construal prime. Each self-construal was assessed by three questions. For independent self, participants must indicate how much they agree with the following statements at the moment, you feel satisfied with being yourself, you find being with yourself is important, and what you want to do is from your own needs'. For relational self, participants would indicate how much they agree with the statements at the moment, you feel satisfied with having good relationships with the loved one, you

find being with people who are important to you is important, and what you want to do is from people who have a close relationship with you.' For collective self, participants are asked how much they agree with the statements at the moment, and I feel satisfied with being a part of a group; you find being in a group is important, and what you want is from collective needs.' It is expected that participants in different conditions of self-construal might show a high score on manipulation check measures that match their condition. Furthermore, the items assessing interpersonal behaviors are added to validate the self-construal effect from the priming since the assessment of values might capture the effect of the self-construal. Items include 'I'd rather say no directly to whomever instead of using the indirect method.', 'I always encourage or support someone closed to me to do whatever he/she likes.' And 'For most of the time, I tend to avoid arguing when I disagree with others in my group.'

Statistical analysis

A descriptive statistic was used to describe the demography of participants as well as the correlation within the research model. To test the first and second sets of hypotheses, two-way MANOVA was performed with a fear appeal message and self-construal priming as independent variables and perceived threat, fear aroused, attitude toward FIT test and intention to attend FIT test as dependent variables. Since one of the assumptions to use MANOVA is that dependent variables should be correlated but not that high, evidence proving correlation among dependent variables is from previous research relating to the use of EPPM to increase CRC screening. A previous study showed that perceived threat, both severity and susceptibility, correlated with fear aroused and intention to attend colonoscopy (Dillard et al., 2017). Additionally, Kanjananopinit et al. (2019) found that intention to attend FIT test screening was correlated with attitude toward FIT test screening. Therefore, MANOVA is appropriate to perform an analysis of the perceived threat, fear aroused, attitude toward the FIT test and intention to attend the FIT test. Furthermore, the PROCESS macro was conducted for additional analysis to explore the relationships of key variables in the study.

Chapter 3

Results

This current study was an experimental study with the 3 self-construal primes (independent versus relational versus collective priming) x 2 types of fear messages (self-treated versus family threatened). Data analysis of the study was once performed by descriptive analysis to understand the basic information of the participants and key variables. Then, the between-group multiple analysis of variance (MANOVA) was conducted to compare perceived threats feeling, fear, attitude, and intention scores.

There were three parts of the result from the analysis: descriptive statistics of the demography of participants, inferential statistics for testing hypothesis, hypothesis testing outcomes and alternative analysis.

Descriptive statistics of demography of participants and key variables

demographical information of participants

Participants who voluntarily participated in the study were high-risk adults who resided in Bangkok and had not attended FIT test screening. The average age of 134 participants was 49.31 ($SD= 6.191$). In terms of gender, there were 67 females, 66 males and one other. Participants were randomly assigned to six experimental conditions of which they did not become aware of that.

Data preparation. The data gathered from 134 participants had to be screened before further analysis. The researcher detected a possible multivariate outlier by Mahalanobis Distance (MD) and Difference in Fits ($DFFITS$). After calculating MD for each observation, the researcher determined if any distances were significant, so the p-value was calculated. There was no potential outlier detected at $p < .001$. For $DFFITS$, one observation observed that the $DFFITS$ value exceeded 2 (Rousseeuw & Leroy, 2003), which potentially influenced its prediction. Consequently, that case was deleted before proceeding with data analysis.

One hundred thirty-three participants were assigned to six conditions, with at least 20 participants per condition. As shown in 6, the descriptive analysis indicated that participants have similar demographical information among conditions. The average age of participants in condition 1 was 49.30 ($SD= 6.13$), in condition 2 was 49.48 ($SD= 7.47$), in condition 3 was 49.55 ($SD= 4.73$), in condition 4 was 49.96 ($SD= 6.75$), in condition 5 was 48.82 ($SD= 6.54$) and in condition 6 was 49.31 ($SD=6.191$). In terms of gender and marital status, there were almost equal numbers of males and females in each condition; moreover, participants' careers, number of children, monthly income and family health history of CRC were illustrated.

Table 5

Demographical information of participants based on experimental conditions

Condition	1	2	3	4	5	6	Full
Demography	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	sample
<i>N</i>	23	21	20	24	22	23	133
Age M(<i>SD</i>)	49.30 (6.13)	49.48 (7.47)	49.55 (4.73)	49.96 (6.75)	48.82 (6.54)	49 (5.75)	49.35 (6.19)
Sex							
Female	11 (47.83)	11 (52.38)	9 (45)	9 (37.5)	14 (63.64)	12 (54.17)	66 (49.62)
Male	12 (52.17)	9 (42.86)	11 (55)	15 (62.5)	8 (36.36)	11 (45.83)	66 (49.62)
Others	0 (0)	1 (4.76)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.76)
Marital status							
Single	10 (43.48)	7 (33.33)	10 (50)	6 (25)	10 (45.45)	12 (52.17)	55 (41.35)
Married	12 (52.17)	13 (61.90)	8 (40)	16 (66.67)	10 (45.45)	10 (43.48)	69 (51.88)
Divorced	1 (4.38)	1 (4.76)	2 (10)	2 (8.33)	2 (2)	1 (4.35)	9 (6.77)
Career							
unemployed	1 (4.35)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.75)
Government officer	19 (82.61)	15 (71.43)	14 (14)	15 (62.50)	16 (72.72)	16 (69.57)	95 (71.43)
company employee	1 (4.35)	1 (4.76)	2 (10)	2 (8.33)	1 (0)	4 (17.39)	11 (8.27)
agriculturist	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)	0 (0)	1 (0.75)
freelancer	0 (0)	0 (0)	0 (0)	1 (0)	1 (0)	0 (0)	2 (1.50)
Others	2 (8.70)	5 (23.81)	4 (20)	6 (25)	3 (13.64)	3 13.04	23 (17.29)
Number of children							

No children	11 (47.83)	10 (47.62)	13 (65)	9 (37.50)	10 (45.45)	13 (56.52)	66 (49.62)
1 child	5 (21.74)	5 (23.81)	2 (10)	6 (25)	5 (22.73)	1 (4.35)	24 (18.05)
2 children	7 (30.43)	3 (14.29)	3 (15)	4 (16.67)	4 (18.18)	4 (17.39)	25 (18.80)
3 children	0 (0)	3 (14.29)	1 (5)	4 (16.67)	3 (13.63)	4 (17.39)	15 (11.28)
4 children	0 (0)	0 (0)	1 (5)	1 (4.17)	0 (0)	0 (0)	2 (1.50)
More than 4	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (4.35)	1 (0.75)
Monthly income							
< 10,000 THB	0 (0)	0 (0)	0 (0)	1 (4.17)	1 (4.55)	0 (0)	2 (1.50)
10,001-20,000 THB	7 (30.43)	6 (28.57)	8 (40)	7 (29.17)	6 (27.27)	7 (30.43)	41 (30.83)
20,001-30,000 THB	11 (47.83)	10 (47.62)	7 (35)	9 (37.50)	9 (40.91)	11 (47.83)	57 (42.86)
30,001-40,000 THB	1 (4.35)	3 (14.29)	1 (5)	3 (12.50)	3 (13.64)	1 (4.35)	12 (9.02)
40,001-50,000 THB	1 (4.35)	0 (0)	1 (5)	1 (4.17)	1 (4.55)	1 (4.35)	5 (3.76)
50,001-60,000 THB	0 (0)	2 (9.52)	2 (10)	1 (4.17)	1 (4.55)	2 (8.70)	8 (6.02)
60,001-70,000 THB	1 (4.35)	0 (0)	0 (0)	1 (4.17)	1 (4.55)	0 (0)	3 (2.26)
70,001-80,000 THB	2 (8.70)	0 (0)	1 (5)	0 (0)	0 (0)	0 (0)	3 (2.26)
> 80,001 THB	0 (0)	0 (0)	0 (0)	1 (4.17)	0 (0)	1 (4.35)	2 (1.50)
Family Health History of CRC							
No history	21 (91.30)	21 (100)	17 (85)	21 (83.50)	21 (95.45)	22 (95.65)	123 (92.48)
Parents	0 (0)	0 (0)	1 (5)	3 (12.50)	0 (0)	1 (4.35)	5 (3.76)
Biological siblings	1 (4.35)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.75)
Grandparents	1 (4.35)	0 (0)	1 (5)	0 (0)	1 (4.55)	0 (0)	3 (2.26)
Uncles and aunts	0 (0)	0 (0)	1 (5)	0 (0)	0 (0)	0 (0)	1 (0.75)

Note. N= 133 1= independent self-construal priming & self-threat message, 2= independent self-construal priming & family-threat message, 3= relational self-construal priming & self-threat message, 4= relational self-construal priming & family-threat message, 5= collective self-construal priming & self-threat message, 6= collective self-construal priming & family-threat message

Descriptive analysis of key variables

The current study focused on outcome variables resulting from the fear message: perceived threat, feelings of fear, intention to attend the FIT test and attitude toward the FIT test. The focused variables were divided into two sets. The Risk Behavior Diagnosis scale measured the perceived threat, comprising eight items. Feelings of fear were measured by fear experiences containing three items. Attitude toward attending FIT test screening was measured by nine items containing four

items of affective and five items of cognitive components. Finally, the intention to attend FIT test screening was measured by three items. The descriptive statistics of key variables were presented based on Mean (*M*) and Standard Deviation (*SD*). Those descriptive statistics were also presented based on each experimental group, as shown in Tables 7 and 8.

Table 6

Descriptive Statistics of perceived threat and feelings of fears

Measure	Fear message condition	Self-construal priming					
			<i>M</i>	<i>SD</i>	<i>N</i>		
Perceived threat	Self-threatened	Independent	4.31	1.25	23		
		Relational	4.09	1.60	20		
		Collective	4.23	1.07	22		
	Family-threatened	Independent	4.21	1.32	21		
		Relational	4.09	1.12	24		
		Collective	4.59	1.02	23		
		Total	4.26	1.22	133		
		Feelings of fear	Self-threatened	Independent	4.59	1.95	23
				Relational	4.60	1.69	20
Collective	4.38			1.34	22		
Family-threatened	Independent		4.70	1.66	21		
	Relational		4.26	1.90	24		
	Collective		4.54	1.54	23		
Total	4.51	1.673	133				

Note. *N*= 133

Table 7

Descriptive Statistics of intention and attitudes

Measure	Fear mess condition	Self-construal priming	<i>M</i>	<i>SD</i>	<i>N</i>	
Intention	Self-threatened	Independent	5.22	1.50	23	
		Relational	4.93	1.45	20	
		Collective	4.32	1.74	22	
	Family-threatened	Independent	4.59	1.60	21	
		Relational	4.36	1.82	24	
		Collective	4.74	1.50	23	
		Total	4.69	1.61	133	
	Attitudes	Self-threatened	Independent	5.07	1.05	23
			Relational	4.71	0.86	20
Collective			4.57	0.80	22	
Family-threatened		Independent	4.63	0.93	21	
		Relational	4.99	1.01	24	
		Collective	4.68	0.86	23	
		Total	4.78	0.93	133	

Note. *N*= 133

Another key variable was perceived efficacy. As mentioned, the fear message was composed based on the extended parallel process model of fear appeal (EPPM); consequently, the researcher had to ensure that participants perceived that they could prevent CRC and that CRC is easily protected, as suggested by the message. The measure assessing perceived efficacy comprised four items on a 1-7 Likert scale, and the score that was accepted as moderately high was more than 3.5. Table 9 showed that the mean efficacy perception among participants in all conditions was higher than 3.5 ($M= 5.14$, $SD= 1.21$).

Table 8

Descriptive statistic for perceived efficacy measure

Condition	<i>M</i>	<i>SD</i>	<i>N</i>
1	5.42	0.25	23
2	4.92	0.25	21
3	5.20	0.32	20
4	5.25	0.26	24
5	5.00	0.25	22
6	5.01	0.22	23
Total	5.14	1.21	133

Note. *N*= 133. 1= independent self-construal priming & self-threat message, 2= independent self-construal priming & family-threat message, 3= relational self-construal priming & self-threat message, 4= relational self-construal priming & family-threat message, 5= collective self-construal priming & self-threat message, 6= collective self-construal priming & family-threat message

Data analysis for hypothesis testing

The Multivariate Analysis of Variance (MANOVA) was employed to compare the score of perceived threat, feeling of fear, attitude and intention between experimental groups. Before proceeding with MANOVA analysis, testing the manipulation and assumptions checks were run.

Manipulation check

Before reporting results from MANOVA, analyzing the manipulation check would be crucial to illustrate that self-construal and message manipulation influenced the thoughts as well as perceptions of participants.

Self-construal priming. There were 12 items to assess self-construal manipulation check and four items for each self-construal. Participants were expected to report the highest score for the manipulation check scale that matched the self-construal priming they got in the first place. The researcher applied Analysis of Variance (ANOVA) to test the differences in manipulation check scores by self-construal priming. Table 10 presents the result from ANOVA, reporting no significant differences in any means of self-construal manipulation check. Participants with independent self-priming did not report higher score ($M= 5.22$, $SD= 1.24$) on

independent manipulation check than those in relational ($M= 5.36, SD= 1.11$) and collective priming ($M= 5.34, SD= 0.93$). The participant with relational self-priming reported a higher score ($M= 5.50, SD= 1.02$) on the relational manipulation check scale than those in independent ($M= 5.37, SD= 1.24$) and collective priming ($M= 5.37, 0.95$) but no significance found. Finally, participants with collective priming did not report higher score ($M= 5.18, SD= 0.92$) on collective manipulation check than those in independent ($M= 5.04, SD= 1.21$) and relational priming ($M= 5.21, SD= 1.13$). In sum, unfortunately, the manipulations were not successful in activating different self-construal among participants.

Types of Fear message. There were six items assessing manipulation check of the fear message to test whether the participants perceived the message threatened themselves or thought it threatened their family members. Therefore, the t-test was applied to reveal the differences in manipulation check measures. Despite the unsuccessful manipulation of fear messages via a pilot test, the manipulation check in the main study did not detect the differences between the two types of fear appeal messages. 65 participants who have read the self-threatened message reported higher score ($M= 4.68, SD= 1.64$) on self-threatened manipulation check than 68 participants who read family-threatened message ($M= 4.46, SD= 1.79, t(131) = 0.77, p= .22$ but not significantly). Similarly, participants who encountered family-threatened messages reported higher scores ($M= 4.59, SD= 1.80$) on the family-threatened manipulation scale than those encountering self-threatened messages ($M= 4.40, SD= 1.76, t(131) = -0.60, p= .27$ but not significantly). In sum, the fear appeal messages did not successfully create the perception of self-threat and family threats.

Table 9

Mean differences of self-construal manipulation check among self-construal priming groups

Measure	Independent		Relational		Collective		F (2, 129)	η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Independent	5.22	1.24	5.37	1.24	5.04	1.21	0.20	.003
Relational	5.36	1.11	5.50	1.02	5.21	1.13	0.22	.003
Collective	5.34	0.92	5.37	0.95	5.18	0.92	0.30	.005

The result from both manipulation checks can indicate that the manipulation might not effectively influence how participants thought, perceived and felt toward the message. However, the researcher still proceeded to conduct MANOVA analysis with caution of the ineffectiveness of each manipulation.

Assumption testing

Three main assumptions must be met to ensure that MANOVA analysis was valid, including 1) observations have to be independent; 2) Variance-Covariance matrices must be equal in all groups; 3) dependent variables must be normally distributed within each group of dependent variables (Hair et al., 2014).

Independent observations. In order to confirm this assumption, the intraclass correlation (ICC) using multilevel regression of all dependent variables was conducted. If ICC =0, no variance between groups can be assumed. ICC can be calculated as $ICC = (\text{between-group variance}) / (\text{total variance})$. From the analysis, the ICC of perceived threat and fear was 0, while ICC of intention was .0028 and attitude was .0045, indicating no correlation between experimental groups in any dependent variables.

Normality. To test the normal distribution of the data. Hair and colleagues (2014) suggest examining skewness and kurtosis value. The normal distribution test result revealed skewness, and kurtosis values fell from -1 to +1 (Hair et al., 2014). Additionally, Kolmogorov–Smirnov test should not establish significant statistics, yet this data set revealed a significant level of Kolmogorov–Smirnov, as shown in Table

11. Despite the significance of Kolmogorov-Smirnov, the skewness and kurtosis value fell within the satisfied range.

Table 10

Normality assumption test

Variables	Skewness	SE	Kurtosis	SE	Kolmogorov-Smirnov
Perceived threat	-.83	.21	.52	.42	<.001
Fear	-.17	.21	-.78	.42	<.05
Attitude	.35	.21	-.68	.42	<.001
Intention	-.46	.21	-.54	.42	<.001

The researcher later employed correlation analysis to test whether those dependent variables were correlated but should not have high multicollinearity. Firstly, the researcher examined correlations among all dependent variables: perceived threat, fear, attitude and intention. As illustrated in Table 12, fear and attitude toward FIT screening were not correlated, $r(131) = .05, p = .61$. This could be problematic during MANCOVA analysis. According to EPPM, the dependent variables were divided into two sets before entering MANCOVA analysis. The first set of variables consisted of perceived threat and fear characterized fear appeal technique, and those two variables were positive correlate, $r(131) = .56, p < .01$. The second set of dependent variables included behavioral and attitude outcomes toward FIT test screening and were positively correlated, $r(131) = .50, p < .01$. Hence, the researcher ran MANCOVA two times for each set of the variables.

Table 11

Correlations between dependent variables

Variable	1	2	3	4
1. Attitude	-			
2. Intention	.50**	-		
3. Perceived threat	.33**	.50**	-	
4. Feelings of fear	.05	.56**	.56**	-

Note. ** $p < .01$

Homogeneity of covariance matrices of dependent variables. Another critical assumption of MANCOVA analysis was to confirm that variance-covariance matrices must be equal in all groups. The Box's M was used to determine that no significance did not violate this assumption. As mentioned about two sets of dependent variables, there were two values of the Box's M. The analysis revealed that this data set did not violate this assumption, as shown in Table 13.

Table 12

Box's M test of Equality of Covariance matrices

Set of variables	Value	F	df1	df2	p
1. perceived threat and feelings of fear	16.45	1.06	15	84323.55	.40
2. attitude and intention	8.63	0.55	15	84323.55	.91

Conclusively, this data set met all of the assumptions for MANCOVA analysis and was acceptable to analyze further. According to Hair et al. (2014), MANCOVA was still a robust analysis even though some assumptions may be violated. The researcher eventually conducted a MANCOVA analysis on this data set with Wilk's Lambda as a statistical measure since all assumptions had not been violated.

Hypothesis testing

The researcher proposed four main hypotheses (1a, 2a, 3a, 4a) to test whether the different types of self-construal priming (independent versus relational versus collective) and the different fear message (self-threatened versus family-threatened) would affect how participants perceived the message which eventually led to emotional, attitudinal, and behavioral outcomes as follows:

Hypothesis 1a: Participants who receive different types of fear messages would report **threat perception** differently depending on self-construal priming.

Hypothesis 1b: In relational self-construal priming, participants receiving a family-threatened message would report **higher threat perception** than those receiving collective priming with a family-threatened message.

Hypotheses 2a: Participants who receive different types of fear messages would report **fear experiences** differently depending on self-construal priming.

Hypothesis 2b: In relational self-construal priming, participants who receive family-threatened messages would report **higher fear experiences** than those in collective priming.

Hypotheses 3a: Participants who receive different types of fear messages would report **attitudes toward FIT test screening** differently depending on self-construal priming.

Hypothesis 3b: In relational self-construal priming, participants who receive a family-threatened message would report **more positive attitude** toward FIT test screening than those in collective priming with the family-threatened message.

Hypotheses 4a: Participants who receive different fear messages would report **the intention to attend FIT test screening** differently depending on self-construal priming.

