Persuasion and Language: The Relationship between Abstractness of Language and Message Framing on Health Communication

by

Yasemin Görür

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Thesis Advisor: Prof. Dr. Sami Gülgöz

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STATEMENT OF AUTHORSHIP

This thesis contains no material which has been accepted for any award or any other degree or diploma in any university or other institution. It is affirmed by the candidate that, to the best of her knowledge, the thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

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ABSTRACT

The literature on an emerging area of inquiry focusing on effective health related messages is mixed regarding the way message framing affects attitudes and behavioral intentions. The current study proposed two main hypotheses related to increasing the effectiveness of message framing based on language abstractness and involvement. Integrating the Elaboration Likelihood Model with the Linguistic Category Model, we suggested that the relationship between language and persuasion would operate at two sequential levels. At the first level, involvement was expected to moderate the relationship between message framing and persuasion. At the second level, the match between language abstractness and message framing would determine the level of the intention and the behavior to follow a healthy diet. In order to test the hypotheses, field and laboratory studies were conducted with a total sample of 356 participants. An analysis of variance on the data from the field study showed a three-way interaction between involvement, message framing and abstractness of language on long term intention. As for behavior, a chi-square analysis indicated that there was a significant association between involvement, message framing and abstractness of language in field study. Neither of these effects was observed in the laboratory study. The findings and implications of both studies were discussed in further detail.

Keywords: Persuasion, message framing, language, involvement, Elaboration Likelihood Model, health communication, Linguistic Category Model

ÖZET

Sosyal Psikolojide sağlıkla ilgili etkili olan mesajlara odaklanan literatür, mesaj çerçevelemenin tutum ve davranışsal niyetleri üzerine etkisi açısından oldukça karışık bulgular içermektedir. Bu çalışma dil soyutluğunu ve ilgilenime bağlı olarak mesaj çerçevelemesinin etkisini artırmayı hedefleyen iki temel hipotez sunmaktadır. Detaylandırma Olasılığı Modeli ve Dilsel Sınıflama Modeli birleştirerek, dil ve ikna arasındaki ilişkinin iki ardışık düzeyde faaliyet göstereceğini önerilmiştir. İlk düzeyde, ilgilenimin mesaj çerçeveleme ve ikna arasındaki ilişkiyi etkilemesi beklendi. İkinci düzeyde ise dil soyutluğu ve çevreleme arasında uygun eşleşmenin sağlıklı beslenme konusunda niyet ve davranışı belirleyeceği önerildi. Hipotezleri test etmek amacıyla, saha ve laboratuar çalışmaları toplam 356 katılımcı ile yapılmıştır. Alan çalışması üzerine yapılan varyans analizi ilgilenim, mesaj çerçevelemesi ve dil soyutluk derecesinin uzun vadeli niyet üzerinde üç yönlü bir etkileşimi olduğunu göstermiştir. Ancak bu etkileşim laboratuar çalışmasında gözlemlenmemiştir. Alan çalışmasındaki davranış sonuçlarında ki-kare analizi, ilgilenim, mesaj çerçeveleme ve dil soyutluğu arasında anlamlı bir ilişki olduğunu göstermiştir. Bu ilişkilerden hiçbir laboratuar çalışmasında gözlemlenmemiştir. Saha ve laboratuar çalışmasının bulguları ve etkileri daha ayrıntılı olarak ele alınmıştır.

Anahtar Kelimeler: İkna, dil, mesaj çerçeveleme, ilgilenim, Detaylandırma Olasılık Modeli, sağlık iletişimi, Dilsel Sınıflama Modeli

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CHAPTER 1

1. INTRODUCTION

Promotional or preventive messages, especially those related to health communication have been of great interest in many fields including social psychology, consumer behavior, psycholinguistics, health psychology, and marketing. Adopting a healthy diet, having a long life, or reducing the likelihood of catching various illnesses have become major concerns. In addition to physical well-being and financial costs at the individual level, adopting an unhealthy diet has substantial costs at the societal level. Unhealthy individuals would be less productive at work and cause substantial costs to the society. Considering all the costs in the long term, it is essential to produce effective health campaigns in order to alter health behavior and behavioral intention. Hence, an emerging area of inquiry in social psychology focuses on producing effective health messages. Despite the focus on developing promotional messages through various strategies, it is essential to explain and overcome the obstacles that lead to ineffective messages under some circumstances. These are several factors that may reduce the effectiveness of messages. Factors such as target audience and message framing are critical in assuring that a message has intended effect of persuasion. Due to lack of compatibility between target audience and message framing, promotional or preventive messages may create reverse effects such that individuals may reject the message and become alienated, resulting in no persuasion. More specifically, there have been no clear-cut findings about the effects of message framing leading to a preferred mode of persuasion. Should health campaigns include positively framed messages accentuating benefits of behavior change in order to persuade individuals to alter health related intention and behavior? Or should they employ negatively framed messages focusing on the damages of the current behavior in order to make individuals take the issue more

seriously? In addition to framing, moderating variables such as linguistic structure and issue involvement may be influential in determining the effectiveness of the message.

The current study investigated the separate and combined effects of the abstractness of language and message framing in persuasive context. Based on the Elaboration Likelihood Model and the Linguistic Category Model, the match between abstractness of language and message valence were expected to be more persuasive compared to mismatch condition. Specifically, abstract language was expected to be more effective when matched with positively framed messages while concrete language was expected to be more effective when matched with negatively framed messages.