Hypotheses 4b: Participants who receive different fear messages would report **the intention to attend FIT test screening** differently depending on self-construal priming.

The multiple linear regression was also conducted to investigate relationships between demographical information which was the predictor and perceived threat, feelings of fear, attitudes, and intention. Firstly, the multiple linear regression was calculated to predict **perceived threat** based on age, gender, marital status, number of children, career, monthly income, and family health history of CRC. A significant regression equation was found ($F(7, 123) = 2.22, p < .05$), with an R^2 of .11. The demographics that significantly predicted perceived threat included age ($B = -.20, p < .05$), marital status ($B = -.22, p < .05$), and monthly income ($B = .25, p < .01$). Next, the multiple linear regression was conducted to predict **feelings of fear** based on the same set of predictors. A significant regression equation was found ($F(7, 123) = 3.30, p < .01$), with an R^2 of .16. The demographics that significantly predicted feelings of fear included age ($B = -.22, p < .05$) and marital status ($B = -.18, p < .05$). Then, the multiple linear regression was conducted to predict **attitudes** based on the same set of predictors. A significant regression equation was found ($F(7, 123) = 4.33, p < .01$), with an R^2 of .20. The demographics that significantly predicted attitudes included number of children ($B = .26, p < .05$), monthly income ($B = .38, p < .001$) and family

health history of CRC ($B = .18, p < .05$). Lastly, Then, the multiple linear regression was conducted to predict **intention** based on the same set of predictors. A significant regression equation was found ($F(7, 123) = 4.24, p < .001$), with an R^2 of .19. The demographics that significantly predicted intention included age ($B = -.18, p < .05$), marital status ($B = -.38, p < .001$) and career ($B = -.19, p < .05$).

Therefore, significant demographical information was controlled.

Perceived threat and Fear feeling. The first set of variables, including perceived threat and fear, was analyzed to test the mean differences resulting from self-construal priming and types of fear messages. The researcher also controlled the effect of age, marital status, monthly income, career, and family health history of CRC using a Multivariate analysis of covariance (MANCOVA). The MANCOVA revealed there was non-significant differences in perceived threat and feelings of fear scores based on fear message $F(2, 121) = 0.34, p = .71$; Wilk's $\Lambda = .99$, partial $\eta^2 = .01$ and self-construal priming $F(4, 242) = 0.96, p = .43$; Wilk's $\Lambda = .97$, partial $\eta^2 = .02$. Furthermore, there was no significant interaction effect between fear messages and self-construal priming on those two dependent variables, $F(4, 242) = 0.28, p = .91$; Wilk's $\Lambda = .99$, partial $\eta^2 = .004$, after controlling for age, marital status, monthly income, career, and family health history of CRC as shown in Table 14. The result was also illustrated in figure 2 and 3. Therefore, hypotheses 1a, 1b, 2a, and 2b were not supported.

Figure 2

Mean difference in perceived threat

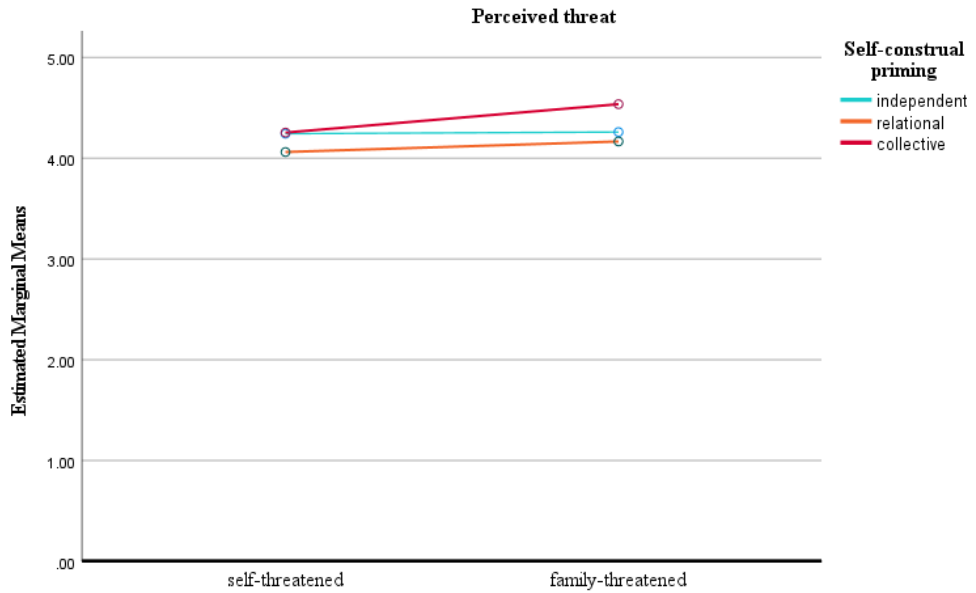


Figure 3

Mean difference in feelings of fear

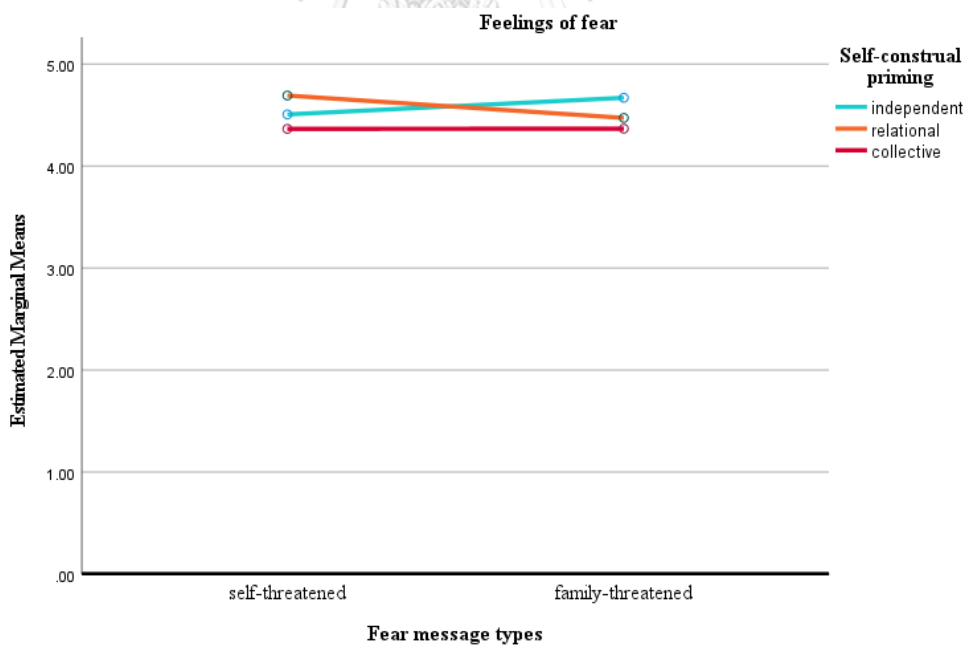


Figure 4

Mean difference in intention

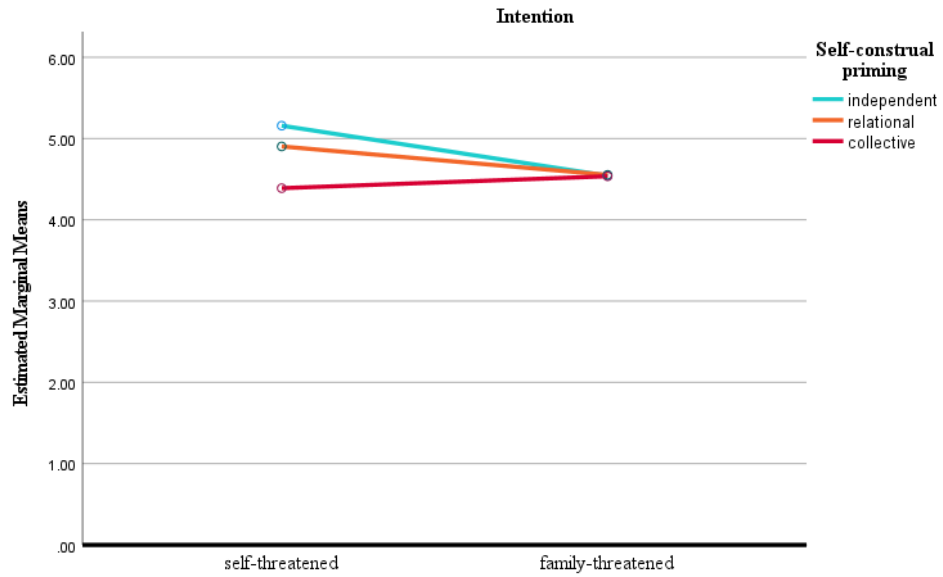
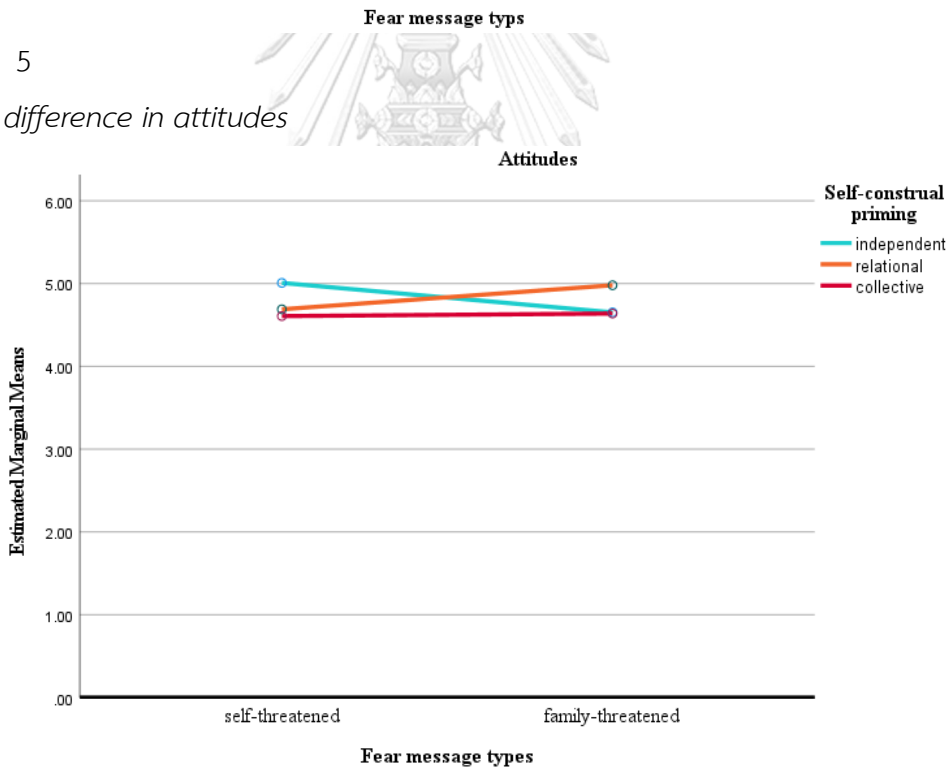


Figure 5

Mean difference in attitudes



Attitude and intention toward FIT test screening. The second set of variables includes attitude and intention toward FIT test screening. The differences in attitude and intention since the fear message and self-construal priming were expected. Also, the age, number of children, marital status, monthly income, and family health history of CRC were controlled. Again, the MANCOVA analysis revealed there were non-significant differences in attitude and intention based on fear message $F(2, 121) = 0.40, p = .67$; Wilk's $\Lambda = .99$, partial $\eta^2 = .01$ and self-construal priming $F(4, 242) = 0.67, p = .61$; Wilk's $\Lambda = .98$, partial $\eta^2 = .01$. Moreover, there was no significant interaction effect between fear messages and self-construal priming on attitude and intention $F(4, 242) = 1.09, p = .36$; Wilk's $\Lambda = .97$, partial $\eta^2 = .02$ as shown in Table 14. The result was illustrated in figure 4 and 5. Therefore, the hypothesis 3a, 3b, 4a and 4b was not supported.

Table 13

MANCOVA analysis for two sets of dependent variables

Measure	Source	Wilk's Λ	F	Hypothesis df	Error df	p	η^2
Perceived threat and feelings of fear	Intercept	.67	29.80	2	121	< .001	.33
	Age	.95	3.50	2	121	.03	.06
	Marital status	.96	2.31	2	121	.10	.04
	Monthly income	.88	7.96	2	121	< .001	.12
	career	.96	2.24	2	121	.11	.04
	Family health history	.96	2.21	2	121	.11	.04
	Fear message	.99	0.34	2	121	.71	.01
	Self-construal	.97	0.96	4	242	.43	.02
	Fear * Self	.99	0.25	4	242	.91	.004
	Attitude and intention	Intercept	.62	36.98	2	121	< .001
Age		.95	3.43	2	121	.04	.05
Number of children		.95	3.02	2	121	.05	.05
Marital status		.90	6.58	2	121	.002	.10

Monthly income	.86	9.58	2	121	< .001	.14
Family health history	.97	2.14	2	121	.12	.03
Fear message	.99	0.40	2	121	.67	.01
Self-construal	.98	0.67	4	242	.61	.01
Fear * Self	.97	1.09	4	242	.36	.02

Note. Fear= types of fear appeal message (self- versus family-threatened message) and self = self-construal priming (independent, relational, and collective self-construal priming).

Additional analyses

Apart from analyzing the main hypotheses, the researcher assessed the former self-construal of each participant before self-construal manipulation. The self-construal scale consisted of 3 subscales measuring independent, relational, and collective self on 7 Likert scales. There were statements reflecting the definition of each self-construal. The participants were asked to rate how much they agreed with each statement on a 7 Likert scale (1= totally disagree to 7= totally agree). The reliability of the self-construal scale after the data collection was carried out.

There were five items for assessing *independent self*. After the reliability analysis, there was 1 item whose Corrected item-total Correlation coefficients (CITC) did not pass using the critical r value as the cut-off (critical $r = .143, p = .05$, one-tailed). Cronbach's alpha of 4 items for independent self-scale was .82. The items assessing independent self-construal include 'I enjoy being unique and different from others in many respects.' and 'I am comfortable with being singled out for praise or rewards.'

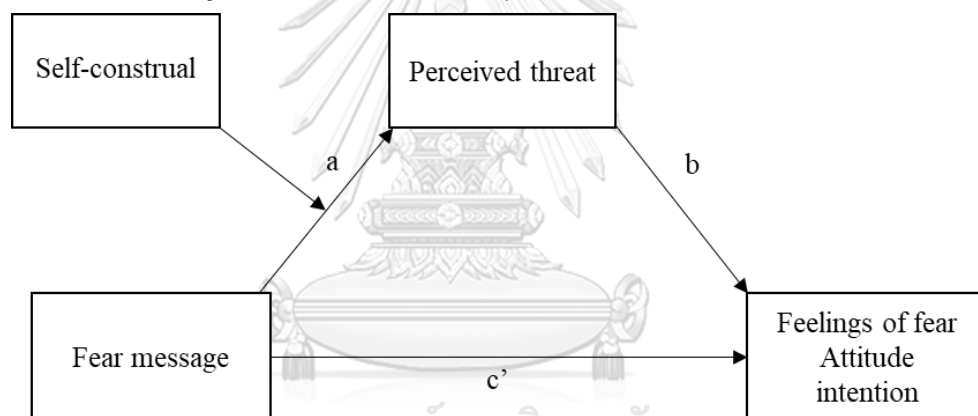
For *the relational self-scale*, there were five items. The CITC of all items passed the critical r -value (critical $r = .143, p = .05$, one-tailed). The Cronbach's alpha was .90. The example items are 'In general, my close relationships are an important part of my self-image.' and 'I would feel proud if my closed ones have accomplished their important goals.' Like the Relational self-scale, the *collective self-scale* consisted of 5 items. The CITC of all items also passed the critical r -value (critical $r = .143, p = .05$, one-tailed). The Cronbach's alpha was .89. The example

items are ‘I will sacrifice my self-interest for the benefit of the group I am in.’ and ‘I would respect decisions made by the group even though I disagree with them.’

All three measured self-construal were used to test moderating role in an additional analysis. According to EPPM, the perceived threat is a mediator between fear message and affective, attitudinal, and behavioral outcomes, which depends on self-construal. The researcher conducted mediation PROCESS version 4.0 in (model 7) in SPSS to confirm relationships in the model. After checking for regression assumptions, this data set met all assumptions and could be further analyzed. The researcher analyzed PROCESS 9 times since there were three kinds of self-construal and three criterion variables.

Figure 6

The overall model of PROCESS macro analysis



Moderated mediation model

The moderated mediation model included the predictor: fear message (dichotomous), the criterion variables: feelings of fear (continuous), attitude (continuous), intention (continuous), the mediator: perceived threat (continuous) and the moderator: three types of self-construal (continuous). Age, career, marital status, monthly income, number of children and family health history of CRC were controlled. Consequently, the moderated mediation model was run in nine models based on three criterion variables and three types of self-construal as a moderator. The significance of the direct and indirect effects was evaluated by means of 5000

bootstrap samples to create bias-corrected confidence intervals (CIs; 95%). There were five paths in the model (see figure 7).

1. The path a is the effect of types of fear messages on the perceived threat. There were a_{self_1} when adding independent self-construal as moderator, a_{self_2} when adding relational self-construal as moderator and a_{self_3} when adding independent as a moderator.
2. Path b is the effect of perceived threat on feelings of fear/attitude/intention.
3. Path ab is the indirect effect of the fear message on feelings of fear/attitude/intention mediated by a perceived threat.
4. Path c' is the effect of the fear message on attitude/intention after adding the mediator.

Moderated mediation on feelings of fear. As mentioned about the necessity of separated analysis, the effect of the fear appeal message on each criterion variable would be presented depending on each measured self-construal. Firstly, we began with feelings of fear.

Independent self-construal as a moderator. The analysis of PROCESS Macro revealed the effect of fear appeal message on feelings of fear mediated by perceived threat depending on independent self-construal was insignificant (moderated mediation index= 0.003, Boot SE= 0.08, LLCI = -0.17, ULCI = 0.17). Moreover, the interaction effect of fear message and independent self-construal on perceived threat was not significant ($B= 0.01$, $SE= 0.30$, $t= 0.04$, $p= .97$, $\Delta R^2= .00$). The analysis revealed the insignificant effect of fear message on perceived threat ($B= -0.15$, $SE= 0.585$, $t= -0.03$, $p= .98$) on path a_{self_1} . Also, the direct effect of fear message on feelings of fear was not significant as well on path c' ($B= -0.08$, $SE= 0.69$, $t= -0.12$, $p= .91$).

However, for path b which was the effect of perceived threat on feelings of fear, the significant effect of perceived threat on feelings of fear was found ($B= 0.30$, $SE= 0.04$, $t= 8.18$, $p < .001$). The effect of independent self-construal on perceived threat was significant ($B= 0.70$, $SE= 0.20$, $t= 3.50$, $p < .001$).

Relational self-construal as a moderator. When relational self-construal was entered as a moderator instead of independent self-construal, the effect of fear appeal message on feelings of fear mediated by perceived threat depending on relational self-construal was also insignificant (moderated mediation index= -0.08, Boot $SE= 0.09$, LLCI = -0.25, ULCI = 0.09). The interaction effect of fear message and relational self-construal on perceived threat was still not significant ($B= -0.27$, $SE= 0.28$, $t= -0.98$, $p= .33$)

The effect of fear appeal message on perceived threat was changed, but remained non-significant on path a_{self2} ($B= 9.07$, $SE= 8.17$, $t= 1.11$, $p= .27$). The c' and b path were the same. The effect of relational self-construal on perceived threat was found $B= 0.89$, $SE= 0.19$, $t= 4.60$, $p < .001$.

Collective self-construal as a moderator. The collective self-construal was entered as moderator. The analysis revealed that the effect of the fear appeal message on feelings of fear mediated by perceived threat depending on collective self-construal was still insignificant (moderated mediation index= -0.11, Boot $SE= 0.12$, LLCI = -0.34, ULCI = 0.12). The interaction effect of fear message and collective self-construal on perceived threat was still not significant ($B= -0.38$, $SE= 0.36$, $t= -1.06$, $p= .29$, $\Delta R^2= .01$).

The fear appeal message still had non-significant effect on perceived threat on path a_{self3} $B= 12.17$, $SE= 10.40$, $t= 1.17$, $p= .24$). The c' and b path were the same. The effect of collective self-construal on perceived threat was found significant $B= 0.89$, $SE= 0.23$, $t= 3.79$, $p < .001$.

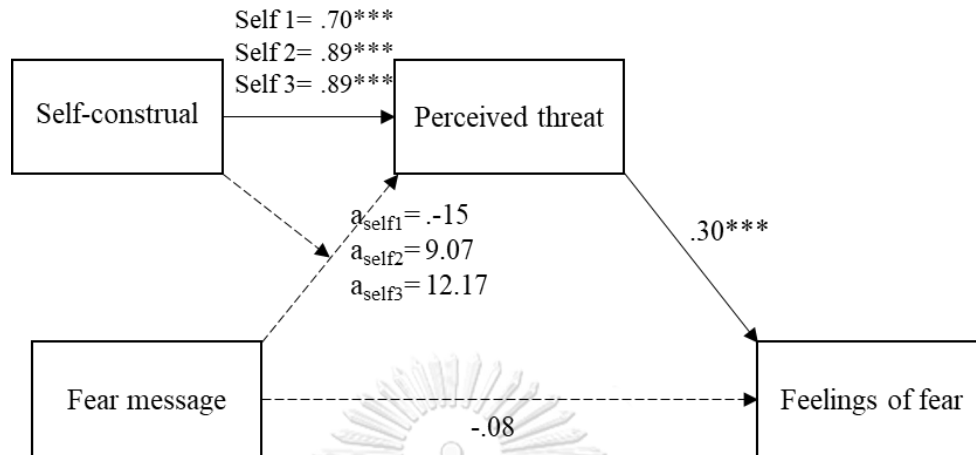
All in all, the analysis indicated no moderated mediation or interaction effect. That is, there was no indirect effect of the fear message on feelings of fear mediated by perceived threat depending on three types of self-construal. Furthermore, the direct effect of the fear message on feelings of fear was also insignificant. However, there was a significant effect of tripartite self-construal on perceived threat and perceived threat on feelings of fear, as illustrated in Figure 7 and Table 15.



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Figure 7

The analysis of moderated mediation on feelings of fear.



Note. Dashed lines present non-significant effect while solid ones reflect the opposite. Path a is changed based on different types of self-construal as a moderator. Path a_{self1} is the effect of fear message on perceived threat when independent self-construal is added. Path a_{self2} is the effect when relational self-construal is added and path a_{self3} is the effect when collective self-construal is added. Self 1= independent self-construal, self 2= relational self-construal, 3= collective self-construal. Path coefficients are unstandardized regression coefficients, *** $p < .001$

Moderated mediation on attitude. Next, the analysis moved to another criterion variable, which was attitude. The three types of self-construal were entered separately in the model. One thing that the researcher was aware of was that conducting the PROCESS analysis might show the same result concerning the non-significant effect of fear appeal message on the perceived threat and the indirect effect of fear appeal message on attitude via perceived threat. Therefore, the researcher would not report path a, the interaction effect of the fear message and three types of self-construal on perceived threat and the effect of self-construal on perceived threat again to avoid repetition.

Independent self-construal as a moderator. The analysis revealed the effect of fear appeal message on attitude mediated by perceived threat depending

on independent self-construal was found insignificant (moderated mediation index= 0.002, Boot SE = 0.05, LLCI = -0.08, ULCI = 0.10). Focusing on path c' which was the direct effect of fear appeal message on attitude, the result indicated the non-significant relationship between two variables (B = -0.26, SE = 1.36 t = -0.19, p = .85). Moving on to path b , the effect of perceived threat on attitude was almost but still not significant (B = 0.14, SE = 0.07, t = 1.94, p = .05).

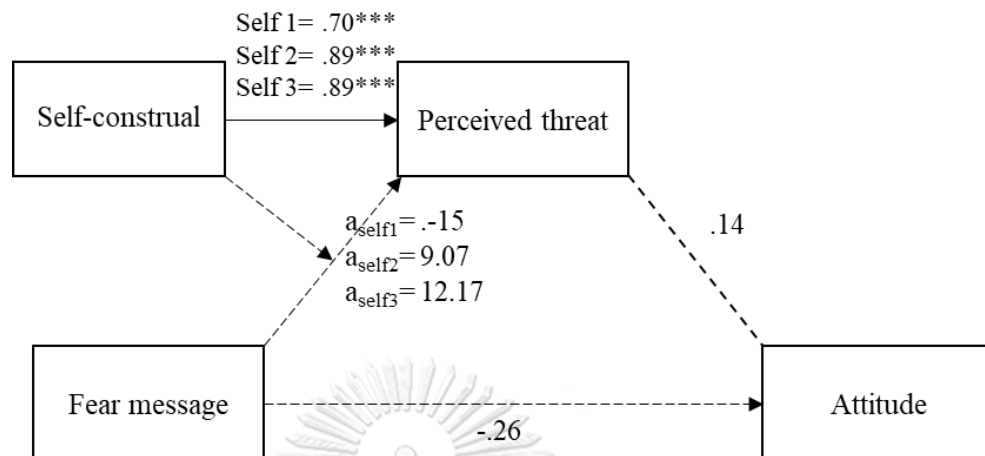
Relational self-construal as a moderator. For this analysis, the independent self-construal was replaced by relational self-construal. The analysis revealed that the effect of fear appeal message on attitude mediated by perceived threat depending on relational self-construal was still found insignificant (moderated mediation index= -0.04, Boot SE = 0.04, LLCI = -0.13, ULCI = 0.05). The direct effect of the fear message on attitude and the effect of perceived threat on attitude was similar to independent self-construal as a moderator.

Collective self-construal as a moderator. The collective self-construal was entered into the analysis as a moderator for this analysis. Again, the effect of the fear appeal message on attitude mediated by perceived threat depending on collective self-construal was still insignificant (moderated mediation index= -0.05, Boot SE = 0.63, LLCI = -0.19, ULCI = 0.06). The direct effect of fear messages on attitude and the effect of perceived threat on attitude was similar to what was reported in independent/relational self-construal as a moderator.

To conclude, the effect of the fear appeal message on attitude and the indirect effect of the fear message on attitude mediated by perceived threat with tripartite self-construal as a moderator on attitude as criterion variable was not found as illustrated in Figure 9 and Table 15.

Figure 8

The analysis of moderated mediation on attitudes toward FIT test screening.

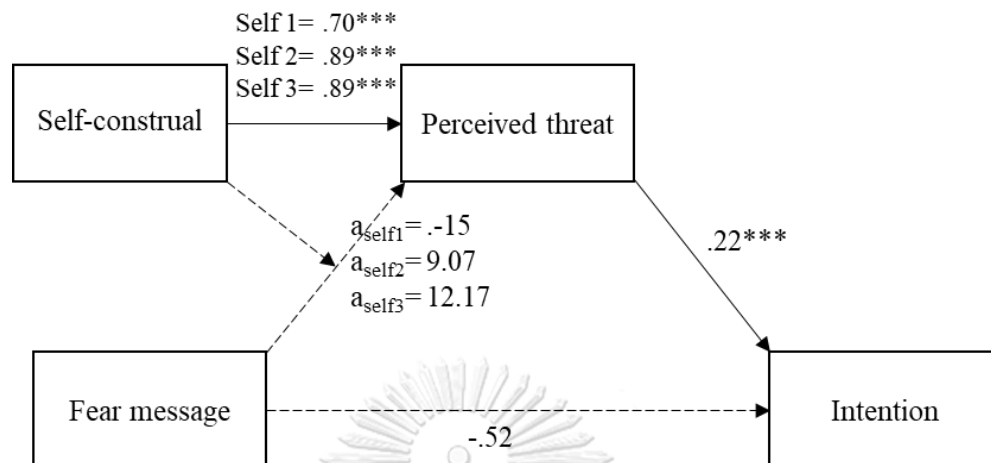


Note. Dashed lines present non-significant effect while solid ones reflect the opposite. Path a is changed based on different types of self-construal as a moderator. Path a_{self1} is the effect of fear message on perceived threat when independent self-construal is added. Path a_{self2} is the effect when relational self-construal is added and path a_{self3} is the effect when collective self-construal is added. Self 1 = independent self-construal, self 2 = relational self-construal, 3 = collective self-construal. Path coefficients are unstandardized regression coefficients, *** $p < .001$

Moderated mediation on intention. This section of analysis employed intention as a criterion variable. As mentioned before, the effect of the fear appeal message on perceived threat remained insignificant, and the effect of each self-construal on perceived threat also remained the same.

Figure 9

The analysis of moderated mediation on intention to attend FIT test.



Note. Dashed lines present non-significant effect while solid ones reflect the opposite. Path a is changed based on different types of self-construal as a moderator. Path a_{self1} is the effect of fear message on perceived threat when independent self-construal is added. Path a_{self2} is the effect when relational self-construal is added and path a_{self3} is the effect when collective self-construal is added. Self 1= independent self-construal, self 2= relational self-construal, 3= collective self-construal. Path coefficients are unstandardized regression coefficients, *** $p < .001$

Independent self-construal as a moderator. The analysis of this model revealed that the effect of fear appeal message on intention mediated by perceived threat depending on independent self-construal was non-significant (moderated mediation index= 0.002, Boot $SE = 0.06$, LLCI = -0.13, ULCI = 0.13). The direct effect of fear appeal message on intention on path c' was non-significant ($B = -0.52$, $SE = 0.72$, $t = -0.72$, $p = .47$). For path b, the effect of perceived threat on intention was found positively significant ($B = 0.22$, $SE = 0.04$, $t = 5.84$, $p < .001$).

Relational self-construal as a moderator. The researcher only changed the moderator from independent self-construal to relational self-construal. The effect of fear appeal message on attitude mediated by perceived threat depending on relational self-construal was still non-significant (moderated mediation index= -0.06,

Boot $SE= 0.07$, LLCI = -0.20 , ULCI = 0.07). The result of paths a, c' and b was similar to what was earlier reported.

Collective self-construal as a moderator. When entering collective self-construal into the model, the effect of fear appeal message on attitude mediated by perceived threat depending on collective self-construal was still insignificant (moderated mediation index= -0.09 , Boot $SE= 0.09$, LLCI = -0.28 , ULCI = 0.09). Paths c' and b were similar to the model in which independent and relational self-construal were a moderator.

Finally, the researcher also converted all continuous score into standardized Z-score in order to compare the coefficient effect of three self-construal on perceived threat. The highest standardized coefficient among three self-construal was relational ($\beta= .42$), independent ($\beta= .39$) and collective self-construal ($\beta= 0.32$) respectively.

To sum up, both the direct effect of the fear message on intention and the direct effect of the fear message on intention through perceived threat moderated by three self-construal types were insignificant, as shown in Figure 5 and Table 15.

From the analysis of PROCESS, it can be concluded that the fear appeal message did not establish significant relationships with any variables in the model. Therefore, no direct or indirect effect of the fear message on feelings of fear/attitude/intention was found through perceived threat. The interaction effect of fear messages and self-construal was not identified as well. However, there was a significant relationship between perceived threat and all criterion variables. The positive relationship between all types of measured self-construal and perceived threat was found. The results of PROCESS macro were summarized in table 15.

Table 14

Full model: moderated mediation analysis

Effect	<i>B</i>	<i>SE</i>	95% CL		<i>p</i>
			<i>LL</i>	<i>UL</i>	
Fear message ^a on perceived threat when adding Self 1 as a moderator (a_{self1})	-0.15	5.85	-11.72	11.43	0.98
Fear message ^a on perceived threat when adding Self 2 as a moderator (a_{self2})	9.07	8.17	-7.09	25.24	0.27
Fear message ^a on perceived threat when adding Self 3 as a moderator (a_{self3})	12.18	10.40	-8.42	32.76	0.24
Self 1 on perceived threat	0.70	0.20	0.30	1.10	<.001
Self 2 on perceived threat	0.89	0.19	0.51	1.27	<.001
Self 3 on perceived threat	0.89	0.24	0.43	1.36	<.001
Moderation of self 1	0.01	0.30	-0.57	0.59	0.97
Moderation of self 2	-0.27	0.28	0.51	1.27	0.33
Moderation of self 3	-0.38	0.36	-1.10	0.33	0.29
Perceived threat on feelings of fear (b)	0.30	0.04	0.23	0.37	<.001
Perceived threat on attitude (b)	0.14	0.07	-0.003	0.28	0.05
Perceived threat on intention (b)	0.22	0.04	0.15	0.30	<.001
Fear message on feelings of fear (c')	-0.08	0.69	-1.45	0.37	0.91
Fear message on attitude (c')	-0.26	1.36	-2.95	2.44	0.85
Fear message on intention (c')	-0.52	0.72	-1.96	0.90	0.47
Direct effect on feelings of fear	-0.08	0.69	-1.45	0.37	0.91
Direct effect on attitude	-0.26	1.36	-2.95	2.44	0.85
Direct effect on intention	-0.52	0.72	-1.96	0.90	0.47

Note. Self 1= independent self-construal, self 2= relational self-construal, 3= collective self-construal. Path a_{self1} is the effect of fear message on perceived threat when independent self-construal is added. Path a_{self2} is the effect when relational self-construal is added and path a_{self3} is the effect when collective self-construal is added. Path coefficients are unstandardized regression coefficients. ^a0=self-threatened message, 1= family-threatened message.

Chapter 4

Discussion and conclusion

From the vague results of previous studies concerning the effect of cultural differences on the process of fear appeal appraisal, the current study added another doubt to this notion. Sampson et al. (2001) raised skepticism toward the effect of fear appeal when it was used among different target groups, especially when shifting from individualistic versus collectivist culture. Eventually, they could confirm an interaction effect between cultural orientation (individualism versus collectivism) and the type of fear message about AIDS (self-threatened versus family-threatened) on how they perceived the threat. Their study greatly impacted the later fear appeal studies (Chung & Ahn, 2013; Jansen & van der Kroef, 2019; Jansen & Verstappen, 2014) to carry on the crucial role of cultural orientation. However, the results from those studies are inconsistent with the initial one. The mixed results of cultural orientation have led the current study to replicate whether the effect of cultural orientation exists in fear appraisal. In this current study, self-construal was used as an individual level of cultural orientation. Furthermore, to thoroughly investigate the effect of self-construal, the tripartite self-construal, including independent, relational and collective self-construal, was employed. The fear message was developed on the Extended parallel process model of fear appeal (EPPM) about CRC. The MANCOVA analysis examined the differences between perceived threat, fear, attitude, and intention toward recommendations according to fear messages (self-threatened versus family-threatened) and self-construal priming. We expected differences in perceived threat, fear, attitude and intention toward recommendations across different types of self-construal priming and fear messages. Unfortunately, before conducting the MANCOVA analysis, the manipulation check of self-construal priming and fear appeal message revealed that the manipulation did not successfully prime participants. Therefore, the MANCOVA analysis did not confirm the effect of independent variables on dependent variables.

Manipulation failure

Many factors might cause the failure to detect differences in fear appeal outcomes. First, the manipulation check in this study showed that both

manipulations of self-construal and fear messages failed to influence some thoughts among participants. Unlike previous studies using the self-report scale to assess individual cultural orientation, the current study chose self-construal priming to make the self-construal concept salient and accessible. For self-construal priming, the researcher adopted the pronoun circling task (Stapel & Van der Zee, 2006) along with Similarities and Differences with the Family and Friend task (SDFF: Trafimow et al., 1991) as priming to activate independent, relational and collective self-construal. Double priming was employed to strengthen the effect. According to the meta-analysis by Oyserman and Lee (2008), the effect size of SDFF was $d = 0.49$, and the pronoun circling task was $d = 0.29$. The effect size of those two techniques was quite satisfying. However, the result from this current study might reveal a contrasting view. There was no direct effect or interaction effect of self-construal found. Conforming to Ruser (2014), the SDFF task was employed to prime tripartite self-construal and its effect on prosocial behaviors. Ruser (2014) also failed to investigate the effect of tripartite self-construal on prosocial. At this point, the effectiveness of SDFF was unclear. Though Oyserman and Lee (2008) confirmed that the SDFF task seems adequate to use in both East and West, the bias of selecting only published studies that tended to present desirable results (significant) might cause inconsistency among studies (known as a lack of replicability). Moving on to pronoun circling task, this technique was not widely used in Eastern countries, and the effect is still mysterious.

Moreover, various researchers in cognition employed pronoun circling task and successfully investigated the effect of the task on cognitive outcomes such as visual scenes (Choi et al., 2016), holistic face processing and face categorization (Liu et al., 2019) or face recognition (Peng, 2019). In line with Oyserman and Lee (2008), the pronoun circling task has a strong effect on both cognitive tasks ($d = 0.51$) and relationship-related issues ($d = 0.51$). Therefore, the pronoun circling task might be suitable to answer the questions concerning cognitive or relationship-related outcomes. In the case of the current study, including other variables related to relationships, such as a social obligation or social responsibility to attend the FIT test, might help make self-construal more explicit. Taken together, both priming techniques have failed to activate tripartite self-construal priming and its effect on

dependent variables. According to Yang and Vignoles (2020), self-construal priming might not be effective when used as a whole. Their study indicated that self-construal priming might activate some dimensions (i.e., difference versus similarity and self-direction versus reception to influence) of self-construal (independent versus interdependent). The unclear effectiveness of self-construal might explain why there was no difference between relational and collective self-construal. It was hypothesized that when reading about family-threatened content, individuals with relational self-construal would show higher threat perception, fear and intention, and a more positive attitude because relational self-construal emphasized close relationships and motivation to do something for a closed other (Cross & colleagues, 2000). The result also shows no difference in dependent variables between relational versus collective self-construal individuals. Nevertheless, the separateness of independent self-construal is also crucial to studying human behavior. According to Zheng et al. (2018), relational and collective self-construal causes different brain activation. With the relational self-construal process, participants showed higher medial prefrontal cortex activity (MPFC) than in collective self-construal suggesting that relational self-construal is likely to have more closeness and crucial to self-concept than collective self-construal. Besides the unclear effectiveness of self-construal priming, Lin and Wu (2021) have brought up that the predominant culture might be robust and less flexible than previously proposed.

For fear appeal manipulation, despite the successful manipulation of fear message types in a pilot test, the manipulation in the main study did not establish differences in threat perception concerning self-threat or family-threat. The reason participants did not show the difference in threat perception regarding the different focused messages (self-threatened versus family-threatened) might be explained by the self-expansion model (Aron et al., 2004). According to the self-expansion model, people in close relationships include others in self-processing: perspectives, resources, and identities. Cognitive experiments about visual images have supported this notion. Ketay et al. (2019) discovered that participants hardly distinguished pictures of themselves from close others. This could mean the overlap of close others and self-concept could mold our visual and cognitive processes (Ketay et al.,

2019). Consequently, the inability to differentiate threat perception of CRC consequence on self versus family might be caused by the overlap of self and others. In addition, the focused disease, CRC, may provoke noteworthy aftermath compared to previous studies. While the previous study emphasized sexual-transmitted disease (STD: Sampson and colleagues, 2001) and smoking (Chung & Ahn, 2013), the CRC is another level. Colorectal cancer is an incurable disease that considerably impacts patients and others. At some point, when the colorectal has developed to the late stage (3-4), the patient's condition can get worse and need a caregiver. Eventually, there will be the involvement of others since the patients (especially in the final stage) will get weaker and unable to do most of the daily activities. That might make the participants perceive that both themselves and others would be impacted by CRC regardless of the message condition. Therefore, if focusing on the disease or health behavior that rarely involves others and is not chronic, the gap between different fear messages might be more salient. Also, when further considering HIV and AIDS, which was the center of interest of the previous study (i.e., Sampson et al., 2002), that kind of disease could cause family shame, the family face loss or family identity damage (Li et al., 2008). The effect of HIV and AIDS stigma might incline us to differentiate the gap between those with the self-threatened and family-threatened messages. However, the latter studies have also focused on the sexual-transmitted disease but found no difference in attitude and behavior outcome when using the fear appeal messages that match their cultural differences. This could explain that society nowadays has more awareness and knowledge of the disease and tend to accept living with the patients. However, some studies still can discover STD stigma (i.e., Garcia et al., 2021). To sum up, there were two main potential explanations of fear message failure: the overlap of self-concepts and the nature of cancer. The researcher wants to notify that maybe when applying the notion of fear appeal message, the different types of messages focusing on self-threat versus others-threat might not be critical.