Whether the language used in messages is abstract or concrete should receive considerable attention in order to understand the effectiveness of message framing. Based on the Linguistic Category Model (LCM), Semin et al. (2005) articulated that people with a promotion approach preferred abstract language whereas people with a prevention approach tended to use concrete language. The current study aimed to establish the links between message framing and language abstractness in increasing persuasion. In line with the Language Category Model, we proposed that the match between abstract language and positively framed messages would be more effective compared to the mismatch condition. In contrast, negatively framed messages would be more effective when matched with concrete language. We expected a moderating effect of involvement with linguistic structure, such that, in match condition, positively framed messages would be more influential under low involvement whereas individuals with high involvement would be more persuaded after reading negatively framed messages.

The topic of involvement has been studied in the context of the Elaboration Likelihood Model. In this model, Petty and Cacioppo (1986) proposed that people who are highly involved with an issue would process the message in central route and focus on

the content of the message. Under high involvement, people would give weight to the negatively framed message due to negativity bias. People with low involvement, on the other hand, would not scrutinize the message content but would make inferences based on peripheral cues. Due to low elaboration, people would focus on the message valence and therefore positively framed messages would be more persuasive compared to negatively framed ones. Maheswaran and Mayers (1990) found that positively framed messages were more effective under low elaboration whereas negatively phrased messages were more persuasive under high elaboration. Martin and Marshall (1997) also showed that consumers were more likely to buy cell phones after being subjected to positively phrased advertisements while negatively phrased advertisements increased intention to buy cell phones under high involvement.

CHAPTER 2

2. LITERATURE REVIEW

2.1. The Elaboration Likelihood Model and Involvement

The Elaboration Likelihood Model (ELM) is a dual process theory which explains the underlying mechanisms behind persuasion communication by examining how attitudes are formed or changed (Petty and Cacioppo, 1986). According to the ELM, there are two distinctive routes to process information, known as the central route and the peripheral route. The central route, in which elaboration is high, requires using effortful thinking and cognitive capacity. In other words, individuals deliberately think about the message content by using their prior knowledge and experience. Since individuals would focus on the relevant message content, they would have favorable attitudes when they are convinced with the message and find it reliable whereas they would have negative attitudes if they are not convinced with the message and find it unreliable. According to the ELM, ability to process information and motivation is required in order to process information in the central route.

The second route to persuasion is known as the "peripheral route" which occurs by using non-content cues rather than scrutinizing the message content and strength. In other words, since individuals would not evaluate the message based on the argument's merits, they would be more likely to rely on peripheral cues such as perceived credibility of the source, the number of arguments, or source attractiveness rather than the message content. The mechanisms in which persuasion occurs through peripheral route are explained by non-cognitive processes such as mere exposure or classical conditioning.

According to Elaboration Likelihood Model, the desire to think about the message content, known as motivation and cognitive capability to evaluate the message critically are the key elements to process information in central route. When motivation and ability

to process information in central route are lacking, individuals would be more likely to rely on peripheral cues and, they would not elaborate on the message content and strength. However, if participants have the necessary cognitive capacity, they are not distracted and they also have the prior knowledge about the relevant issue, they would have the ability to elaborate on the message and process the information in central route. As for the motivation factor, in certain conditions such as when individuals are involved with the relevant issue, they would have the motivation to elaborate on the message and process the information in an effortful way. Hence, involvement, which is defined as "the extent to which the attitudinal issue under consideration is of personal importance", carries utmost importance in terms of providing the necessary motivation to process information in central route (Petty & Cacioppo 1986).

According to the Elaboration Likelihood Model, involvement with the relevant issue requires the motivation to elaborate on the presented information and ultimately to decide to accept or reject the message based on argument content and strength. In line with this proposition, since individuals scrutinize the argument's merits, they would be persuaded only when they are convinced with the presented information. However, if they are not convinced with the information and find it unreliable, they would reject the message as a result of effortful thinking (Petty & Cacioppo, 1986).

How a message is framed has differential effects under low and high elaboration as well as high and low involvement situations. Maheswaran and Meyers-Levy (1990) found that positively framed messages were more effective under low elaboration condition whereas negatively phrased messages were more persuasive under high elaboration condition. In a similar vein, Martin and Marshall (1997) showed that individuals were more likely to buy cell phones after being subjected to positively

phrased advertisements while negatively phrased advertisements increased the intention to buy cell phones under high involvement condition.

Integrating the concept of message framing and the Elaboration Likelihood Model, we proposed that under high involvement, people would process the information in effortfully as well as giving more weight to negatively framed message due to negativity bias compared to positively framed messages. People with low involvement, on the other hand, would not scrutinize the message content but would make inferences based on peripheral cues. Due to low elaboration, they would focus on the message valence and therefore positively framed messages would be more persuasive compared to negatively framed ones. Negativity bias, in this context, is the tendency to give more weight to negative information. The nature of negativity bias is explained by different theories. For, example, Kanouse (1984) clarified the concept with the Figure Ground Hypothesis, in which the scarcity of negativity in a generally pleasant world makes the negative information more salient. On the other hand, in the Evolutionary Threat Hypothesis, negativity bias is explained by the need to focus on negative stimuli in order to increase the chances of survival (Pratto & John, 1991). Lastly, Wright (1974) elaborated on the issue by suggesting that individuals should have necessary concerns over the relevant issue to be affected by negativity bias. Considering the effect of involvement condition on negativity bias, under high elaboration condition, people have the tendency to give more weight to negative information due to detailed information processing. In the case of high elaboration, negative information would be more salient because individuals would feel a threat to self. On the other hand, under low elaboration, people would not pay attention to message content and process information based on peripheral cues. In other words, due to heuristic nature, processing information in accordance with peripheral cues would be more practical (Martin & Marshall, 1997).