The researcher also would like to note that all manipulations were implemented online, which enabled many possible confounds during the experiment. The participants might not give full attention to the manipulations, or

they may have interfered with their environment, which might affect their perception or thoughts while completing the experiment. At this point, the researcher cannot be specific toward the result of MANCOVA that revealed no interaction effect of self-construal priming and fear appeal message on outcome variables.

The researcher also conducted additional analysis to confirm the relationships among critical variables in the model. Unfortunately, the fear appeal message, the predictor variable, did not establish any relationships with other variables in the model. The potential explanation may be that the fear appeal message was entered in the model as a dummy variable (self-threatened versus family threatened message), and there was possibly no difference between the two types of fear messages. That was why the effect of the fear message could not be detected. However, the result disclosed some interesting relationships between key variables.

From the additional analysis using measured self-construal, the PROCESS macro analysis revealed a significantly positive relationship between self-construal and perceived CRC threat. This relationship was consistent with Lee et al. (2021), who suggested self-construal can be a crucial disposition in the process of fear appeal. This could, again, be explained by the nature of CRC. The CRC is chronic and less likely to be cured. Therefore, it has a long-term effect on patients not only from the disease itself but also its treatment. Stein et al. (2008) identifies long-term effects of both physical and psychological ones among cancer patients. The long-term effects cover almost every aspect of life, including health, mental health, finances and relationships. Uskul and Hynie (2007) also found the effect of self-construal on illness-related personal or social concerns. They found that independent self-construal led more to personal concern while interdependent self-construal caused more social concern. They explained that illness could be interpreted as a threat to self since it can obstruct people from performing physical activities which are essential and meaningful to their sense of self, such as a lack of ability to complete their achievement (independent self-construal), inability to fulfill their social role as a lover or parent (relational self-construal) or a failure to carry out a role in a particular group (collective self-construal). The result of the current study can confirm this

notion. Self-construal discussion of how people identify the self or give meaning to self would affect the perceived CRC threat. More importantly, when we compare the standardized effect among three types of self-construal on perceived CRC threat, the highest coefficient on perceived threat was from relational, independent, and collective, respectively. It possibly indicates that individuals who focus on close others might perceive a higher CRC threat than those focusing on themselves and group memberships. Nevertheless, all types of self-construal have a positive relationship with the perceived threat. The relationship between self-construal and threat perception might be crucial to help scholars along with policy and campaign practitioners focus more on the role of self-construal in health-campaign related to serious illness. To increase the effectiveness of communication about the severe health problem, scholars or campaign practitioners can use self-construal to emphasize the threat to self which can potentially provoke behavioral outcomes.

Although the analysis of PROCESS macro revealed no relationship between fear appeal message on perceived CRC threat (mediator) or criterion variables (feeling fear, attitude and intention), the significant relationship between perceived threat which was the proximal mediator, and the criterion variables was found. In line with the EPPM, perceived threat leads to fear aroused (Witte, 1992). Consistent with So (2013), the study found that cognitions of threat can cause fear aroused. The present study confirms the purposed relationship between perceived threats and feelings of fear. However, the effect of perceived threat on attitude and the behavioral intention was way too complicated. According to EPPM (proposition 3), cognitions of threat and efficacy lead to a change of attitude, intention and behavior. Some studies, such as Witte (1994 as cited in Popova, 2012), found that cognition of efficacy was significantly correlated to attitude, intention and behavior. Cognition of threat was only related to intention, not attitude. On the other hand, MacMahan et al. (1998, as cited in Popova, 2012) found no effect of perceived threat on predictive intention measure. The current study confirmed only the relationship between perceived CRC and intention, but the relationship between perceived threat and attitudes was weak and non-significant, consistent with Witte (1994). Overall, the present result could indicate that cognition of the threat of CRC leads to emotional and intentional

outcomes. This result can help policy practitioners or health campaigns apply this finding to promote attitudes and behavioral intention about CRC screening by emphasizing a threat component accompanied by a high-efficacy message.

Strengths

The current study was considered the first one using tripartite self-construal to investigate the congruence effect of the role of self-construal and types of messages on fear appeal outcomes among adults in Thailand. The experimental design was employed to establish a causal effect of self-construal and types of fear messages on related outcomes. The self-construal, as well as fear appeal, was manipulated. Unfortunately, the manipulations were not successful. The insignificant results, therefore, need verification from future research. Unlike the previous study experimenting with university students who were young and healthy, the participants in the current study were adults in 40-70s who were at risk of developing CRC. Moreover, this study might help consider selecting self-construal priming and the focused health behavior for fear appeal messages. From the other result, the current study can confirm particular relationships among variables in the EPPM. The relationships between perceived threat and fear appeal outcomes, especially intention, were found. Both practical and theoretical benefits were addressed.

Limitations

With all the failure to confirm the hypotheses, there are some limitations listed in the current study. The first and most important factor is how the experiment was conducted. The researcher used an online experiment to manipulate all independent variables and measure dependent variables due to COVID-19. This cannot ensure the contamination of confounding variables. The researcher did not know whether the participants played attention to the manipulations. The manipulation failure might not be caused by the manipulation itself because there was another confounding variable during the experiment. Moreover, the participants in this current study were risk adults with an average age of 49.35 years. They may not be familiar with online activities, and the result cannot reflect what they really thought or perceived. The double self-construal priming requires participants to

think, and the answer may exhaust participants and cause them to answer all measures without attention.

Suggestions for future study

Due to all limitations, the researcher would recommend further study to 1) carefully use and select self-construal priming, 2) the medium of experimental research 3) replicate with cautions. To clarify, self-construal priming might affect cognitive processes and outcomes differently. As confirmed by Yang and Vignoles (2020), self-construal priming affects self-construal dimensions unequally based on seven dimensions proposed by Vignoles et al. (2016). According to Yang and Vignoles (2020), difference versus similarity and self-direction versus reception to influence were two dimensions that might be resulted from the priming. Future studies should be aware that self-construal might be used to activate self-construal as a whole. Focusing on specific concepts of dimensions of self-construal should be considered (Yang & Vignoles, 2020). Moreover, an online experiment may not be proper due to less control of confounding variables and participants' attention to study materials. Lab experiment is instead recommended. Moreover, scholars can implement this notion with a program concerning a particular health behavior, i.e., integrating a fear management model and motivational interviewing (Pengchit et al., 2011). Future studies should include a control condition to compare the presence and the absence of fear appeal messages and self-construal priming. Finally, the nature of a target health behavior should be cautiously selected for future studies that wish to replicate the effect of self-construal and different types of messages on fear appeal outcomes. The fear message focused on cancer or the disease that wholly impacted audiences and others should be considered.

Conclusion

Although the results did not support the hypotheses and the doubt about the role of self-construal in fear appeal processing would be raised, the results' benefits could be considered when constructing fear message types about cancer. Cancer is chronic and possibly incurable, so it threatens all aspects of life among people. When constructing a fear message type, either a message focusing on a threat to self or others affects threat perception among the audience identically.

Self-construal can be another crucial psychological disposition in the process of fear appeal. Finally, the perceived threat can lead to attitudes and behavioral intentions when promoting cancer screening.



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Appendix

Pilot 1 study

คำชี้แจง: สิ่งใดที่คุณกลัวที่สุดหากคุณได้รับการวินิจฉัยว่าเป็นมะเร็งลำไส้ใหญ่และลำไส้ตรง ทั้งต่อตัว
คุณเองและต่อครอบครัวของคุณ โปรดตอบเป็นข้อ ๆ และตอบได้เท่าที่นึกออก
ต่อตัวคุณเอง

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ต่อครอบครัวของคุณ

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Pilot 2 study materials

คำชี้แจง: 1. โปรดอ่านข้อความต่อไปนี้ และเลือกตัวเลือกตามความรู้สึกจริงของท่านว่าท่านเห็นด้วยกับข้อความเหล่านั้นมากน้อยเพียงใด โดยที่ท่านสามารถเลือกตอบตามเกณฑ์การให้คะแนน 1-7 ซึ่งแปลความได้ว่า

1 = ท่านไม่เห็นด้วยอย่างยิ่งกับข้อความดังกล่าว, 2 = ท่านไม่เห็นด้วยกับข้อความดังกล่าว, 3 = ท่านค่อนข้างไม่เห็นด้วยกับข้อความดังกล่าว, 4 = ท่านเห็นด้วยและไม่เห็นด้วยพอกันกับข้อความดังกล่าว, 5 = ท่านค่อนข้างเห็นด้วยกับข้อความดังกล่าว, 6 = ท่านเห็นด้วยกับข้อความดังกล่าว, 7 = ท่านเห็นด้วยอย่างยิ่งกับข้อความดังกล่าว

Personal self

1. ฉันชอบที่จะมีเอกลักษณ์และแตกต่างจากผู้อื่นในหลายๆด้าน
2. ฉันทำในสิ่งที่ฉันอยากทำโดยไม่คำนึงว่าผู้อื่นจะคิดอย่างไร
3. ฉันรู้สึกสะดวกใจหากได้รับเลือกให้ขึ้นรับคำชมหรือรางวัลโดยลำพังบนเวที จากสิ่งที่ฉันได้ทำ
4. ฉันรู้สึกว่าการได้ตัดสินใจทำสิ่งต่างๆ ด้วยตัวเองอย่างเป็นอิสระจากผู้อื่น เป็นสิ่งสำคัญต่อฉัน
5. ฉันเชื่อว่า ตนเป็นที่พึ่งแห่งตน

Relational self

1. โดยรวมแล้ว ความสัมพันธ์ที่ใกล้ชิดของฉันเป็นส่วนสำคัญของตัวตนฉัน (ในที่นี้อาจหมายถึงความสัมพันธ์กับพ่อ แม่ คู่รัก เพื่อนสนิท ก็ได้)
2. ฉันมักจะรู้สึกภูมิใจเป็นอย่างมาก เมื่อคนที่สำคัญของฉันประสบความสำเร็จครั้งสำคัญ (ในที่นี้อาจหมายถึงความสัมพันธ์กับพ่อ แม่ คู่รัก เพื่อนสนิท ก็ได้)
3. กิจกรรมที่ฉันพึงพอใจที่สุดคือการได้ทำอะไรสักอย่างเพื่อคนสำคัญของฉัน (ในที่นี้อาจหมายถึงความสัมพันธ์กับพ่อ แม่ คู่รัก เพื่อนสนิท ก็ได้)
4. เมื่อคนสำคัญใกล้ชิดของฉันรู้สึกเจ็บปวดในเรื่องใด ฉันก็มักจะรู้สึกเจ็บปวดใจไปด้วย
5. ฉันให้ความสำคัญอย่างมากกับการได้เอาใจใส่ดูแลคำสำคัญของฉัน

Collective self

1. ฉันยอมสละผลประโยชน์ของตนเองได้เพื่อผลประโยชน์ของกลุ่มที่ฉันอยู่ (ในที่นี้อาจหมายถึงกลุ่มเพื่อนๆ ที่ทำงาน หรือสมาคมที่คุณอยู่)
2. ฉันเคารพการตัดสินใจของกลุ่ม แม้ในใจอาจจะไม่เห็นด้วยก็ตาม (ในที่นี้อาจหมายถึงกลุ่มเพื่อนๆ ที่ทำงาน หรือสมาคมที่คุณอยู่)

3. ฉันจะภูมิใจมากถ้ากลุ่มที่ฉันเป็นสมาชิกอยู่ ได้รับรางวัลหรือการยกย่อง (ในที่นี่อาจหมายถึงกลุ่มเพื่อนๆ ที่ทำงาน หรือสมาคมที่คุณอยู่)
4. กิจกรรมที่ฉันพึงพอใจที่สุดคือการได้ทำอะไรสักอย่างเพื่อกลุ่มของฉัน (เช่น โรงเรียน ศาสนา สถาน สโมสร หมู่บ้าน และชุมชนของฉัน)
5. ฉันมักจะพยายามรักษาความสัมพันธ์ที่ปรองดองระหว่างสมาชิกในกลุ่มของฉัน

คำสั่ง: ในส่วนนี้ จะเป็นการอ่านบทความสั้น ๆ เพื่อให้คุณได้มีสมาธิและเตรียมพร้อมก่อนตอบคำถามต่อไป

1.1 The personal self-condition or independent self-construal priming

คำสั่ง: กรุณาอ่านข้อความต่อไปนี้อย่างรอบคอบ (ให้สมมติว่าสถานการณ์โรคโควิด-19 ระบาดยุติแล้ว) และหลังจากท่านอ่านจบแล้ว โปรดนับว่า มีคำว่า “ฉัน” ที่ท่านอ่านเจอทั้งหมดกี่คำ ขอให้นับให้ครบถ้วน

สำหรับฉันแล้ว การได้อยู่กับตัวเองถือเป็นวิธีการเยียวยาจิตใจอย่างหนึ่ง ฉันได้จัดจ้อกับตัวเองตระหนักถึงสิ่งที่ฉันเป็น ความสามารถ และความต้องการของตัวเองได้อย่างเต็มที่ ฉันอยากทำอะไรก็ได้ที่ฉันอยากทำ เช่น อยากเปิดเพลงที่ฉันชอบให้เสียงดัง อ่านหนังสือเล่มโปรดเท่าที่ฉันต้องการกินอะไรก็ได้ที่เท่าที่ฉันอยากกิน หรือดูหนังเรื่องโปรดที่ฉันอยากดูโดยไม่ต้องแคร์ใคร และแล้ววันหยุดของฉันก็มาถึง ฉันเลือกที่จะพักผ่อนอยู่บ้านกับตัวเอง ฉันเริ่มต้นด้วยการเปิดเพลงที่ฉันชอบ เตรียมวัตถุดิบและสูตรเพื่อทำอาหารจานโปรดของฉัน แต่พอลงมือทำจริง ๆ กลายเป็นว่าฉันปรุงอาหารตามแบบที่ฉันชอบแทนจนลืมนึกถึงสูตรซะอย่างนั้น ก่อนที่ฉันจัดแจงที่นั่งเตรียมพร้อมสำหรับการกินอาหารแสนอร่อยที่ฉันปรับปรุงสูตรเองพร้อมกับดูรายการทีวีที่ฉันชอบอย่างสบายใจ ฉันไม่ยอมให้วันหยุดนี้หมดไปเลย

1.2 the relational self-condition

คำสั่ง: กรุณาอ่านข้อความต่อไปนี้อย่างรอบคอบ (ให้สมมติว่าสถานการณ์โรคโควิด-19 ระบาดยุติแล้ว) และหลังจากท่านอ่านจบแล้ว โปรดนับว่ามีคำว่า “ฉันและคุณ” “ฉันกับคุณ” “เรา” “เราทั้งสอง” และ “เราสองคน” ที่ท่านอ่านเจอทั้งหมดกี่คำ (โดยให้นับเป็นหนึ่งคำ) ขอให้นับให้ครบถ้วน

สำหรับเราทั้งสองแล้ว การได้อยู่กับคนที่รักและรักเราถือเป็นอะไรที่ฉันกับเธอให้ความสำคัญที่สุด ไม่ว่าจะวันไหน ๆ เราสองคนก็เลือกที่จะใช้เวลาด้วยกัน เราสองคนใส่ใจความรู้สึกของกันและกัน

เสมอ โดยมักจะถามว่าอีกฝ่ายต้องการหรือไม่ต้องการอะไร ชอบหรือไม่ชอบอะไรเป็นอย่างแรก ต่อให้เราสองคนจะยุ่งแค่ไหน เราก็จะหาเวลาให้กันและกันเสมอ วันนี้ก็เช่นกัน ฉันกับเธอทำงานหนักมาทั้งอาทิตย์ เธอเข้าใจว่าฉันจะต้องไปทำงานต่างจังหวัด แต่จริงๆ แล้วฉันวางแผนพาเธอหนีไปเที่ยวต่างหาก จะได้ไปเจอธรรมชาติที่สวยงามเพื่อผ่อนคลาย ฉันไปรับเธอหลังเลิกงาน เธอดูประหลาดใจมากที่มีสัมภาระพร้อมสเปียงเต็มที่นั่งหลังรถ เราสองคนมุ่งหน้าสู่ถนนที่เต็มไปด้วยต้นไม้สีเขียวสองข้างทาง รถของเราเต็มไปด้วยเสียงหัวเราะของฉันกับเธอตลอดทาง สุดท้ายแล้ว เราสองคนได้ตกลงกันว่า ต่อให้ยุ่งแค่ไหนเราก็จะมีเวลาให้กับคนสำคัญของเราเสมอ

1.3 the collective self condition

คำสั่ง: กรุณาอ่านข้อความต่อไปนี้อย่างรอบคอบ (ให้สมมติว่าสถานการณ์โรคโควิด 19 ระบาดยุติแล้ว) และหลังจากที่ท่านอ่านจบแล้ว โปรดนับว่า มีคำว่า“พวกเรา” ที่ท่านอ่านเจอทั้งหมดกี่คำ ขอให้นับให้ครบถ้วน

พวกเราเป็นเพื่อนร่วมงานกันที่สนิทกันมาก ๆ มักจะไปไหนมาไหนด้วยกันเสมอ แม้พวกเราต่างที่มาแต่ก็เข้ากันได้เป็นอย่างดี วันนี้ก็เป็นอีกวันหนึ่งที่พวกเราจะต้องอยู่ทำงานด้วยกันจนดึก เพราะมีงานเร่งด่วนเข้ามา ทำให้พวกเราทุกคนในแผนกต้องร่วมแรงร่วมใจกันทำให้เสร็จ ถึงแม้จะมีเรื่องส่วนตัวเข้ามา แต่ทุกคนก็ยังเป็นห่วงคนอื่น ๆ ในแผนกกว่าจะทำงานไม่เสร็จ พวกเราจึงไม่ทิ้งไปไหน พวกเราจะคอยพูดให้กำลังใจ หยอกล้อกันเพื่อคลายเครียดตอนที่เร่งมือทำงาน จนในที่สุดในเวลาตีมาก งานของพวกเราก็เสร็จเสียที งานนี้สำคัญต่อแผนกของพวกเรามาก เป็นความสำเร็จและความภาคภูมิใจของพวกเราทุกคน พวกเรารู้สึกโชคดีที่ได้ทำงานอยู่ในแผนกนี้และได้ทุ่มเทเพื่อแผนกของพวกเราที่ให้ความรู้สึกเสมือนครอบครัวที่ 2

คำสั่ง: โปรดอ่านบทความในใบประชาสัมพันธ์เกี่ยวกับมะเร็งลำไส้ใหญ่ต่อไปนี้ แล้วตอบคำถามตามความรู้ที่ถูกต้องจริงของท่าน

(เงื่อนไข: self-threatened)

ตรวจเลือดแฝงในอุจจาระป้องกันมะเร็งลำไส้ใหญ่ได้
...โรคมะเร็งลำไส้ใหญ่พบมากเป็นอันดับต้นๆในคนไทย

ปัจจัยเสี่ยง...