2.2. Involvement and Message Framing

The influence of message framing and issue involvement on performing health-related behavior has been a hot topic in the literature recently. Message framing is the differential perception of the factually equivalent information depending on the way it is presented and it is strongly related to issue involvement. Whether the message is framed with the emphasis on benefits or losses resulting from the desired behavior may have different effects depending on issue involvement. Although there have been many studies in recent years attempting to understand message framing effects (McCusker & Carnevale, 1995; Shelley & Omer, 1996), some researchers have come up with contradictory findings as to whether positive or negative frames are more persuasive (Martin & Marshall, 1997; Meyerowitz & Chaiken, 1987).

Positively framed messages could be conceptualized as phrases which specify attributes or benefits gained by performing a behavior; negative messages, on the other hand, could be described as phrases which specify attributes or benefits lost by not performing a behavior. According to the Prospect Theory (Kahneman & Tversky, 1982), individuals are risk oriented when options are positively oriented such as "lives saved"; however, they are more risk aversive when the information is negatively phrased such as "lives lost". In other words, positively framed messages are more approach-oriented with the emphasis on gains whereas negatively framed messages are more avoidance-oriented with the emphasis on risk aversive behavior. Many studies found that message framing has implications on health related behavior because gain-framed messages increased intentions to perform such behavior more, compared to loss framed messages (Robberson & Rogers, 1988). On the other hand, loss-framed messages were found to be more effective in increasing self-breast examination (Meyerowitz & Chaiken, 1987). To resolve the conflict between contradictory results, involvement has been introduced as a

moderator in studying the effect of message framing (Maheswaran & Meyers-Levy, 1990). For example, Rothman et al. (1993) proposed that framing effect occurred only when the participants are involved with the issue due to high elaboration of the message. In other words, they proposed that participants should process the message cognitively in order to be influenced by message framing. In a study, Millar and Millar (2000) articulated that, with involved participants, gain-framed messages were more effective in promoting safe driving compared to loss framed messages.

Clarifying the past research that yields contradictory findings, Martin & Marshall (1997) hypothesized that under low involvement; positively framed messages would be more effective, leading individuals to buy cell-phones after being subjected to positively framed advertisements. However, individuals with high involvement would be more persuaded by negatively phrased messages due to negativity bias. As explained before, detailed information processing would lead individuals to give more weight to negative information in order to decrease the threat to self. On the other hand, under low involvement, there would be no detailed information processing and individuals would choose the positive information due to heuristic nature (Martin & Marshall, 1997). In line with these findings, a study by Maheswaran and Meyers-Levy (1990) also supported the link between issue involvement and message framing. They found that positively framed messages which specified gains of a product were more persuasive when people were not engaged in detailed processing. On the contrary, highly involved people were more persuaded by negatively phrased messages specifying the losses related to a product due to detailed processing. In the experiment, participants were given either a positively or negatively framed text including information about the gains and losses of a taking or not taking a cholesterol test. The positively framed messages related to health behavior such as advantages of taking the test were more likely to change behavior for less involved

participants whereas negatively phrased messages were more effective with highly involved participants.

Takemura (1994) also found that framing effect was observed under low involvement but not in high involvement. In his study, participants were asked to make a medical decision based on the text that was either positively or negatively framed. Under positive frame, participants were expected to choose riskless option, on the other hand, under negative frame; they were expected to choose risky option. In addition, the effect of involvement on the framing effect was investigated. According to the results, under low involvement, participants chose the riskless option after seeing the positively framed message whereas those who were subjected to negatively phrased messages chose the risky option. This difference was not observed in high involvement condition. He articulated that framing effect was only limited to low elaboration, once individuals elaborate on the message, the message frame would not influence their choices, in contrast to the Prospect Theory of Kahneman and Tversky (1979). He also argued that the results of Kahneman ad Tversky (1979) were not reliable as they used a within-subject design. However, in the case of the contradictory results of Takemura (1994) and Maheswaren & Meyers-Levy (1990), both researchers preferred between-subjects designs and came up with different results. Therefore, the content and the structure of messages and the tasks in the experiment may lead to contradictory results. For example, Takemura (1994) asked participants to choose from five options to solve a medical problem, whereas Maheswaren and Meyers-Levy (1990) wanted to learn if participants' intention to take a cholesterol test increased after reading negatively or positively framed messages. In this case, there are several distinctions between the two tasks that may have led to discrepant results, one of which can be that the cognitive load to choose one of the five options may have undermined the effect of elaboration.

2.3. Abstract vs. Concrete Language

The idea that language could shape human cognition has received considerable attention over the last decades in a variety of disciplines such social psychology, psycholinguistics and cognitive sciences. Since language could be introduced as a bridge between social behavior and cognition, the study on structural characteristics of language is highly relevant to persuasion research. This section would investigate the relationship between language structure and promotion/prevention orientation in message framing.

According to the Language Category Model, structural differences in language may influence social inference and cognitive processes (Semin & Fiedler, 1991). . Hence, the Language Category Model could be described as a model of interpersonal language in which linguistic devices are used as a general framework of information related to social events (Semin & Fiedler, 1991). There are four different categories of interpersonal terms varying in concreteness: descriptive action verbs, interpretive-action verbs, state verbs and adjectives. Descriptive action verbs are the most concrete ones because they convey a description of an observable event or features e.g. "John hits Michael". The second category, interpretive-action verbs are more abstract in terms of referring to a general class of behaviors such as "John hurts Michael." State verbs, on the other hand, define an unobservable event and enduring states, therefore they are more abstract such as "John hates Michael." The last category, adjectives, are the most abstract due to showing low contextual dependence and more conceptual interdependence such as "John is rude." According the LCM, concrete category is based on contextual factors but abstract category is semantically related to conceptual interpretations. Applying the model into self regulation systems, they articulated that people with promotion orientation used more abstract language when talking about attaining end states whereas prevention oriented people preferred concrete language more in the same situation.

Based on the Linguistic Category Model, Semin et al. (2005) found that promotion vs. prevention approach affects the use of language. The results showed that people with a promotion approach used abstract language more whereas people with a prevention approach preferred concrete language. Promotion focus is related with advancement and growth; however, prevention focus is more associated with security and safety (Crowe & Higgins, 1997). In their study, Semin et al. (2005) explained the model through the relationship between strategic goal orientation and language use. Faced with negative and positive goals, people may show different orientations as a result of different self regulation systems. In other words, based on the Self Regulatory Theory, an individual has two alternative ways to decrease discrepancy between self states; they can either approach the actual self state or avoid the actual self state to reach the desired end (Higgins,1998). In line with this theory, people have the tendency to show promotion orientation due to hopes, aspirations and advancement while prevention orientation results from beliefs about duties, responsibilities and security. Promotion self regulation is associated with inclinations such as progress and advancement to the desired result, however prevention orientation is associated with avoiding making mistakes due to responsibilities and duties. Previous studies showed that different orientations led to different cognitive and motivational processes (Higgins,1998). Semin et al. (2005) have found evidence that these differences in self regulation orientations also occur in language. In line with the findings mentioned above, it is highly essential to clarify the conceptual definition of framing. Kahneman & Tversky (1979) preferred using the terms ”gain and loss frames”, which could be described as equivalent ways of expressing information in terms of gains or losses such as “ lives saved” or “lives lost”. On the other hand, Shen and Dillard (2007) used the terms as “positive or negative framing”, or “disadvantage or advantage framing” by referring to the same definition as gaining

benefits in exchange for performing an action or losses by not performing the action. Hence, it may be articulated that positive or gain framed messages are promotion-oriented whereas negative/loss framed messages are prevention oriented.

Considering that linguistic variations in messages create different effects, messages about a health behavior may either emphasize the benefits of performing desired action or the costs of failing to perform the action. Integrating the Language Category Model with message framing, the match between abstractness of language and message framing is expected to lead to more persuasive messages compared to mismatch conditions. Specifically, when positively framed messages include abstract language, individuals would be more persuaded than when the message uses concrete language. Similarly, when concrete language is matched with negatively phrased messages, individuals would be more persuaded compared to a mismatch condition. In other words, since individuals with promotion orientation prefer more abstract language, they would be persuaded more with a positively framed message when the information is given in abstract language. On the contrary, the match between prevention orientation and concrete language would lead individuals to perceive the negatively framed messages more persuasive when the language is concrete.

Although previous research has yielded findings related to the link between promotion/prevention orientation and abstractness level of language, there has been no work on how language abstractness influences message framing. Hence, the current study would have significant contributions to the literature in attempting to establish a connection between message framing and abstractness of language.

CHAPTER 3

3. PROPOSED MODEL AND HYPOTHESES

Considering that majority of population is not highly involved with health-related or environmental messages, most of the advertisements or campaigns aim at changing the attitudes of consumers with low involvement. In other words, since people are more optimistic about their health issues, they are not highly involved with the relevant issue (Weinstein, 1987). On the other hand, some individuals may have high involvement about health issues due to their past experience of an illness of themselves or a close relative. Therefore, the message should vary depending on the attributes of target audience in order to increase persuasion. In the Elaboration Likelihood Model, if an individual is involved with the issue, he would be more likely to be motivated to process information in central route and elaborate on the message content rather than peripheral cues. Furthermore, past research shows that there is a relationship between abstractness of language and promotion vs. prevention approach (Semin et al., 2005).

This paper investigated the relationship between abstractness of language and message framing on persuasion communication. Based on the Elaboration Likelihood Model and the Linguistic Category Model, when there was a match between abstractness of language and message framing, individuals would be more persuaded compared to mismatch condition. Moreover, involvement was expected to be a moderator in the relationship between message framing and abstractness of language. Based on the literature review, we proposed that the relationship between language and persuasion would operate at two sequential levels. Specifically, at the first level, message framing would influence persuasion based on the moderating effect of involvement. Under high involvement condition, negatively framed messages would be more effective compared to positively framed ones since individuals would pay more attention to negative phrases

due to negativity bias and feeling a threat to self. On the other hand, under low involvement condition, positively phrased messages would be more influential since individuals would process information in peripheral route, paying more attention to positive cues.

At the second level, the interaction between abstractness of language and message framing was explored. In other words, the match between the abstractness of language and message framing was expected to determine how much the message would be persuasive. As seen in the *Table 1*, when there is a match between abstractness of language and message framing depending on involvement condition, the message would be most effective. Discussing in further detail, the match between abstractness of language and message framing would operate regardless of involvement condition; however, which match condition would be more effective would be determined by the moderating effect of involvement.