- 1. ปัจจัยด้านอายุ** สถาบันมะเร็งแห่งชาติ พบสถิติว่า ในผู้ป่วยโรคมะเร็งลำไส้ใหญ่ 100 คน เป็นคนอายุ 40 - 69 ปี ถึง 70 คน นั่นหมายความว่า **ตัวคุณซึ่งอายุ 40 ปีขึ้นไป ตกเป็นกลุ่มผู้มีความเสี่ยงสูงที่จะเป็นโรคมะเร็งลำไส้ใหญ่** มากกว่าคนอายุน้อยกว่า 40 ปี
- 2. ปัจจัยทางพันธุกรรม** พบว่า คนที่มีครอบครัวหรือญาติใกล้ชิดเป็นโรคมะเร็งลำไส้ใหญ่ จะมีโอกาสเป็นโรคนี้อีกเพิ่มขึ้น 2-8 เท่า
- 3. ปัจจัยอื่นๆ** เช่น เคยป่วยเป็นโรคลำไส้อักเสบมาก่อนหรือทานผักผลไม้ไม่เพียงพอ

เป็นแล้วมีโอกาสตายถึง 90%... เมื่อคุณเป็นโรคมะเร็งลำไส้ใหญ่จะมีโอกาสเสียชีวิตสูงมาก ยิ่งพบช้ายิ่งมีโอกาสเสียชีวิตได้ถึง 90% ปัจจุบันเป็นฆาตกรคร่าชีวิตอันดับที่ 3 ของผู้ชายและอันดับที่ 4 ของผู้หญิง ในหมู่โรคมะเร็งทุกชนิด หากคุณเป็น คุณอาจจะต้องทรมานกับอาการเหล่านี้อย่างหลีกเลี่ยงไม่ได้ เช่น

- มีเลือดออกทางทวารหนัก
- ปวดท้องอย่างหนัก กดเจ็บ
- ภาวะลำไส้อุดตัน
- ภาวะลำไส้แตกเป็นรู
- ขับถ่ายไม่ได้ต้องสวนทวารช่วย
- เซลล์มะเร็งกระจายไปยังส่วนอื่น

ขั้นตอนการรักษาโรคมะเร็งจะทำให้คุณเจ็บปวดทรมานและอาจใช้หลายวิธีร่วมกัน ทั้งการผ่าตัด การให้ยาเคมีบำบัด และการใช้รังสีรักษา มีค่าใช้จ่ายสูง รวมถึงอาการแทรกซ้อนมากมาย เช่น

- ลำไส้บางส่วนถูกตัดออกไป ทำให้การกินหรือขับถ่ายผิดปกติ
- ผอมร่าง คลื่นไส้ อาเจียน
- ภูมิคุ้มกันต่ำ เสี่ยงต่อการติดเชื้อ

การรักษาอาจกินระยะเวลานานกว่าที่คุณจะหายหรือเสียชีวิตรวมถึงค่าใช้จ่ายที่จะต้องจ่ายไม่รู้จกจบสิ้น และชีวิตประจำวันที่จะต้องเปลี่ยนไปตลอดกาล...

วิธีป้องกันที่แสนง่าย แม้ผลลัพธ์ของโรคมะเร็งลำไส้ใหญ่จะรุนแรงและน่ากลัว แต่วิธีป้องกันก็แสนง่าย ยิ่งรู้เร็ว ยิ่งหายได้ **เพียงคุณเข้ารับการคัดกรองด้วยวิธีการตรวจเลือดแฝงในอุจจาระ** ซึ่ง...

- **แม่นยำถึง 77%** ในการบ่งชี้ว่า มีโอกาสเป็นหรือไม่เป็นโรคมะเร็งลำไส้ใหญ่
- **ไม่เจ็บตัว**
- **ราคาถูก**
- **สะดวก** เพียงนำอุจจาระไปตรวจ
- **ตรวจได้ทุกที่** ตั้งแต่โรงพยาบาลส่งเสริมสุขภาพตำบล โรงพยาบาลชุมชน โรงพยาบาลทั่วไป และโรงพยาบาลศูนย์ ใกล้บ้านคุณ

ตรวจป้องกันมะเร็งลำไส้ใหญ่ด้วยการตรวจเลือดแฝงในอุจจาระ
ลดเสี่ยง - เลี่ยงตาย ทำง่าย คุณทำได้แน่

(เงื่อนไข: family-threatened)

ตรวจเลือดแฝงในอุจจาระป้องกันมะเร็งลำไส้ใหญ่ได้
...โรคมะเร็งลำไส้ใหญ่พบมากเป็นอันดับต้นๆในคนไทย

ปัจจัยเสี่ยง...

1. ปัจจัยด้านอายุ สถาบันมะเร็งแห่งชาติ พบสถิติว่า ในผู้ป่วยโรคมะเร็งลำไส้ใหญ่ 100 คน เป็นคนอายุ 40 - 69 ปี ถึง 70 คน นั้นหมายความว่า ตัวคุณซึ่งอายุ 40 ปีขึ้นไป ตกเป็นกลุ่มผู้มีความเสี่ยงสูงที่จะเป็นโรคมะเร็งลำไส้ใหญ่ มากกว่าคนอายุน้อยกว่า 40 ปี

2. ปัจจัยทางพันธุกรรม พบว่า คนที่มีครอบครัวหรือญาติใกล้ชิดเป็นโรคมะเร็งลำไส้ใหญ่ จะมีโอกาสเป็นโรคนี้อีกเพิ่มขึ้น 2-8 เท่า

3. ปัจจัยอื่นๆ เช่น เคยป่วยเป็นโรคลำไส้อักเสบมาก่อนหรือทานผักผลไม้ไม่พอ

เป็นแล้วมีโอกาสตายถึง 90%... เมื่อคุณเป็นโรคมะเร็งลำไส้ใหญ่จะมีโอกาสเสียชีวิตสูงมาก ยิ่งพบช้ายิ่งมีโอกาสเสียชีวิตได้ถึง 90% ปัจจุบันเป็นฆาตรกรคร่าชีวิตอันดับที่ 3 ของผู้ชายและอันดับที่ 4 ของผู้หญิง ในหมู่โรคมะเร็งทุกชนิด เมื่อคุณเป็นโรคมะเร็งลำไส้ใหญ่ ครอบครัวหรือคนที่รักของคุณมักจะล้มไปกับคุณด้วยอย่างเลี่ยงไม่ได้ เพราะการรักษายากและต้องรักษาต่อเนื่อง ซึ่งผู้ป่วยเช่นคุณคงไม่สามารถทำอะไรหลายๆอย่างได้เอง ภาระหลายอย่างจึงจะตกไปอยู่ที่ครอบครัวของคุณ เช่น

- **คนในครอบครัวคุณ** ต้องดูแลตั้งแต่ การกิน นอน เดิน และ ขับถ่าย ตลอด 24 ชั่วโมง
- **คนในครอบครัวคุณ** ต้องช่วยจ่ายเงินในการรักษา ตกประมาณ 160,000 บาท ตลอดการรักษาต่อครั้ง (อาจกลับมาเป็นซ้ำได้อีก) เป็นหนี้และขัดสนทางการเงิน
- **คนในครอบครัวคุณ** ต้องสละเวลาส่วนตัว พาคุณไปหาหมอ คอยสังเกตอาการ
- **คนในครอบครัวคุณ** ได้ผลกระทบต่อจิตใจ ทั้งภาระทางกายและการเงิน อาจนำมาสู่ความเครียดสะสม ท้อแท้ หาทงออกไม่ได้ และป่วยทางจิตได้ในที่สุด

เหล่านี้นี่ยังไม่รวมถึงผลกระทบใหญ่หลวง หากคุณถือเป็นเสาหลักสำคัญของครอบครัวคุณด้วย

วิธีป้องกันที่แสนง่าย แม้ผลลัพธ์ของโรคมะเร็งลำไส้ใหญ่จะรุนแรงและน่ากลัว แต่วิธีป้องกันก็แสนง่าย ยิ่งรู้เร็ว ยิ่งหายได้ **เพียงคุณเข้ารับการคัดกรองด้วยวิธีการตรวจเลือดแฝงในอุจจาระ ซึ่ง...**

- **แม่นยำถึง 77%** ในการบ่งชี้ว่า มีโอกาสเป็นหรือไม่เป็นโรคมะเร็งลำไส้ใหญ่
- **ไม่เจ็บตัว**
- **ราคาถูก**
- **สะดวก** เพียงนำอุจจาระไปตรวจ
- **ตรวจได้ทุกที่** ตั้งแต่โรงพยาบาลส่งเสริมสุขภาพตำบล โรงพยาบาลชุมชน โรงพยาบาลทั่วไป และโรงพยาบาลศูนย์ ใกล้บ้านคุณ

ตรวจป้องกันมะเร็งลำไส้ใหญ่ด้วยการตรวจเลือดแฝงในอุจจาระ
ลดเสี่ยง - เลี่ยงตาย ทำง่าย คุณทำได้แน่

1. Measures of independent variables

โปรดตอบคำถามต่อไปนี้ด้วยความรู้สึกจริงของท่านเกี่ยวกับโรคมะเร็งลำไส้ใหญ่และการคัดกรองด้วยวิธีการตรวจเลือกฝงในอุจจาระ

1	2	3	4	5	6	7
ไม่เห็นด้วย อย่างยิ่ง	ไม่เห็นด้วย	ค่อนข้างไม่ เห็นด้วย	เห็นด้วยและ ไม่เห็นด้วย พอๆกัน	ค่อนข้างเห็น ด้วย	เห็นด้วย	เห็นด้วยอย่าง ยิ่ง

Perceived threat 1-8, feeling fear 9-11, perceived efficacy 12-15

1. ฉันเสี่ยงที่จะเป็นโรคมะเร็งลำไส้ใหญ่มากกว่าคนอื่น
2. มีความเป็นไปได้ที่ฉันจะเป็นโรคมะเร็งลำไส้ใหญ่มากกว่าคนอื่น
3. ฉันมีความเสี่ยงต่อการเป็นโรคมะเร็งลำไส้ใหญ่มากกว่าคนอื่น
4. ฉันมีโอกาสที่จะเป็นโรคมะเร็งลำไส้ใหญ่มากกว่าคนอื่น
5. ฉันเชื่อว่าโรคมะเร็งลำไส้ใหญ่เป็นโรคที่ร้ายแรง
6. ฉันเชื่อว่าโรคมะเร็งลำไส้ใหญ่เป็นโรคที่อันตราย
7. ฉันเชื่อว่าโรคมะเร็งลำไส้ใหญ่เป็นโรคที่มีความรุนแรง
8. ฉันเชื่อว่าโรคมะเร็งลำไส้ใหญ่ส่งผลเสียร้ายแรง
9. ข้อความในการศึกษานี้ทำให้ฉันรู้สึกกลัว
10. ข้อความในการศึกษานี้ทำให้ฉันรู้สึกขวัญเสีย
11. ข้อความในการศึกษานี้ทำให้ฉันรู้สึกตื่นตระหนก
12. หลังจากอ่านบทความนี้แล้ว ท่านรู้สึกว่าการไปตรวจคัดกรองมะเร็งลำไส้ใหญ่ด้วยวิธีตรวจเลือดแฝงในอุจจาระเพื่อป้องกันโรคมะเร็งลำไส้ใหญ่เป็นสิ่งที่ท่านทำได้
13. หลังจากอ่านบทความนี้แล้ว ท่านรู้สึกว่าการไปตรวจคัดกรองมะเร็งลำไส้ใหญ่ด้วยวิธีตรวจเลือดแฝงในอุจจาระเพื่อป้องกันโรคมะเร็งลำไส้ใหญ่เป็นสิ่งที่ทำได้ง่าย
14. หลังจากอ่านบทความนี้แล้ว ท่านรู้สึกว่าการตรวจคัดกรองมะเร็งลำไส้ใหญ่ด้วยวิธีตรวจเลือดแฝงในอุจจาระมีประสิทธิภาพในการป้องกันโรคมะเร็งลำไส้ใหญ่
15. หลังจากอ่านบทความนี้แล้ว ท่านรู้สึกว่าการตรวจคัดกรองมะเร็งลำไส้ใหญ่ด้วยวิธีตรวจเลือดแฝงในอุจจาระช่วยป้องกันการเกิดโรคมะเร็งลำไส้ใหญ่ได้ดี

มาตรวัดเจตคติเกี่ยวกับการไปตรวจมะเร็งลำไส้ใหญ่ด้วยวิธีการตรวจเลือดแฝงในอุจจาระ

1. ท่านคิดว่าการไปตรวจคัดกรองมะเร็งลำไส้ใหญ่และลำไส้ตรง โดยวิธีตรวจเลือดแฝงในอุจจาระ (FIT test) ในอีก 4 อาทิตย์ ข้างหน้าเป็นสิ่งที่ดี: ไม่เห็นด้วยอย่างยิ่ง-เห็นด้วยอย่างยิ่ง
2. ท่านคิดว่าการไปตรวจคัดกรองมะเร็งลำไส้ใหญ่และลำไส้ตรง โดยวิธีตรวจเลือดแฝงในอุจจาระ (FIT test) ในอีก 4 อาทิตย์ ข้างหน้าเป็นสิ่งที่น่าพึงพอใจ: ไม่เห็นด้วยอย่างยิ่ง-เห็นด้วยอย่างยิ่ง
3. ท่านคิดว่าการไปตรวจคัดกรองมะเร็งลำไส้ใหญ่และลำไส้ตรง โดยวิธีตรวจเลือดแฝงในอุจจาระ (FIT test) ในอีก 4 อาทิตย์ ข้างหน้าเป็นสิ่งที่จำเป็น: ไม่เห็นด้วยอย่างยิ่ง-เห็นด้วยอย่างยิ่ง
4. ท่านเต็มใจไปตรวจคัดกรองมะเร็งลำไส้ใหญ่และลำไส้ตรง โดยวิธีตรวจเลือดแฝงในอุจจาระ (FIT test) ในอีก 4 อาทิตย์: ไม่เห็นด้วยอย่างยิ่ง-เห็นด้วยอย่างยิ่ง
5. ท่านคิดว่าการไปตรวจคัดกรองมะเร็งลำไส้ใหญ่และลำไส้ตรง โดยวิธีตรวจเลือดแฝงในอุจจาระ (FIT test) ในอีก 4 อาทิตย์ ข้างหน้า เป็นสิ่งที่มีประโยชน์: ไม่เห็นด้วยอย่างยิ่ง-เห็นด้วยอย่างยิ่ง
6. ท่านคิดว่าการไปตรวจคัดกรองมะเร็งลำไส้ใหญ่และลำไส้ตรง โดยวิธีตรวจเลือดแฝงในอุจจาระ (FIT test) ในอีก 4 อาทิตย์ ข้างหน้าเป็นสิ่งที่ควรถูกส่งเสริม: ไม่เห็นด้วยอย่างยิ่ง-เห็นด้วยอย่างยิ่ง
7. ท่านสบายใจที่จะไปตรวจคัดกรองมะเร็งลำไส้ใหญ่และลำไส้ตรง โดยวิธีตรวจเลือดแฝงในอุจจาระ (FIT test) ในอีก 4 อาทิตย์: ไม่เห็นด้วยอย่างยิ่ง-เห็นด้วยอย่างยิ่ง
8. ท่านคิดว่าการไปตรวจคัดกรองมะเร็งลำไส้ใหญ่และลำไส้ตรง โดยวิธีตรวจเลือดแฝงในอุจจาระ (FIT test) ในอีก 4 อาทิตย์เป็นสิ่งที่สะดวก: ไม่เห็นด้วยอย่างยิ่ง-เห็นด้วยอย่างยิ่ง
9. ท่านคิดว่าการไปตรวจคัดกรองมะเร็งลำไส้ใหญ่และลำไส้ตรง โดยวิธีตรวจเลือดแฝงในอุจจาระ (FIT test) ในอีก 4 อาทิตย์ ข้างหน้าเป็นสิ่งที่ดีเยี่ยม: ไม่เห็นด้วยอย่างยิ่ง-เห็นด้วยอย่างยิ่ง
10. ท่านสุขใจที่จะไปตรวจคัดกรองมะเร็งลำไส้ใหญ่และลำไส้ตรง โดยวิธีตรวจเลือดแฝงในอุจจาระ (FIT test) ในอีก 4 อาทิตย์

มาตรวัดเจตนาในการไปตรวจคัดกรอง

1. ฉันวางแผนจะไปตรวจคัดกรองมะเร็งลำไส้ใหญ่โดยวิธีตรวจเลือดแฝงในอุจจาระเพื่อป้องกันการเป็นมะเร็งลำไส้ใหญ่ในอีก 4 สัปดาห์ข้างหน้า
2. ฉันอยากจะไปตรวจคัดกรองมะเร็งลำไส้ใหญ่โดยวิธีตรวจเลือดแฝงในอุจจาระเพื่อป้องกันการเป็นมะเร็งลำไส้ใหญ่ในอีก 4 สัปดาห์ข้างหน้า

3. ฉันตั้งใจจะไปตรวจคัดกรองมะเร็งลำไส้ใหญ่ โดยวิธีตรวจเลือดแฝงในอุจจาระเพื่อป้องกันการเป็นมะเร็งลำไส้ใหญ่ในอีก 4 สัปดาห์ข้างหน้า

โปรดตอบคำถามหลังการอ่านใบประชาสัมพันธ์ (manipulation check)

Fear message 1-8 & self-construal 9-17

1	2	3	4	5	6	7
ไม่เห็นด้วย อย่างยิ่ง	ไม่เห็นด้วย	ค่อนข้างไม่ เห็นด้วย	เห็นด้วยและ ไม่เห็นด้วย พอๆกัน	ค่อนข้างเห็น ด้วย	เห็นด้วย	เห็นด้วยอย่าง ยิ่ง

1. บทความนี้เน้นว่า โรคมะเร็งลำไส้ใหญ่เป็นภัยคุกคามสำหรับตัวคุณเอง
2. บทความนี้บอกว่า ตัวคุณจะได้รับผลกระทบอย่างมากจากมะเร็งลำไส้ใหญ่
3. บทความข้างต้นระบุว่า โรคมะเร็งลำไส้ใหญ่เป็นภัยคุกคามสำหรับครอบครัวของคุณ
4. บทความบอกว่า ครอบครัวของคุณจะได้รับผลกระทบอย่างมากจากมะเร็งลำไส้ใหญ่
5. บทความนี้ระบุว่า โรคมะเร็งลำไส้ใหญ่สามารถป้องกันได้ ด้วยการตรวจคัดกรอง FIT test
6. บทความนี้ระบุว่า การตรวจคัดกรองโรคมะเร็งลำไส้ใหญ่เป็นเรื่องง่ายสำหรับคุณ
7. ขณะที่ตอบนี้ คุณรู้สึกว่าการได้อยู่กับตนเองเป็นสิ่งที่คุณพึงพอใจที่สุด
8. ขณะที่ตอบนี้ คุณรู้สึกว่าการได้มีความสัมพันธ์ที่ดีกับคนที่คุณให้ความสำคัญที่สุด (ในที่นี้
อาจจะ เป็น คู่รัก เพื่อนสนิท)เป็นสิ่งที่คุณพึงพอใจที่สุด
9. ขณะที่ตอบนี้ คุณรู้สึกว่าการได้เป็นสมาชิกส่วนหนึ่งของกลุ่ม (ในที่นี้อาจหมายถึงกลุ่มเพื่อน ๆ
หรือ เพื่อนร่วมงาน)เป็นสิ่งที่คุณพึงพอใจที่สุด
10. ขณะที่ตอบนี้ คุณคิดว่าการได้อยู่กับตนเองเป็นสิ่งที่สำคัญที่สุด
11. ขณะที่ตอบนี้ คุณคิดว่าการได้อยู่กับคนที่คุณให้ความสำคัญที่สุดเป็นสิ่งที่สำคัญที่สุด
12. ขณะที่ตอบนี้ คุณคิดว่าการได้อยู่กับกลุ่มเพื่อน ๆ หรือเพื่อนร่วมงานที่คุณสนิทเป็นสิ่งที่สำคัญ
ที่สุด
13. ขณะที่ตอบนี้ คุณคิดว่าสิ่งที่คุณคิดอยากจะทำมาจากความต้องการของคุณเอง
14. ขณะที่ตอบนี้ คุณคิดว่าสิ่งที่คุณคิดอยากจะทำมาจากความต้องการของคนที่คุณมี
ความสัมพันธ์ใกล้ชิดด้วย
15. ขณะที่ตอบนี้ คุณคิดว่าสิ่งที่คุณคิดอยากจะทำมาจากความต้องการของกลุ่ม (กลุ่มเพื่อน ๆ
หรือ เพื่อนร่วมงาน)