Explaining the nature of relationship between two sequential levels, the effect of involvement on message framing was expected to override the effect of match between abstractness of language and message framing. In other words, since involvement was a key element in determining the type of information processing system (Petty and Cacioppo, 1986) and the processing system would determine the effectiveness of the negative or positive message framing (Maheswaran & Mayers, 1990), the relationship between abstractness of language and message framing would operate at the second level. In further detail, negativity or positivity of the message was expected to be more salient compared to the abstractness of language. There has been a direct link between message framing and involvement in the past research; however, no link has been established between abstractness of language and involvement. Although both message framing and abstractness of language are related to the approach and avoidance orientation (Kahneman

& Tversky ,1979, Semin et al., 2005), considering the direct link between involvement and message framing, the moderating effect of involvement on message framing would be more influential compared to the match between abstractness of language and message framing. Therefore, the model was developed based on two sequential levels.

Table 1

The Proposed Model

Moderator	1.Level	2.Level	Effectiveness
High Involvement	Positive Frame	Abstract Language	Low
	Positive Frame	Concrete Language	Very low
	Negative Frame	Abstract Language	Medium
	Negative Frame	Concrete Language	High
Low Involvement	Positive Frame	Abstract Language	High
	Positive Frame	Concrete Language	Medium
	Negative Frame	Abstract Language	Very low
	Negative Frame	Concrete Language	Low

Based on the *Table 1*, the Hypotheses 1a and 1b would explain the first level, at which the mediating effect of involvement on message framing would be examined.

Hypothesis 1a: *Under high involvement condition, negatively framed messages would be more persuasive compared to positively framed ones.*

In the Elaboration Likelihood Model, Petty and Cacioppo (1986) demonstrated that highly involved participants would have the necessary motivation to process information in central route. Past research yields findings supporting the argument that highly involved individuals were more persuaded by negatively framed messages due to elaborating on message content. Under high involvement, individuals would give more importance to the prevention-focused messages due to negativity bias. This hypothesis was in line with the findings of the study in which cell phone advertisements including negative messages were more effective under high involvement condition compared to those including positive messages (Martin & Marshall, 1997).

Hypothesis 1b: *Under low involvement condition, positively framed messages would be more persuasive compared to negatively framed ones.*

Under low involvement, due to the lack of motivation and ability to process information in central route, individuals would not scrutinize the message but make inferences based on the peripheral cues. Therefore, they would be more inclined to change behavior with positively framed messages due to message valence. A study by Maheswaran and Mayers (1990) provides evidence for Hypothesis 2b as that positively framed messages were found to be more persuasive under low involvement condition; however, negatively phrased messages were more effective under high involvement condition.

After having clarified the interaction between involvement and message framing at the first level, the relationship between abstractness of language and message framing was explained at the second level. We hypothesized that the match between abstractness of language and message framing would lead to more effective messages compared to mismatch condition. In line with this proposition, the Hypotheses 2a and 2b were proposed as:

Hypothesis 2a: *Positively framed messages would be more persuasive when matched with abstract language compared to concrete language.*

Semin et al. (2005) have indicated that differences in self regulation orientations have an impact on linguistic structure in communication context. According to Self Regulation Theory, promotion orientation is related to inclinations such as progress and approach the desired result due to hopes and aspirations, whereas prevention orientation is more associated with avoiding making mistakes (Crowe & Higgins, 1997). The Linguistic Category Model also proposes that concrete category is based on contextual factors, promoting avoidance orientation; however, abstract category is semantically

related to conceptual interpretations, leading to promotion orientation. Hence, people with promotion orientation preferred more abstract language when talking about attaining end states whereas prevention-oriented people would prefer concrete language more in the same situation (Semin et al, 2005). On persuasion communication, we expected that positive messages would lead to more promotion approach due to focusing on gains while negatively phrased messages would lead to prevention approach due to focusing on losses. As predicted in Hypothesis 2a, since individuals with promotion orientation would prefer abstract language due to focusing on gains, they would be persuaded more after being subjected to positively phrased messages. In other words, the match between positively framed messages and abstract language would increase the persuasion.

Hypothesis 2b*: Negatively framed messages would be more persuasive when matched with concrete language compared to abstract language.*

According to the Linguistic Category Model, the use of concrete language in negatively framed messages would increase the influence of presented information due to the fact that concrete language would trigger prevention orientation. In other words, individuals would have more tendencies to perform the desired health behavior since they would be more motivated with security and safety (Crowe & Higgins, 1997). As prevention orientation is associated with avoiding making mistakes due to obligations and duties, negativity bias would be more effective in determining behavior with negatively framed messages compared to positively framed ones. Therefore, the match between concrete language and negative valence would be more persuasive on persuasion communication compared to mismatch condition.

3.1. Overview of Studies

The hypotheses mentioned above would be tested in both field and laboratory studies. In the field study, we aimed at testing hypotheses in natural settings of individuals with a high level of ecological validity. The field study would be beneficial in terms of measuring the effect of proposed model accounting for all the parameters we could not measure. Previous research has also supported our argument that field experiments may have more robust findings in terms of explaining behaviors to skin cancer compared to laboratory experiments. Since measuring behavior on the beach created involvement with the issue, it was easier to detect message framing effect compared to sterile setting of laboratory (Salovey & Williams-Piehota, 2004).

In addition to field study, the same hypotheses would be tested in a laboratory study by having more control over confounding variables in a sterile setting. According to previous literature, individuals with high involvement spent more time reading informational text due to elaborating on the information compared to those with low involvement (Celci & Olson, 1988). Therefore, since we expected that the time participants spent on reading informational texts would vary depending on involvement level, we also aimed to measure reading time on computerized tasks. Laboratory study both would allow us to test our hypotheses in a more controlled setting and measure reading time spent on informational texts, which was impossible in the field study due to lack of applicability.

CHAPTER 4

4. STUDY 1

In Study 1, the hypotheses were tested using a field study. The purpose of using a field study is to test the hypotheses in natural settings of participants in which they were expected to behave more naturally. Considering our research interest as altering intention and behavior about eating habits depending on language, we intended to understand participants' actual reaction to information in their daily life accounting for all the parameters we could not measure. Previous research on health communication also supported our argument in that field studies are more effective in the health literature due to making participants involved with the issue easier compared to laboratory studies (Salovey & Williams-Piehota, 2004). Therefore, a field experiment was conducted to test the effects of three variables in a 2 (Abstractness of language: abstract vs. concrete) x 2 (Message framing: positive vs. negative) x 2 (Involvement: low vs. high) design. The experimenter went to different locations varying in socio-economic status in Istanbul and asked participants to participate in a research about eating habits in Turkey. After reading the booklets and answering the questions, participants were thanked and offered biscuits in exchange for their contribution to the study. Upon choosing one of the biscuits, they were thanked and fully debriefed.

4.1. Method

4.1.1. Participants and Design

186 individuals from different locations in Istanbul participated in the study and they were randomly assigned to one of the four conditions. Descriptive statistics of the sample attributes can be seen in *Table* 2.

Table 2

Descriptive statistics of the sample's physical attributes (N=178)

	Mean	Median	SD	Min.	Max.
Age	30.79	27	11.86	18	73
Weight	69.26	68	15.17	41	114
Height	170.62	170	9.24	145	196
Body mass index	23.60	23.28	4.23	14	39

In order to collect data from individuals varying in social economic status, sex, occupation and age, different regions of Istanbul were visited. In the purpose of collecting data from high SES, İstinye Park Shopping Mall and Beşiktaş Square were chosen. For medium and low SES, the experimenter collected data from the individuals who lived in Eminönü, Üsküdar and Eyüp. The sex and location distributions can be seen in *Table* 3.

Table 3

Descriptive statistics of the sample on sex and location (N=186)

		Frequency	Percent
Sex	Female	96	51.6
	Male	90	48.4
Location	İstinye Park	29	15.6
	Beşiktaş	51	27.4
	Eminönü	22	10.8
	Üsküdar	42	22.6
	Eyüp	44	23.7

Regarding the occupation, the data was collected from individuals with a diverse variety of occupations including students, pensioners, housewives, nurses, engineers, directors or shopkeepers. The frequencies of the occupation can be seen in *Table* 4.

Table 4

Occupation distribution of the sample (N=182)

	Frequency	Percent
Student	52	28.0
Housewife	19	10.2
Engineer	11	5.9
Pensioner	12	6.5
Public Servant	14	7.5
Other	77	41.4
Total	185	99.5
Missing	1	0.5

4.1.2. Variables

In order to test the proposed hypotheses, three independent variables were included in the experiment. Abstractness of language and message framing were manipulated and were used as categorical variables in the analysis. On the other hand, involvement was measured with a scale and a grouping variable was created by applying a median split to involvement scores by dividing the variable into two conditions as high and low involvement.

As for the dependent variables, intention was measured with a scale in the experiment and was introduced as a continuous variable. Behavior was measured and used as a categorical variable as healthy vs. unhealthy choice in the analysis.

4.1.2.1. Independent Variables

4.1.2.1.1. Abstractness of Language

Turkish population mostly does not follow a healthy diet, instead they consume too much fat, sugar and salt; hence, the messages are designed to include information about eating habits (Mahley et al., 1995). The booklets were composed of three different sections including involvement scale, informational text and intention scale. The informational texts used in booklets were adapted from the booklets prepared for

following a healthy diet for Turkish citizens by the Turkish Ministry of Health ("Sağlıklı Beslenme Broşürleri", 2009).

The informational texts were composed of two sections; in the first section, information was given about the benefits of following a healthy diet or costs of following an unhealthy diet. In the second section, a list to adopt a healthy diet or a list to avoid from unhealthy diet was given. Specifically, positively framed texts were designed to include messages touching upon advantages of following a healthy diet and what to eat in order to have a good nutrition. On the other hand, negatively phrased texts were composed of disadvantages of following an unhealthy diet and what not to do to avoid unhealthy nutrition. Participants would randomly receive one of the 4 booklets on a healthy diet. Based on the LCM, abstractness of language was manipulated by creating messages varying in adjectives, state verbs, descriptive- action verbs and interpretative action verbs. In other words, abstract texts were designed to include mostly adjectives and state verbs whereas concrete texts were mostly composed of descriptive action verbs and interpretative action verbs (see Appendix A). In order to check inter-rater reliability, the texts were coded by seven independent raters and mean of those scores were used to measure the difference between abstractness and abstractness of language. To make sure they understood the coding scheme, a coding guideline was given to all raters (see Appendix B). Based on the article by Cohen, Hedebouw and Semin (2006), verbs and adjectives were coded as one of the four categories in the LCM and scored from 1 to 4 depending on the abstractness level, in which the higher score meant the text was more abstract.