(ข้อความนี้ไม่ได้แสดงให้ผู้ร่วมวิจัยเห็น: ในส่วนของคำถามที่ 2 และ 3 ซึ่งเป็นการอ่านโปสเตอร์ ผู้ร่วมวิจัยจะถูกสุ่มให้เข้าให้ทำกิจกรรม ดังนี้ กลุ่มที่ 1 และอ่านโปสเตอร์ที่ 1 กลุ่มที่ 2 และอ่านโปสเตอร์ที่ 1 กลุ่มที่ 3 และอ่านโปสเตอร์ที่ 1 กลุ่มที่ 1 และอ่านโปสเตอร์ที่ 2 กลุ่มที่ 2 และอ่านโปสเตอร์ที่ 2 กลุ่มที่ 3 และอ่านโปสเตอร์ที่ 2)

2. ในส่วนนี้ จะเป็นการอ่านบทความสั้น ๆ เพื่อให้คุณได้มีสมาธิและเตรียมพร้อมก่อนตอบคำถามต่อไป

กลุ่มที่ 1

กิจกรรมที่ 1

คำสั่ง: กรุณาอ่านข้อความต่อไปนี้อย่างรอบคอบ (ให้สมมติว่าสถานการณ์โรคโควิด-19 ระบาดยุติแล้ว) และหลังจากทำอ่านจบแล้ว

โปรดนับว่า มีคำว่า “ฉัน” ที่ท่านอ่านเจอทั้งหมดกี่คำ ขอให้นับให้ครบถ้วน

สำหรับฉันแล้ว การได้อยู่กับตัวเองถือเป็นช่วงเวลาที่ดีของฉัน ทำให้ฉันได้มีโอกาสเข้าใจความต้องการของฉันเองอย่างแท้จริง ฉันสามารถเป็นตัวของตัวเองได้อย่างเต็มที่ ถึงแม้จะมีช่วงที่ฉันแทบจะไม่มีเวลาให้กับตัวเองเลย โดยเฉพาะช่วงงานยุ่ง ฉันก็จะพยายามเต็มที่เพื่อหาเวลาอยู่กับตัวเอง ฉันใช้เวลาช่วงเลิกงานเพื่อแวะไปดูหนังโปรดของฉัน ชื่อของที่ฉันอยากได้ และกลับบ้านเพื่อทำกับข้าวที่ตัวเองอยากกิน บางทีฉันก็มักจะร้องเพลงแม้ว่าเสียงจะเพี้ยน ๆ ไปบ้างหรือ เดินท่าแปลกๆ คนเดียว มันทำให้ฉันมีความสุข ทำให้ฉันรู้สึกว่าได้ปลดปล่อย ไม่ต้องคอยกังวลว่าคนอื่นจะคิดอย่างไรกับฉัน ฉันได้ค้นพบความสุขที่มาจากตัวฉันเองและถือเป็นความสุขเล็กๆน้อยๆที่ฉันหามาได้ไม่ยากท่ามกลางโลกที่สับสนวุ่นวาย

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มีคำว่า “ฉัน” ที่นับได้จากบทความนี้ทั้งหมดกี่คำ (โปรดใส่เป็นตัวเลขตามจำนวนคำที่ท่านนับได้)

กิจกรรมที่ 2

คำสั่ง: ให้ท่านใช้เวลา 2 นาที ในการคิดว่า ตัวท่านมีอะไรบ้างที่แตกต่างจากครอบครัวหรือเพื่อนสนิทของท่าน

ในด้านใดก็ได้ เช่น นิสัยใจคอ ท่าทาง/รูปลักษณ์ภายนอก กิจกรรมที่ชอบ อาหารที่ชอบ ความเชื่อ

หรือความคิดเกี่ยวกับสิ่งต่างๆ ค่านิยม ความสามารถพิเศษ สถานที่ท่องเที่ยวที่ชอบ งานอดิเรก และอื่นๆที่ท่านนึกได้

โปรดพิมพ์ในช่องสี่เหลี่ยมด้านล่างโดย 1 ช่องสี่เหลี่ยมต่อความแตกต่าง 1 อย่าง (ขอให้ท่านระบุ 5

อย่างเป็นอย่างน้อย หากท่านนึกได้มากกว่า 5 อย่างก็สามารถระบุเพิ่มมากกว่า 5 ช่องได้)

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กลุ่มที่ 2

กิจกรรมที่ 1

คำสั่ง: กรุณาอ่านข้อความต่อไปนี้อย่างรอบคอบ (ให้สมมติว่าสถานการณ์โรคโควิด-19 ระบาดยุติแล้ว)

และหลังจากท่านอ่านจบแล้ว โปรดนับว่ามีคำว่า “ฉันและเธอ” “ฉันกับเธอ” “เรา” “เราทั้งสอง” และ

“เราสองคน” ที่ท่านอ่านเจอทั้งหมดกี่คำ (โดยให้นับเป็นหนึ่งคำ) ขอให้นับให้ครบถ้วน

สำหรับฉันและเธอแล้วการได้อยู่ด้วยกันถือเป็นช่วงเวลาที่ดีของเราทั้งสองคนเพราะทำให้เราได้ใกล้ชิดและเข้าใจ

จกันและกันมากขึ้นฉันกับเธอมักจะหาโอกาสเพื่อใช้เวลาด้วยกันอยู่เสมอแม้ว่าเราทั้งคู่จะยุ่งกับงานแค่ไหนก็ตามฉันกับเธอมักจะชวนกันหนีความวุ่นวายในวันหยุดสุดสัปดาห์ไม่ว่าจะใกล้หรือไกลเราสองคนก็มักจะหาเวลาไปเที่ยวหรือใช้เวลาอยู่ด้วยกันแต่หากเราไม่มีโอกาสได้เที่ยวฉันและเธอก็จะใช้เวลาอยู่ด้วยกันทั้งวันในที่ของเรา บางทีเราสองคนก็ช่วยกันปลูกต้นไม้ รดน้ำต้นไม้ พอเหนื่อยก็นั่ง พักดูรายการโทรทัศน์ที่เราทั้งสองคนชอบ ทำอาหารที่ฉันและเธอชอบทานด้วยกัน ดูหนังที่เราทั้งสองโปรด และใช้เวลาเล่นกีฬาที่ทำให้ทำให้เราสองคนได้หัวเราะด้วยกัน เราทั้งสองคนให้ความสำคัญกับกันและกันเหนือสิ่งอื่น นั้นเพราะเราได้ค้นพบว่าการได้อยู่กับคนที่รู้ใจ สนิทใจ และผูกพันกันเป็นความสุขง่าย ๆ ที่เราสองคนหาได้ไม่ยากในโลกที่สับสนวุ่นวาย ขอเพียงฉันกับเธอได้อยู่ด้วยกัน

มีคำว่า “ฉันและเธอ” “ฉันกับเธอ” “เรา” “เราทั้งสอง” “สองเรา” และ “เราสองคน” ที่คุณนับได้ทั้งหมดกี่คำ

กิจกรรมที่ 2

คำสั่ง: ให้ท่านเลือกคนที่ท่านมีความสัมพันธ์ที่สนิทสนมและแน่นแฟ้นที่สุดมา 1 คน จะเป็นคนในครอบครัว เช่น พ่อ แม่ ลูก ภรรยา สามี แฟน เพื่อนสนิท หรือเพื่อนจากที่ทำงานก็ได้

คนที่ท่านเลือกมามีความสัมพันธ์เป็นอะไรกับท่าน โปรดพิมพ์ระบุในช่องด้านล่างนี้ (ไม่ต้องใส่ชื่อแต่ใส่ว่าคนๆนั้นมีความสัมพันธ์อย่างไรกับท่านก็ได้ เช่น เพื่อนสนิท น้องสาว คู่รัก)

จากนั้นขอให้ท่านใช้เวลา 2 นาที เพื่อคิดว่าตัวท่านมีอะไรที่เหมือนหรือคล้ายคลึงกับบุคคลที่คุณเลือกมา ในด้านใดก็ได้ เช่น นิสัยใจคอ ท่าทาง/รูปลักษณ์ภายนอก กิจกรรมที่ชอบ อาหารที่ชอบ ความเชื่อ หรือความคิดเกี่ยวกับสิ่งต่างๆ ค่านิยม ความสามารถพิเศษ สถานที่ท่องเที่ยวที่ชอบ งานอดิเรก และอื่นๆที่ท่านนึกได้ โปรดพิมพ์ในช่องสี่เหลี่ยมด้านล่างโดย 1 ช่องสี่เหลี่ยมต่อความแตกต่าง 1 อย่าง (ขอให้ท่านระบุ 5 อย่างเป็นอย่างน้อย หากท่านนึกได้มากกว่า 5 อย่างก็สามารถระบุเพิ่มมากกว่า 5 ช่องได้)

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2. ในส่วนนี้ จะเป็นการอ่านบทความสั้น ๆ เพื่อให้คุณได้มีสมาธิและเตรียมพร้อมก่อนตอบคำถามต่อไป

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กลุ่มที่ 3

กิจกรรมที่ 1

คำสั่ง: กรุณาอ่านข้อความต่อไปนี้อย่างรอบคอบ (ให้สมมติว่าสถานการณ์โรคโควิด 19 ระบาดยุติแล้ว) และหลังจากที่ท่านอ่านจบแล้ว โปรดนับว่า มีคำว่า “พวกเรา” และ “เรา” ที่ท่านอ่านเจอทั้งหมดกี่คำ ขอให้นับให้ครบถ้วน

พวกเราเป็นกลุ่มเพื่อนเก่าตั้งแต่สมัยมหาวิทยาลัยที่สนิทกันเหนียวแน่นมาก ๆ กลุ่มพวกเรามีกันอยู่ 8 คนและมักจะหาเวลานัดเจอกันเสมอ ถึงแม้พวกเราจะมีหน้าที่การงานที่แตกต่างกันออกไป แต่พวกเราก็คงรักกันเหนียวแน่น

พวกเรามักวางแผนเพื่อเที่ยวกันเป็นกลุ่มแม้พวกเราจะยุ่งแค่ไหนการได้เที่ยวด้วยกันของพวกเราเป็นสิ่งที่ทำให้พวกเรารู้สึกผูกพันกันในฐานะ “แก๊งค์ของเรา” พวกเราได้ใช้เวลาอยู่ด้วยกันไปทานอาหารที่ร้านอาหารโปรดของพวกเรา

าไปทำกิจกรรมที่พวกเราทำด้วยกันแล้วเพลิดเพลินถึงแม้พวกเราจะมีนิสัยหรือความชอบที่ต่างกันแต่เมื่อพวกเราอยู่กันเป็นกลุ่มแล้วก็จะเลือกในสิ่งที่พวกเราทุกคนชอบเหมือนกัน

พวกเราจะให้ความสำคัญกับความเห็นของทุกคน ไม่มีใครในกลุ่มพวกเราจะถูกกลະเลยจากกลุ่มเวลาที่พวกเราได้อยู่ด้วยกันคือความสุขที่พวกเราหาได้ง่ายในโลกที่สับสนวุ่นวาย

มีคำว่า ‘พวกเรา’ ที่คุณนับได้ทั้งหมดกี่คำ

กิจกรรมที่ 2

โดยปกติแล้ว คนเรามีกลุ่มต่างๆ ที่เราติดต่อเกี่ยวข้องกับอยู่หลายกลุ่ม ทั้งกลุ่มเพื่อนสนิท เพื่อนที่ทำงาน กลุ่มคนที่เราทำกิจกรรมต่าง ๆ ด้วยเป็นประจำ เช่น กลุ่มที่เราออกกำลังกายด้วย สมาคมแม่บ้าน หรือกลุ่มรำไท้เก๊กอื่นๆ หรือแม้แต่ครอบครัวก็ถือเป็นกลุ่มหนึ่งที่สำคัญของเรา

คำสั่ง: ขอให้ท่านนึกถึงกลุ่มที่ท่านสนิทสนมและใช้เวลาด้วยมากที่สุดมา 1 กลุ่ม อาจจะเป็นครอบครัวของท่าน กลุ่มเพื่อนหรือ เพื่อนที่ทำงาน สมาคม หรือชมรม หรือการรวมกลุ่มใดก็ได้ของท่านและคนอื่นๆ ที่สนิทสนมกัน โปรดระบุกลุ่มที่ท่านเลือกในช่องสี่เหลี่ยมด้านล่าง

จากนั้นให้ท่านใช้เวลา 2 นาที ในการคิดว่าตัวท่านมีอะไรที่เหมือนหรือคล้ายคลึงกับกลุ่มที่คุณเลือกมาในด้านใดก็ได้ เช่น นิสัยใจคอ ท่าทาง/รูปลักษณ์ภายนอก กิจกรรมที่ชอบ อาหารที่ชอบ ความเชื่อ หรือความคิดเกี่ยวกับสิ่งต่างๆ ค่านิยม ความสามารถพิเศษ สถานที่ท่องเที่ยวที่ชอบ งานอดิเรก และอื่นๆที่ท่านนึกได้ (ขอให้ท่านระบุ 5 อย่างเป็นอย่างน้อย หากท่านนึกได้มากกว่า 5 อย่างขอให้ใส่มาทั้งหมด)

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(ผู้ร่วมวิจัยจะถูกสุ่มให้อ่านโปสเตอร์ 1 หรือ2)

3. โปรดอ่านบทความในใบประชาสัมพันธ์เกี่ยวกับมะเร็งลำไส้ใหญ่ต่อไปนี้ แล้วตอบคำถามตามความรู้สึกจริงของท่าน

(โปสเตอร์ 1)

ตรวจเลือดแฝงในอุจจาระป้องกันมะเร็งลำไส้ใหญ่ได้
...โรคมะเร็งลำไส้ใหญ่พบมากเป็นอันดับต้นๆในคนไทย

ปัจจัยเสี่ยง...

1. **ปัจจัยด้านอายุ** สถาบันมะเร็งแห่งชาติ พบสถิติว่า ในผู้ป่วยโรคมะเร็งลำไส้ใหญ่ 100 คน เป็นคนอายุ 40 - 69 ปี ถึง 70 คน นั่นหมายความว่า ตัวคุณซึ่งอายุ 40 ปีขึ้นไป ตกเป็นกลุ่มผู้มีความเสี่ยงสูงที่จะเป็นโรคมะเร็งลำไส้ใหญ่ มากกว่าคนอายุน้อยกว่า 40 ปี

2. **ปัจจัยทางพันธุกรรม** พบว่า คนที่มีครอบครัวหรือญาติใกล้ชิดเป็นโรคมะเร็งลำไส้ใหญ่ จะมีโอกาสเป็นโรคนี้นี้เพิ่มขึ้น 2-8 เท่า

3. **ปัจจัยอื่นๆ** เช่น เคยป่วยเป็นโรคลำไส้อักเสบมาก่อนหรือทานผักผลไม้ไม่เพียงพอ

เป็นแล้วมีโอกาสตายถึง 90%... เมื่อคุณเป็นโรคมะเร็งลำไส้ใหญ่จะมีโอกาสเสียชีวิตสูงมาก ยิ่งพบช้ายิ่งมีโอกาสเสียชีวิตได้ถึง 90% ปัจจุบันเป็นฆาตรกรคร่าชีวิตอันดับที่ 3 ของผู้ชายและอันดับที่ 4 ของผู้หญิง ในหมู่โรคมะเร็งทุกชนิด หากคุณเป็น คุณอาจจะต้องทรมานกับอาการเหล่านี้อย่างหลีกเลี่ยงไม่ได้ เช่น

- มีเลือดออกทางทวารหนัก
- ปวดท้องอย่างหนัก กดเจ็บ
- ภาวะลำไส้อุดตัน
- ภาวะลำไส้แตกเป็นรู

ขับถ่ายไม่ได้ต้องสวนทวารช่วย เซลล์มะเร็งกระจายไปยังส่วนอื่น

ขั้นตอนการรักษาโรคอาจจะทำให้คุณเจ็บปวดทรมานและอาจใช้หลายวิธีร่วมกัน ทั้งการผ่าตัด การให้ยาเคมีบำบัด และการใช้รังสีรักษา มีค่าใช้จ่ายสูง รวมถึงอาการแทรกซ้อนมากมาย เช่น

- ลำไส้บางส่วนถูกตัดออกไป ทำให้การกินหรือขับถ่ายผิดปกติ
- ผอมร่าง คลื่นไส้ อาเจียน
- ภูมิคุ้มกันต่ำ เสี่ยงต่อการติดเชื้อ

การรักษาอาจกินระยะเวลานานกว่าที่คุณจะหายหรือเสียชีวิตรวมถึงค่าใช้จ่ายที่จะต้องจ่ายไม่รู้จกจบสิ้น และชีวิตประจำวันที่จะต้องเปลี่ยนไปตลอดกาล...

วิธีป้องกันที่แสนง่าย แม้ผลลัพธ์ของโรคมะเร็งลำไส้ใหญ่จะรุนแรงและน่ากลัว แต่วิธีป้องกันก็แสนง่าย ยิ่งรู้เร็ว ยิ่งหายได้ **เพียงคุณเข้ารับการคัดกรองด้วยวิธีการตรวจเลือดแฝงในอุจจาระ** ซึ่ง...

- **แม่นยำถึง 77%** ในการบ่งชี้ว่า มีโอกาสเป็นหรือไม่เป็นโรคมะเร็งลำไส้ใหญ่
- **สะดวก** เพียงนำอุจจาระไปตรวจ
- **ไม่เจ็บตัว**
- **ราคาป้องกันถูกกว่ารักษา** เริ่มที่ 500-1,200 บาท (โรงพยาบาลรัฐ) เมื่อเปรียบเทียบกับราคาในการรักษาซึ่งเริ่มต้นที่ 80,000 ต่อครั้ง
- **ตรวจได้ทุกที่** ตั้งแต่โรงพยาบาลส่งเสริมสุขภาพตำบล โรงพยาบาลชุมชน โรงพยาบาลทั่วไป และ โรงพยาบาลศูนย์ ใกล้บ้านคุณ

ตรวจป้องกันมะเร็งลำไส้ใหญ่ด้วยการตรวจเลือดแฝงในอุจจาระ
ลดเสี่ยง - เลี่ยงตาย ทำง่าย คุณทำได้แน่

ท่านได้อ่านใบประชาสัมพันธ์ข้างต้นอย่างละเอียดแล้ว

ยืนยัน

(โปรดเตอร์ 2)

ตรวจเลือดแฝงในอุจจาระป้องกันมะเร็งลำไส้ใหญ่ได้

...โรคมะเร็งลำไส้ใหญ่พบมากเป็นอันดับต้นๆในคนไทย

ปัจจัยเสี่ยง...

1. **ปัจจัยด้านอายุ** สถาบันมะเร็งแห่งชาติ พบสถิติว่า ในผู้ป่วยโรคมะเร็งลำไส้ใหญ่ 100 คน เป็นคนอายุ 40 - 69 ปี ถึง 70 คน นั้นหมายความว่า ตัวคุณซึ่งอายุ 40 ปีขึ้นไป ตกเป็นกลุ่มผู้มีความเสี่ยงสูงที่จะเป็นโรคมะเร็งลำไส้ใหญ่ มากกว่าคนอายุน้อยกว่า 40 ปี
2. **ปัจจัยทางพันธุกรรม** พบว่า คนที่มีครอบครัวหรือญาติใกล้ชิดเป็นโรคมะเร็งลำไส้ใหญ่ จะมีโอกาสเป็นโรคนี้อีกเพิ่มขึ้น 2-8 เท่า
3. **ปัจจัยอื่นๆ** เช่น เคยป่วยเป็นโรคลำไส้อักเสบมาก่อนหรือทานผักผลไม้ไม่บ่อย

เป็นแล้วมีโอกาสตายถึง 90%... เมื่อคุณเป็นโรคมะเร็งลำไส้ใหญ่จะมีโอกาสเสียชีวิตสูงมาก ยิ่งพบช้ายิ่งมีโอกาสเสียชีวิตได้ถึง 90% ปัจจุบันเป็นฆาตกรคร่าชีวิตอันดับที่ 3 ของผู้ชายและอันดับที่ 4 ของผู้หญิง ในหมู่โรคมะเร็งทุกชนิด เมื่อคุณเป็นโรคมะเร็งลำไส้ใหญ่ ครอบครัวหรือคนที่รักของคุณมักจะล้มไปกับคุณด้วยอย่างเลี่ยงไม่ได้ เพราะการรักษายากและต้องรักษาต่อเนื่องซึ่งผู้ป่วยเช่นคุณคงไม่สามารถทำอะไรหลายๆอย่างได้เองภาวะหลายอย่างจึงจะตกไปอยู่ที่ครอบครัวของคุณ เช่น

- **คนในครอบครัวคุณ** ต้องดูแลตั้งแต่ การกิน นอน เดิน และ ขับถ่าย ตลอด 24 ชั่วโมง
- **คนในครอบครัวคุณ** ต้องช่วยจ่ายเงินในการรักษา ตกประมาณ 160,000 บาท ตลอดการรักษาต่อครั้ง (อาจกลับมาเป็นซ้ำได้อีก) เป็นหนี้และขัดสนทางการเงิน
- **คนในครอบครัวคุณ** ต้องสละเวลาส่วนตัว พาคุณไปหาหมอ คอยสังเกตอาการ
- **คนในครอบครัวคุณ** ได้ผลกระทบต่อจิตใจ ทั้งภาวะทางกายและการเงิน อาจนำมาสู่ความเครียดสะสม ท้อแท้ หาทางออกไม่ได้ และป่วยทางจิตได้ในที่สุด

เหล่านั้นยังไม่รวมถึงผลกระทบใหญ่หลวง หากคุณถือเป็นเสาหลักสำคัญของครอบครัวคุณด้วย

วิธีป้องกันที่แสนง่าย แม้ผลลัพธ์ของโรคมะเร็งลำไส้ใหญ่จะรุนแรงและน่ากลัว แต่วิธีป้องกันก็ง่ายแสนง่าย ยิ่งรู้เร็ว ยิ่งหายได้ **เพียงคุณเข้ารับการคัดกรองด้วยวิธีการตรวจเลือดแฝงในอุจจาระ** ซึ่ง...

- **แม่นยำถึง 77%** ในการบ่งชี้ว่า มีโอกาสเป็น หรือไม่เป็นโรคมะเร็งลำไส้ใหญ่
- **สะดวก** เพียงนำอุจจาระไปตรวจ
- **ไม่เจ็บตัว**
- **ราคาป้องกันถูกกว่ารักษา** เริ่มที่ 500-1,200 บาท (โรงพยาบาลรัฐ) เมื่อเปรียบเทียบกับราคาในการรักษาซึ่งเริ่มต้นที่ 80,000 ต่อครั้ง
- **ตรวจได้ทุกที่** ตั้งแต่โรงพยาบาลส่งเสริมสุขภาพตำบล โรงพยาบาลชุมชน โรงพยาบาลทั่วไป และ โรงพยาบาลศูนย์ ใกล้บ้านคุณ

ตรวจป้องกันมะเร็งลำไส้ใหญ่ด้วยการตรวจเลือดแฝงในอุจจาระ
ลดเสี่ยง - เลี่ยงตาย ทำง่าย คุณทำได้แน่

ท่านได้อ่านใบประชาสัมพันธ์ข้างต้นอย่างละเอียดแล้ว

ยืนยัน

19.

การไปตรวจคัดกรองมะเร็งลำไส้ใหญ่
โดยวิธีตรวจเลือดแฝงในอุจจาระ (FIT
test) ในอีก 4 สัปดาห์ข้างหน้า
สำหรับฉันเป็น**สิ่งที่มีประโยชน์**

C C

20.

การไปตรวจคัดกรองมะเร็งลำไส้ใหญ่
โดยวิธีตรวจเลือดแฝงในอุจจาระ (FIT
test) ในอีก 4 สัปดาห์ข้างหน้า
สำหรับฉันเป็น**สิ่งที่สะดวก**

C C

21.

การไปตรวจคัดกรองมะเร็งลำไส้ใหญ่
โดยวิธีตรวจเลือดแฝงในอุจจาระ (FIT
test) ในอีก 4 สัปดาห์ข้างหน้า
สำหรับฉันเป็น**สิ่งที่ดี**

C C



	ไม่เห็น ด้วย อย่าง ยิ่ง 1	ไม่เห็น ด้วย 2	ค่อนข้าง ไม่เห็น ด้วย 3	เห็นด้วยแ ละไม่เห็น ด้วยพอๆ กัน 4	ค่อนข้าง เห็นด้วย 5	เห็น ด้วย 6	เห็นด้วย อย่างยิ่ง 7
22.ฉันวางแผนจะไปตรวจ คัดกรองมะเร็งลำไส้ใหญ่โดยวิธีตรวจ เลือดแฝงในอุจจาระเพื่อป้องกันการเป็น มะเร็งลำไส้ใหญ่ในอีก 4 สัปดาห์ข้างหน้า	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23.ฉันอยากจะไปตรวจคัดกรอง มะเร็งลำไส้ใหญ่โดยวิธีตรวจเลือดแฝงใน อุจจาระเพื่อป้องกันการเป็นมะเร็งลำไส้ใ ใหญ่ในอีก 4 สัปดาห์ข้างหน้า	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. ฉันตั้งใจจะไปตรวจคัดกรองมะเร็งลำไส้ใ ใหญ่โดยวิธีตรวจเลือดแฝงในอุจจาระเพื่อ ป้องกันการเป็นมะเร็งลำไส้ใหญ่ในอีก 4 สัปดาห์ข้างหน้า	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

บทความได้กล่าวถึง ผลเสียที่จะเกิดแก่คนในครอบครัวของคุณ ถ้าคุณเป็นโรคมะเร็งลำไส้ใหญ่ ใช่หรือไม่

- ใช่
- ไม่ใช่

บทความได้กล่าวถึง ผลเสียต่อสุขภาพของตัวเอง ที่คุณต้องเผชิญเมื่อเป็นโรคมะเร็งลำไส้ใหญ่ ใช่หรือไม่

- ใช่
- ไม่ใช่



ข้อมูลทั่วไปของผู้ร่วมวิจัย

1. เพศของท่าน

- เพศหญิง
- เพศชาย
- อื่นๆ
-

2. สถานะภาพสมรส

- โสด
- สมรส
- มีคู่รักที่ยังไม่ได้แต่งงาน
- หย่าร้าง



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Skip To: Q69 If 2. สถานะภาพสมรส = โสด

3. จำนวนบุตรของท่าน

- ไม่มีบุตร
- 1 คน
- 2 คน
- 3 คน
- 4 คน
- 5 คน
- มากกว่า 5 คน

4. อาชีพ

- ไม่ได้ประกอบอาชีพ (1)
- ข้าราชการ (2)
- พนักงานบริษัทเอกชน/รัฐวิสาหกิจ (3)
- เกษตกร (ทำไร่/ทำนา/เลี้ยงสัตว์) (4)
- รับจ้าง (5)
- ค้าขาย/ธุรกิจส่วนตัว (6)
- อื่น ๆ (7)



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5. รายได้เฉลี่ยต่อเดือน

- น้อยกว่า 10,000 บาท
- 10,000-20,000 บาท
- 20,001-30,000 บาท
- 30,001-40,000 บาท
- 40,001-50,000 บาท
- 50,001 – 60,000 บาท
- 60,001 – 70,000 บาท
- 70,001 – 80,000บาท
- 80,001บาท ขึ้นไป



6. มะเร็งลำไส้ใหญ่สามารถถ่ายทอดได้ทางพันธุกรรม

โปรดระบุว่าคุณมีประวัติญาติที่ใกล้ชิดเป็นมะเร็งลำไส้ใหญ่ตามตัวเลือกต่อไปนี้หรือไม่ (ตอบได้มากกว่า 1 ตัวเลือก)

- ไม่มีประวัติญาติคนใดเป็นใดเคยเป็นมะเร็งลำไส้ใหญ่
- บิดา
- มารดา
- พี่
- น้อง
- ปู่
- ย่า
- ตา
- ยาย
- ลุง
- ป้า
- น้า
- อา



สำหรับตอบแทนที่ท่านสละเวลาเพื่อตอบแบบสอบถามออนไลน์

ผู้วิจัยขอขอบพระคุณที่ระลึกเป็นเจลแอลกอฮอล์หรือสเปรย์แอลกอฮอล์ที่ปลอดภัยและมีมาตรฐาน

ท่านสามารถเลือกได้ตามใจชอบของท่าน แต่ทั้งนี้ผู้วิจัยจะขอทราบชื่อ ที่อยู่และเบอร์ติดต่อของท่าน

เพื่อส่งของที่ระลึกดังกล่าวให้กับท่าน

กรุณาเลือกของที่ระลึกที่ท่านต้องการ

- ต้องการรับของที่ระลึกเป็นเจลแอลกอฮอล์ยี่ห้อ Bath & Body Works
- ต้องการรับของที่ระลึกเป็นสเปรย์แอลกอฮอล์ยี่ห้อ Seisou
- ไม่ต้องการรับของที่ระลึก

กรุณาพิมพ์ชื่อที่อยู่และเบอร์ติดต่อของท่าน

- ชื่อ-นามสกุล _____
- ที่อยู่สำหรับจัดส่ง _____
- เบอร์โทร _____

เสร็จสิ้นการทำงานวิจัยครั้งนี้แล้ว

ผู้วิจัยขอขอบพระคุณผู้ร่วมวิจัยทุกท่านครั้งนี้เป็นอย่างสูง

คำอธิบายจุดประสงค์ในการทำงานวิจัยนี้ คือ การที่ให้ผู้วิจัยอ่านบทความแล้วให้รับคำที่กำหนด เช่น ‘ฉัน’

‘ฉันกับเธอ’ และ ‘พวกเรา’ และให้ท่านเขียนว่าท่านเหมือนหรือแตกต่างกับคนอื่นอย่างไร

เป็นกิจกรรมที่ชี้แนะให้ท่านนึกถึงเรื่องเกี่ยวกับตนเอง หรือคนที่ท่านรัก หรือ กลุ่มของท่าน

เมื่อท่านคิดถึงเรื่องของตนเองหรือผู้อื่น

จะส่งผลเวลาอ่านบทความเกี่ยวกับโรคมะเร็งลำไส้ใหญ่ที่ส่งผลเสียต่อตนเองหรือครอบครัวแตกต่างกัน

ผู้วิจัยคาดหวังว่า

หากท่านคิดถึงตัวเองเวลาอ่านบทความที่เน้นผลเสียต่อตัวเองก็จะทำให้ท่านรู้สึกมีภัยคุกคามมากขึ้น

และจะส่งผลให้ท่านมีเจตคติต่อการไปตรวจมะเร็งลำไส้ใหญ่ที่ตีมากขึ้นไปด้วย ในขณะเดียวกัน

หากท่านคนใดโดนชี้แนะถึงผู้อื่น เช่น คนรักหรือกลุ่ม เวลาอ่านบทความที่เน้นผลเสียต่อผู้อื่น

จะทำให้ท่านรู้สึกมีภัยคุกคามมากขึ้น และส่งผลต่อเจตคติและเจตนาต่อไปตรวจคัดกรองที่ดีเช่นกัน ดังนั้นจึงสรุปได้ว่า

การที่ท่านให้ความสำคัญกับตนเอง

และผู้อื่นแตกต่างกันก็จะส่งผลต่อการรับรู้ในการรับสารโน้มน้าวใจที่แตกต่างกันไปด้วย

ดังนั้นเพื่อสร้างสื่อหรือการรณรงค์ที่มีประสิทธิภาพ ผู้สร้างควรคำนึงถึงลักษณะของผู้รับสารด้วย

ท่านสามารถสอบถามเกี่ยวกับการคัดกรองเพิ่มเติมที่โรงพยาบาลใกล้บ้านคุณ และสามารถอ่านบทความที่มีประโยชน์สำหรับท่านตามลิงก์ด้านล่างนี้ ซึ่งเกี่ยวกับมะเร็งลำไส้ใหญ่ การคัดกรองมะเร็งลำไส้ใหญ่ และขั้นตอนการคัดกรองโดยวิธีตรวจอุจจาระ ดังนี้

[1. บทความจาก สสส](#)

[2. ปัจจัยเสี่ยงในการเกิดโรคมะเร็งลำไส้ใหญ่](#)

[3. วิธีการตรวจคัดกรองลำไส้ใหญ่จากโรงพยาบาลจุฬาลงกรณ์](#)

[4. เรียนรู้วิธีการตรวจคัดกรองโดยใช้วิธีการตรวจอุจจาระจากสถาบันมะเร็งแห่งชาติ](#)

ผู้วิจัยได้รวบรวมเบอร์สำหรับติดต่อถามข้อมูลเพิ่มเติมของโรงพยาบาลใหญ่ ๆ มาให้ดังนี้

1. โรงพยาบาลจุฬารณณ์ 0 2576 6000
2. โรงพยาบาลสุภูมิวิท 02-391-0011 ต่อ 225 – 227
3. ศูนย์ความเป็นเลิศด้านการรักษาผู้ป่วยมะเร็งลำไส้ใหญ่และทวารหนักอย่างครบวงจร โรงพยาบาลจุฬา 02 649 4047-9
4. ศูนย์ศัลยกรรมลำไส้ใหญ่และทวารหนักชั้น3 อาคารโรงพยาบาลบำรุงราษฎร์ ฝั่งทิศเหนือ โทร 02 011 2351-2 (8:00 - 18:00น.)หรือ โทร 1378 (20:00 - 8:00น.)
5. ศูนย์ความเป็นเลิศด้านโรคมะเร็ง คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี มหาวิทยาลัยมหิดลโทรศัพท์ : 0-2201-2682, 0-2201-0049

เมื่อท่านทราบจุดประสงค์ที่แท้จริงของงานวิจัยครั้งนี้แล้ว

ท่านจะยินยอมให้นำข้อมูลของท่านไปใช้วิเคราะห์และนำเสนอได้หรือไม่

ยินยอมให้นำข้อมูลไปใช้ได้

ไม่ยินยอมให้นำข้อมูลไปใช้



จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

Process analysis

Process analysis on feelings fear

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.0 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 7
Y : SumFear
X : FearPrim
M : SumPerTh
W : SumIndSc

Covariates:
age2 career status income CRCfam chilNO

Sample
Size: 133

OUTCOME VARIABLE:
SumPerTh

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.4695	.2205	80.0808	3.8649	9.0000	123.0000
	.0002					

Model

	coeff	se	t	p	LLCI	ULCI
constant	31.3958	8.2746	3.7942	.0002	15.0166	47.7749
FearPrim	-.1466	5.8473	-.0251	.9800	-11.7209	11.4278
SumIndSc	.7009	.2004	3.4971	.0007	.3042	1.0977
Int_1	.0107	.2950	.0363	.9711	-.5732	.5946
age2	-.3331	.1331	-2.5035	.0136	-.5966	-.0697
career	-.1790	.4175	-.4288	.6688	-1.0055	.6474
status	-1.4022	1.8630	-.7527	.4531	-5.0900	2.2855
income	1.4292	.5057	2.8264	.0055	.4283	2.4302
CRCfam	.3956	.5934	.6666	.5063	-.7791	1.5703
chilNO	1.7109	.8941	1.9134	.0580	-.0590	3.4807

Product terms key:

Int_1 : FearPrim x SumIndSc

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0000	.0013	1.0000	123.0000	.9711

OUTCOME VARIABLE:
SumFear

Model Summary

R R-sq MSE F df1 df2
 p .6626 .4390 15.0347 12.1295 8.0000 124.0000
 .0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	12.4424	3.4400	3.6170	.0004	5.6336	19.2511
FearPrim	-.0811	.6911	-.1174	.9068	-1.4489	1.2867
SumPerTh	.2970	.0363	8.1781	.0000	.2251	.3689
age2	-.0734	.0584	-1.2573	.2110	-.1890	.0422
career	-.3748	.1805	-2.0763	.0399	-.7321	-.0175
status	-.0451	.7934	-.0569	.9547	-1.6154	1.5251
income	-.7023	.2257	-3.1115	.0023	-1.1491	-.2556
CRCfam	-.3103	.2575	-1.2048	.2306	-.8200	.1995
chilNO	-.7207	.3812	-1.8907	.0610	-1.4752	.0338

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-.0811	.6911	-.1174	.9068	-1.4489	1.2867

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

FearPrim	->	SumPerTh	->	SumFear	
SumIndSc	Effect	BootSE	BootLLCI	BootULCI	
13.4641	-.0007	.7623	-1.5105	1.5146	
18.9023	.0167	.4777	-.9330	.9374	
24.3404	.0340	.5466	-1.0521	1.1081	

Index of moderated mediation:

SumIndSc	Index	BootSE	BootLLCI	BootULCI
---	.0032	.0846	-.1672	.1686

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
 95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
 5000

W values in conditional tables are the mean and +/- SD from the mean.

----- END MATRIX -----

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.0 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 7
 Y : SumFear
 X : FearPrim

M : SumPerTh
W : SumReSc

Covariates:

age2 career status income CRCfam chilNO

Sample

Size: 133

OUTCOME VARIABLE:
SumPerTh

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.5227	.2732	74.6638	5.1369	9.0000	123.0000
	.0000					

Model

	coeff	se	t	p	LLCI	ULCI
constant	16.2351	9.1540	1.7736	.0786	-1.8846	34.3549
FearPrim	9.0719	8.1671	1.1108	.2688	-7.0944	25.2383
SumReSc	.8912	.1938	4.5975	.0000	.5075	1.2748
Int_1	-.2702	.2771	-.9753	.3313	-.8187	.2782
age2	-.2038	.1291	-1.5789	.1169	-.4594	.0517
career	.0103	.4094	.0251	.9800	-.8000	.8206
status	-2.3537	1.7564	-1.3401	.1827	-5.8304	1.1230
income	1.0796	.4947	2.1825	.0310	.1004	2.0588
CRCfam	.2978	.5750	.5178	.6055	-.8404	1.4359
chilNO	.6566	.8487	.7736	.4406	-1.0234	2.3365

Product terms key:

Int_1 : FearPrim x SumReSc

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0056	.9513	1.0000	123.0000	.3313

OUTCOME VARIABLE:
SumFear

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.6626	.4390	15.0347	12.1295	8.0000	124.0000
	.0000					

Model

	coeff	se	t	p	LLCI	ULCI
constant	12.4424	3.4400	3.6170	.0004	5.6336	19.2511
FearPrim	-.0811	.6911	-.1174	.9068	-1.4489	1.2867
SumPerTh	.2970	.0363	8.1781	.0000	.2251	.3689
age2	-.0734	.0584	-1.2573	.2110	-.1890	.0422
career	-.3748	.1805	-2.0763	.0399	-.7321	-.0175
status	-.0451	.7934	-.0569	.9547	-1.6154	1.5251
income	-.7023	.2257	-3.1115	.0023	-1.1491	-.2556
CRCfam	-.3103	.2575	-1.2048	.2306	-.8200	.1995
chilNO	-.7207	.3812	-1.8907	.0610	-1.4752	.0338

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-.0811	.6911	-.1174	.9068	-1.4489	1.2867

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

FearPrim	->	SumPerTh	->	SumFear
SumReSc	Effect	BootSE	BootLLCI	BootULCI
23.4504	.8123	.7067	-.5419	2.2358
28.9474	.3711	.4315	-.4417	1.2382
34.4444	-.0702	.5766	-1.1528	1.0998

Index of moderated mediation:

SumReSc	Index	BootSE	BootLLCI	BootULCI
SumReSc	-.0803	.0872	-.2523	.0897

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

W values in conditional tables are the mean and +/- SD from the mean.