The differences in abstraction scores in positively framed and negatively framed booklets were respectively 0.92 and 0.78. Based on the article by Semin et al (2005) in which the difference between abstract and concrete language was 0.45 in Experiment 1

and 0.39 in Experiment 2, the differences in abstraction scores of the four texts could be considered as significant. The scores of the all four texts can be seen in *Table 5.*

Table 5

The mean of abstractness scores varying from 1 to 4(N=7)

Text Type	Abstractness Scores
Positive and Concrete Framing	2.74
Positive and Abstract Framing	3.66
Negative and Concrete Framing	2.83
Negative and Abstract Framing	3.61

4.1.2.1.2. Message Framing

In the formulation of positive vs. negative frame, the negation particles in Turkish such as "mez, -maz," and "-me, -ma" as well as antonyms such as "ill" in exchange for "healthy" were used. Moreover, positively framed message included arguments which put emphasis on the benefits of consuming healthy food while negatively framed messages were formulated with arguments related to drawbacks of consuming unhealthy food. In line with the proposed model, two different versions of positive and negative framed messages were formulated based on abstract and concrete language (see Appendix A). In order to check inter-rater reliability, four independent raters were asked to find negative vs. positive words in each text. A coding guideline was given the raters beforehand (see Appendix B). The scores were calculated by dividing the number of positive vs. negative words to word count in each text. The means of all raters for positivity vs. negativity scores could be seen in *Table 6.*

Table 6

The mean of positivity vs. negativity scores varying from 0 to 1(N=4)

Text Type	Positivity	Negativity
Positive and Concrete Framing	0.31	0.02
Positive and Abstract Framing	0.25	0.02
Negative and Concrete Framing	0.05	0.30
Negative and Abstract Framing	0.04	0.28

4.1.2.1.3. Involvement

A Health Motivation and Knowledge Scale was adapted from Moorman (1990) and Moorman & Matulich (1993) to measure participants' involvement with adopting a healthy life style (see Appendix C). The involvement scale based on 18 items were composed with a high index of reliability (Cronbach's alpha = 0.75). Involvement was turned into a categorical variable by dividing into two groups as high and low involvement. Since a great number of participants' scores were around the median, median split was not applied. Instead, 33% percent of participants cluttered around the median were removed and the rest were coded into two conditions as low and high involvement.

4.1.2.2. Dependent Variables

4.1.2.2.1. Intention

The study was designed to measure both the intention to adopt a healthy diet and behavior change after being subjected to the one of the four conditions. Hence, in order to measure intention to adopt a healthy diet, a Likert type scale with two items was developed based on Kronrod, Grinstein & Wathieu (2012). The scale was composed of two items measuring the behavioral intention to adopt a healthy diet in short term and long term (see Appendix C). The intention scale measuring participants' short term and long term intention to adopt a healthy diet was composed with a high index of reliability (Cronbach's alpha = 0.73).

4.1.2.2.2. Behavior

Positively phrased texts were designed to encourage consuming less sugar, fat and more multigrain products whereas negatively phrased texts were designed to be composed of messages to avoid consuming too much sugar, fat and products that are not multigrain. Therefore, after completing all the tasks, participants were offered to choose

one of the biscuits varying in multigrain, fat and sugar. By offering biscuits as a gift in exchange for their contribution to the study, we intended to measure direct behavior upon being subjected to the messages.

In order to determine biscuit type, a pilot test was conducted with 79 participants. Participants were asked to rate 18 different biscuits from 1 to 5 for their healthiness (see Appendix D). The means and standard deviations of the products used in the pilot test can be seen in Appendix D. According to the results of the pilot test, two products rated as healthy and two products rated as unhealthy were used as the choices that would act as a dependent measure in the experiment. The healthy biscuits (Burçak Kepekli and Eti Form Limonlu) were consistent with the information given in the to-do list in positively phrased text in terms of including less fat, sugar and more multigrain. On the other hand, the unhealthy biscuits (Rondo Sade Kremalı and Biskrem) were consistent with the information given in the not-to-do list in negatively phrased booklets by being rich in fat and sugar and lacking in multigrain. The means and standard deviations of healthiness ratings for those products can be seen in *Table 7.*

Table 7

Means and SDs of products according to Healthy Product Survey (N=79)

Product Name	Mean	Standard Deviation
Burçak Kepekli	3.61	1.06
Eti Form Limonlu	3.19	1.20
Biskrem	1.67	0.81
Rondo Sade Kremalı	1.62	0.74

Based on their choice of healthy or unhealthy biscuits, direct behavior as it relates to a healthy diet was measured. Accordingly, choosing Burçak Kepekli or Eti Form Limonlu were coded as healthy behavior whereas choosing Biskrem or Rondo Sade Kremalı were interpreted as unhealthy behavior. In the case of no choice, participants were asked to tell the reason why they preferred not eating any of the biscuits. If the

answer was related to health concerns, no choice condition was also coded as healthy behavior.

4.1.3. Manipulation Checks

In order to check message framing manipulation, two questions regarding the positivity and negativity of information were asked in the booklet. A credibility scale measuring how credible the participants found the informational text (Cronbach's alpha = 0.68) was composed. In addition, a negative emotion scale to measure participants' negative emotion during the time they read the informational text (Cronbach's alpha = 0.83) was composed to understand if their emotions would change depending on the message framing, abstractness of language and involvement. A question measuring how much participants were confident about their health attitude was asked. Last, the perceived threat participants felt while they were reading the informational text was measured to examine the effect of text type on perceived threat (see Appendix C).