----- END MATRIX -----

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.0 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 7
Y : SumFear
X : FearPrim
M : SumPerTh
W : SumCoSc

Covariates:
age2 career status income CRCfam chilNO

Sample
Size: 133

OUTCOME VARIABLE:
SumPerTh

Model Summary	R	R-sq	MSE	F	df1	df2
p	.4570	.2089	81.2713	3.6082	9.0000	123.0000
.0005						

Model

	coeff	se	t	p	LLCI	ULCI
constant	18.5158	10.0340	1.8453	.0674	-1.3458	38.3774
FearPrim	12.1718	10.4026	1.1701	.2442	-8.4194	32.7631
SumCoSc	.8934	.2358	3.7884	.0002	.4266	1.3602
Int_1	-.3846	.3612	-1.0646	.2891	-1.0996	.3305
age2	-.2736	.1336	-2.0486	.0426	-.5380	-.0092
career	-.0725	.4295	-.1687	.8663	-.9227	.7778
status	-1.8190	1.8580	-.9790	.3295	-5.4968	1.8588
income	1.2284	.5151	2.3848	.0186	.2088	2.2479
CRCfam	.4553	.5981	.7612	.4480	-.7287	1.6392
chilNO	.7822	.8846	.8842	.3783	-.9689	2.5333

Product terms key:

Int_1 : FearPrim x SumCoSc

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0073	1.1335	1.0000	123.0000	.2891

OUTCOME VARIABLE:

SumFear

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.6626	.4390	15.0347	12.1295	8.0000	124.0000
	.0000					

Model

	coeff	se	t	p	LLCI	ULCI
constant	12.4424	3.4400	3.6170	.0004	5.6336	19.2511
FearPrim	-.0811	.6911	-.1174	.9068	-1.4489	1.2867
SumPerTh	.2970	.0363	8.1781	.0000	.2251	.3689
age2	-.0734	.0584	-1.2573	.2110	-.1890	.0422
career	-.3748	.1805	-2.0763	.0399	-.7321	-.0175
status	-.0451	.7934	-.0569	.9547	-1.6154	1.5251
income	-.7023	.2257	-3.1115	.0023	-1.1491	-.2556
CRCfam	-.3103	.2575	-1.2048	.2306	-.8200	.1995
chilNO	-.7207	.3812	-1.8907	.0610	-1.4752	.0338

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-.0811	.6911	-.1174	.9068	-1.4489	1.2867

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

FearPrim ->	SumPerTh ->	SumFear			
SumCoSc	Effect	BootSE	BootLLCI	BootULCI	
23.9067	.8845	.7900	-.6596	2.4517	
28.3835	.3731	.4636	-.4913	1.3356	
32.8602	-.1382	.5994	-1.2597	1.1394	

Index of moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
SumCoSc	-.1142	.1175	-.3420	.1182

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

W values in conditional tables are the mean and +/- SD from the mean.

----- END MATRIX -----

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.0 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 7
Y : SumAtt
X : FearPrim
M : SumPerTh
W : SumIndSc

Covariates:
age2 career status income CRCfam chilNO

Sample
Size: 133

OUTCOME VARIABLE:
SumPerTh

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.4695	.2205	80.0808	3.8649	9.0000	123.0000
	.0002					

Model

	coeff	se	t	p	LLCI	ULCI
constant	31.3958	8.2746	3.7942	.0002	15.0166	47.7749
FearPrim	-.1466	5.8473	-.0251	.9800	-11.7209	11.4278
SumIndSc	.7009	.2004	3.4971	.0007	.3042	1.0977
Int_1	.0107	.2950	.0363	.9711	-.5732	.5946
age2	-.3331	.1331	-2.5035	.0136	-.5966	-.0697
career	-.1790	.4175	-.4288	.6688	-1.0055	.6474
status	-1.4022	1.8630	-.7527	.4531	-5.0900	2.2855
income	1.4292	.5057	2.8264	.0055	.4283	2.4302
CRCfam	.3956	.5934	.6666	.5063	-.7791	1.5703
chilNO	1.7109	.8941	1.9134	.0580	-.0590	3.4807

Product terms key:

Int_1 : FearPrim x SumIndSc

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0000	.0013	1.0000	123.0000	.9711

OUTCOME VARIABLE:

SumAtt

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.4477	.2004	58.4217	3.8847	8.0000	124.0000
	.0004					

Model

	coeff	se	t	p	LLCI	ULCI
constant	39.8349	6.7811	5.8744	.0000	26.4132	53.2566
FearPrim	-.2554	1.3623	-.1875	.8516	-2.9517	2.4409
SumPerTh	.1391	.0716	1.9433	.0542	-.0026	.2808
age2	-.1729	.1151	-1.5019	.1357	-.4007	.0549
career	-.1577	.3558	-.4431	.6584	-.8620	.5466
status	-.8916	1.5639	-.5701	.5696	-3.9870	2.2038
income	1.7086	.4449	3.8400	.0002	.8279	2.5893
CRCfam	.8499	.5077	1.6740	.0967	-.1550	1.8547
chilNO	1.4328	.7514	1.9069	.0589	-.0544	2.9201

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-.2554	1.3623	-.1875	.8516	-2.9517	2.4409

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

	Effect	BootSE	BootLLCI	BootULCI	
SumIndSc	13.4641	-.0003	.3923	-.8296	.7931
	18.9023	.0078	.2441	-.5002	.5209
	24.3404	.0159	.2908	-.5398	.6697

Index of moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
SumIndSc	.0015	.0449	-.0831	.1027

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

5000

W values in conditional tables are the mean and +/- SD from the mean.

----- END MATRIX -----

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.0 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```

*****
Model   : 7
Y       : SumAtt
X       : FearPrim
M       : SumPerTh
W       : SumReSc

```

```

Covariates:
age2      career      status      income      CRCfam      chilNO

```

```

Sample
Size: 133

```

```

*****
OUTCOME VARIABLE:
SumPerTh

```

```

Model Summary
          R          R-sq          MSE          F          df1          df2
p          .5227          .2732          74.6638          5.1369          9.0000          123.0000
.0000

```

```

Model
          coeff          se          t          p          LLCI          ULCI
constant  16.2351          9.1540          1.7736          .0786          -1.8846          34.3549
FearPrim   9.0719          8.1671          1.1108          .2688          -7.0944          25.2383
SumReSc    .8912          .1938          4.5975          .0000           .5075           1.2748
Int_1     -.2702          .2771          -.9753          .3313          -.8187           .2782
age2      -.2038          .1291          -1.5789         .1169          -.4594           .0517
career     .0103          .4094          .0251          .9800          -.8000           .8206
status    -2.3537          1.7564          -1.3401         .1827          -5.8304          1.1230
income     1.0796          .4947          2.1825          .0310           .1004           2.0588
CRCfam     .2978          .5750          .5178          .6055          -.8404           1.4359
chilNO     .6566          .8487          .7736          .4406          -1.0234          2.3365

```

```

Product terms key:
Int_1      :      FearPrim x      SumReSc

```

```

Test(s) of highest order unconditional interaction(s):
          R2-chng          F          df1          df2          p
X*W          .0056          .9513          1.0000          123.0000          .3313

```

```

*****
OUTCOME VARIABLE:
SumAtt

```

```

Model Summary
          R          R-sq          MSE          F          df1          df2
p          .4477          .2004          58.4217          3.8847          8.0000          124.0000
.0004

```

```

Model
          coeff          se          t          p          LLCI          ULCI
constant  39.8349          6.7811          5.8744          .0000          26.4132          53.2566
FearPrim  -.2554          1.3623          -.1875          .8516          -2.9517          2.4409
SumPerTh  .1391          .0716          1.9433          .0542          -.0026           .2808
age2      -.1729          .1151          -1.5019         .1357          -.4007           .0549
career    -.1577          .3558          -.4431          .6584          -.8620           .5466
status    -.8916          1.5639          -.5701         .5696          -3.9870          2.2038
income    1.7086          .4449          3.8400          .0002           .8279           2.5893
CRCfam    .8499          .5077          1.6740          .0967          -.1550           1.8547
chilNO    1.4328          .7514          1.9069          .0589          -.0544           2.9201

```


***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-.2554	1.3623	-.1875	.8516	-2.9517	2.4409

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

FearPrim	->	SumPerTh	->	SumAtt
SumReSc	Effect	BootSE	BootLLCI	BootULCI
23.4504	.3805	.3781	-.2755	1.2394
28.9474	.1738	.2384	-.2481	.7324
34.4444	-.0329	.2946	-.6324	.6060

Index of moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
SumReSc	-.0376	.0438	-.1334	.0452

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

W values in conditional tables are the mean and +/- SD from the mean.

----- END MATRIX -----

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.0 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 7
Y : SumAtt
X : FearPrim
M : SumPerTh
W : SumCoSc

Covariates:

age2 career status income CRCfam chilNO

Sample

Size: 133

OUTCOME VARIABLE:

SumPerTh

Model Summary

	R	R-sq	MSE	F	df1	df2
p						

.4570 .2089 81.2713 3.6082 9.0000 123.0000
 .0005

Model

	coeff	se	t	p	LLCI	ULCI
constant	18.5158	10.0340	1.8453	.0674	-1.3458	38.3774
FearPrim	12.1718	10.4026	1.1701	.2442	-8.4194	32.7631
SumCoSc	.8934	.2358	3.7884	.0002	.4266	1.3602
Int_1	-.3846	.3612	-1.0646	.2891	-1.0996	.3305
age2	-.2736	.1336	-2.0486	.0426	-.5380	-.0092
career	-.0725	.4295	-.1687	.8663	-.9227	.7778
status	-1.8190	1.8580	-.9790	.3295	-5.4968	1.8588
income	1.2284	.5151	2.3848	.0186	.2088	2.2479
CRCfam	.4553	.5981	.7612	.4480	-.7287	1.6392
chilNO	.7822	.8846	.8842	.3783	-.9689	2.5333

Product terms key:

Int_1 : FearPrim x SumCoSc

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0073	1.1335	1.0000	123.0000	.2891

 OUTCOME VARIABLE:

SumAtt

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.4477	.2004	58.4217	3.8847	8.0000	124.0000
	.0004					

Model

	coeff	se	t	p	LLCI	ULCI
constant	39.8349	6.7811	5.8744	.0000	26.4132	53.2566
FearPrim	-.2554	1.3623	-.1875	.8516	-2.9517	2.4409
SumPerTh	.1391	.0716	1.9433	.0542	-.0026	.2808
age2	-.1729	.1151	-1.5019	.1357	-.4007	.0549
career	-.1577	.3558	-.4431	.6584	-.8620	.5466
status	-.8916	1.5639	-.5701	.5696	-3.9870	2.2038
income	1.7086	.4449	3.8400	.0002	.8279	2.5893
CRCfam	.8499	.5077	1.6740	.0967	-.1550	1.8547
chilNO	1.4328	.7514	1.9069	.0589	-.0544	2.9201

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-.2554	1.3623	-.1875	.8516	-2.9517	2.4409

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

FearPrim	->	SumPerTh	->	SumAtt
SumCoSc	Effect	BootSE	BootLLCI	BootULCI
23.9067	.4143	.4356	-.3263	1.4002
28.3835	.1748	.2506	-.2625	.7592
32.8602	-.0648	.3082	-.6770	.6286

Index of moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
SumCoSc	-.0535	.0630	-.1928	.0624

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

5000

W values in conditional tables are the mean and +/- SD from the mean.

----- END MATRIX -----

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.0 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 7
 Y : SumIn
 X : FearPrim
 M : SumPerTh
 W : SumIndSc

Covariates:

age2 career status income CRCfam chilNO

Sample

Size: 133

OUTCOME VARIABLE:

SumPerTh

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.4695	.2205	80.0808	3.8649	9.0000	123.0000
	.0002					

Model

	coeff	se	t	p	LLCI	ULCI
constant	31.3958	8.2746	3.7942	.0002	15.0166	47.7749
FearPrim	-.1466	5.8473	-.0251	.9800	-11.7209	11.4278
SumIndSc	.7009	.2004	3.4971	.0007	.3042	1.0977
Int_1	.0107	.2950	.0363	.9711	-.5732	.5946
age2	-.3331	.1331	-2.5035	.0136	-.5966	-.0697
career	-.1790	.4175	-.4288	.6688	-1.0055	.6474
status	-1.4022	1.8630	-.7527	.4531	-5.0900	2.2855
income	1.4292	.5057	2.8264	.0055	.4283	2.4302
CRCfam	.3956	.5934	.6666	.5063	-.7791	1.5703
chilNO	1.7109	.8941	1.9134	.0580	-.0590	3.4807

Product terms key:

Int_1 : FearPrim x SumIndSc

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0000	.0013	1.0000	123.0000	.9711

 OUTCOME VARIABLE:
 SumIn

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.5814	.3380	16.4871	7.9151	8.0000	124.0000
	.0000					

Model

	coeff	se	t	p	LLCI	ULCI
constant	13.6502	3.6023	3.7893	.0002	6.5202	20.7803
FearPrim	-.5232	.7237	-.7229	.4711	-1.9555	.9092
SumPerTh	.2222	.0380	5.8417	.0000	.1469	.2975
age2	-.0654	.0612	-1.0700	.2867	-.1865	.0556
career	-.4650	.1890	-2.4600	.0153	-.8392	-.0909
status	-2.0244	.8308	-2.4367	.0162	-3.6688	-.3800
income	.0147	.2364	.0624	.9503	-.4531	.4826
CRCfam	.3764	.2697	1.3957	.1653	-.1574	.9102
chilNO	.2724	.3992	.6825	.4962	-.5176	1.0625

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-.5232	.7237	-.7229	.4711	-1.9555	.9092

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

	Effect	BootSE	BootLLCI	BootULCI	
SumIndSc	13.4641	-.0005	.5837	-1.1397	1.1944
	18.9023	.0125	.3625	-.6903	.7455
	24.3404	.0254	.4122	-.8030	.8468

Index of moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
SumIndSc	.0024	.0647	-.1324	.1251

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
 95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
 5000

W values in conditional tables are the mean and +/- SD from the mean.

----- END MATRIX -----

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.0 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 7
Y : SumIn
X : FearPrim
M : SumPerTh
W : SumReSc

Covariates:
age2 career status income CRCfam chilNO

Sample
Size: 133

OUTCOME VARIABLE:
SumPerTh

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.5227	.2732	74.6638	5.1369	9.0000	123.0000
	.0000					

Model

	coeff	se	t	p	LLCI	ULCI
constant	16.2351	9.1540	1.7736	.0786	-1.8846	34.3549
FearPrim	9.0719	8.1671	1.1108	.2688	-7.0944	25.2383
SumReSc	.8912	.1938	4.5975	.0000	.5075	1.2748
Int_1	-.2702	.2771	-.9753	.3313	-.8187	.2782
age2	-.2038	.1291	-1.5789	.1169	-.4594	.0517
career	.0103	.4094	.0251	.9800	-.8000	.8206
status	-2.3537	1.7564	-1.3401	.1827	-5.8304	1.1230
income	1.0796	.4947	2.1825	.0310	.1004	2.0588
CRCfam	.2978	.5750	.5178	.6055	-.8404	1.4359
chilNO	.6566	.8487	.7736	.4406	-1.0234	2.3365

Product terms key:

Int_1 : FearPrim x SumReSc

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0056	.9513	1.0000	123.0000	.3313

OUTCOME VARIABLE:
SumIn

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.5814	.3380	16.4871	7.9151	8.0000	124.0000
	.0000					

Model

	coeff	se	t	p	LLCI	ULCI
constant	13.6502	3.6023	3.7893	.0002	6.5202	20.7803
FearPrim	-.5232	.7237	-.7229	.4711	-1.9555	.9092
SumPerTh	.2222	.0380	5.8417	.0000	.1469	.2975

age2	-.0654	.0612	-1.0700	.2867	-.1865	.0556
career	-.4650	.1890	-2.4600	.0153	-.8392	-.0909
status	-2.0244	.8308	-2.4367	.0162	-3.6688	-.3800
income	.0147	.2364	.0624	.9503	-.4531	.4826
CRCfam	.3764	.2697	1.3957	.1653	-.1574	.9102
chilNO	.2724	.3992	.6825	.4962	-.5176	1.0625

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-.5232	.7237	-.7229	.4711	-1.9555	.9092

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

FearPrim	->	SumPerTh	->	SumIn
SumReSc	Effect	BootSE	BootLLCI	BootULCI
23.4504	.6076	.5357	-.4075	1.7174
28.9474	.2776	.3370	-.3629	.9574
34.4444	-.0525	.4471	-.9616	.8211

Index of moderated mediation:

SumReSc	Index	BootSE	BootLLCI	BootULCI
---	-.0600	.0656	-.1964	.0673

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

W values in conditional tables are the mean and +/- SD from the mean.

----- END MATRIX -----



Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.0 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 7
Y : SumIn
X : FearPrim
M : SumPerTh
W : SumCoSc

Covariates:
age2 career status income CRCfam chilNO

Sample
Size: 133

OUTCOME VARIABLE:

SumPerTh

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.4570	.2089	81.2713	3.6082	9.0000	123.0000
	.0005					

Model

	coeff	se	t	p	LLCI	ULCI
constant	18.5158	10.0340	1.8453	.0674	-1.3458	38.3774
FearPrim	12.1718	10.4026	1.1701	.2442	-8.4194	32.7631
SumCoSc	.8934	.2358	3.7884	.0002	.4266	1.3602
Int_1	-.3846	.3612	-1.0646	.2891	-1.0996	.3305
age2	-.2736	.1336	-2.0486	.0426	-.5380	-.0092
career	-.0725	.4295	-.1687	.8663	-.9227	.7778
status	-1.8190	1.8580	-.9790	.3295	-5.4968	1.8588
income	1.2284	.5151	2.3848	.0186	.2088	2.2479
CRCfam	.4553	.5981	.7612	.4480	-.7287	1.6392
chilNO	.7822	.8846	.8842	.3783	-.9689	2.5333

Product terms key:

Int_1 : FearPrim x SumCoSc

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0073	1.1335	1.0000	123.0000	.2891

OUTCOME VARIABLE:

SumIn

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.5814	.3380	16.4871	7.9151	8.0000	124.0000
	.0000					

Model

	coeff	se	t	p	LLCI	ULCI
constant	13.6502	3.6023	3.7893	.0002	6.5202	20.7803
FearPrim	-.5232	.7237	-.7229	.4711	-1.9555	.9092
SumPerTh	.2222	.0380	5.8417	.0000	.1469	.2975
age2	-.0654	.0612	-1.0700	.2867	-.1865	.0556
career	-.4650	.1890	-2.4600	.0153	-.8392	-.0909
status	-2.0244	.8308	-2.4367	.0162	-3.6688	-.3800
income	.0147	.2364	.0624	.9503	-.4531	.4826
CRCfam	.3764	.2697	1.3957	.1653	-.1574	.9102
chilNO	.2724	.3992	.6825	.4962	-.5176	1.0625

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-.5232	.7237	-.7229	.4711	-1.9555	.9092

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

FearPrim	->	SumPerTh	->	SumIn
SumCoSc	Effect	BootSE	BootLLCI	BootULCI
23.9067	.6616	.6109	-.4496	1.9613

28.3835	.2791	.3483	-.3727	1.0127
32.8602	-.1034	.4518	-1.0244	.7867

Index of moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
SumCoSc	-.0854	.0914	-.2788	.0851

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

W values in conditional tables are the mean and +/- SD from the mean.

----- END MATRIX -----



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