4.2. Procedure

The experimenter went to different locations varying in socio-economic status such as Eminönü Square and İstinye Park Shopping Mall and asked participants to participate in a study about eating habits in Turkey. They were asked to read the booklet and answer some questions. The material was given as hardcopy. For the randomization process, the booklets were sorted randomly and participants received the booklet in the sorted order. After reading the booklets and answering the questions, participants were thanked and offered biscuits in exchange for their contribution to the study. If they preferred not to take any biscuits, they were asked to tell the reason in order to understand whether the no choice condition was related to any health concerns. After choosing one of the biscuits or telling the reason why they did not prefer taking any, they were thanked and fully debriefed.

4.3. Results

4.3.1. Descriptive Statistics

The descriptive statistics regarding involvement, intention to follow a healthy diet and negative emotion, positivity of information, negativity of information, perceived threat and credibility of information can be seen in *Table 8*.

Table 8

Descriptive statistics and reliability scores of scales

	Mean	Median	SD	Min.	Max.	N
Involvement	60.84	61	9.59	36	86	183
Intention	6.35	6	1.70	2	10	186
Negative Emotion	10.03	10	4.10	4	20	186
Positivity of Information	3.83	4	.91	1	5	185
Negativity of Information	1.72	1	.90	1	5	186
Perceived Threat	2.84	2	1.21	1	5	185
Credibility	7.72	8	1.55	2	10	186

4.3.2. Manipulation Checks

Message Framing: A question regarding the positivity of information was asked to check positive message framing. Accordingly, positive message framing was expected to convey more positivity compared to negative message framing. An analysis of variance was conducted to test the effect of message framing on positivity of the information. There was no significant effect of message framing on positivity of the information ($F(1,183) = 1.58$, $p>.05$). Comparison of mean scores showed that participants felt positive message framing conveyed more positivity ($M= 3.92$ $SD=0.91$) compared to negative message framing ($M=3.75$ $SD=0.90$), although this difference was not significant.

Likewise, a question testing the negativity of information was asked to check negative message framing manipulation. We expected that negative message framing would convey more negativity compared to positive message framing. An analysis of variance was conducted to test the effect of message framing on negativity. The analyses

showed that there was a significant main effect of message framing on negativity of information (F (1,181) = 4.41, p< .05). Participants felt negative message framing conveyed more negativity (M= 1.86 SD=0.88) than positive message framing (M= 3.92 SD=0.91).

Abstractness of Language*:* The perceived threat participants felt was expected to change depending on abstractness of language. Specifically, abstract language would convey less threat compared to concrete language due to promotion orientation. Likewise, concrete language was expected to convey more perceived threat compared to abstract language due to prevention orientation. An analysis of variance was conducted to test the effect of abstractness of language on the level of perceived threat participants felt after they read the informational text. The analysis revealed that concreteness of language had no main effect on the perceived threat participants felt (F(1,181)= 2.15, p > 05). Participants felt slightly more perceived threat after they read concrete informational text (M= 2.35 SD=1.08) than abstract informational text ((M= 2.12 SD=1.16), although this difference was not significant.

Credibility of Information: Since participants would not show intention to follow a healthy diet if the information was not credible, two questions regarding to credibility of information were asked. An analysis of variance was conducted to test the effect of message framing and abstractness of language on credibility of the information. The analysis showed that there was no main effect of message framing ($F<1$) and abstractness of language (F(1,182)= 1.30, p >.05) on credibility of the informational text. There was no significant difference between positive (M= 7.77 SD=1.36) and negative message framing (M= 7.67 SD=1.74). Likewise, abstract language (M= 7.59 SD=1.73) was found to be as credible as concrete language (M= 7.85 SD=1.35).

4.3.3. An Analysis of Variance : Intention as Dependent Variable

In order to test hypotheses 1a and 1b related to intention, an analysis of variance (ANOVA) was conducted between involvement and message framing on intention to follow a healthy diet. These two hypotheses are:

Hypothesis 1a: *Under high involvement condition, negatively framed messages would be more persuasive compared to positively framed ones.*

Hypothesis 1b*: Under low involvement condition, positively framed messages would be more persuasive compared to negatively framed ones.*

The ANOVAs results showed a main effect of involvement on participants' intention to follow a healthy diet (F (1,124) = 31.08, p<.001). Specifically, under high involvement, participants showed more intention to adopt a healthy diet (M= 7.06 SD=1.61) than those under low involvement (M= 5.42 SD=1.66). No main effect of message framing on intention to follow a healthy diet was found statistically significant ($F<1$).

Since adopting healthy eating habits requires long term intention and dedication, an analysis of variance was conducted to test the effect of involvement, message framing and abstractness of language on long term intention. The analysis showed that there was a main effect of involvement on the long term intention to follow a healthy diet (F (1,124) = 22.74, p<.001). Participants with high involvement showed more tendency to adopt a healthy diet in the long term (M= 3.62 SD=0.83) compared to participants with low involvement (M= 2.84 SD= 0.98).

Regarding to hypotheses 1a and 1b, the analysis revealed that there was no interaction between involvement and message framing on intention to follow a healthy diet in the long term ($F<1$). The analysis revealed that participants with low and high involvement showed approximately the same intention to adopt a healthy diet in the long

term after they read negative or positive texts (see *Table 9*). Hypotheses 1a and 1b related to intention to follow a healthy diet in the long term were not supported.

Table 9

Means and SDs of message framing on the long term intention

Low Involvement	Mean	SD	N
Positive Text	2.83	0.97	29
Negative Text	2.84	1.00	33
High Involvement	Mean	SD	N
Positive Text	3.69	0.82	32
Negative Text	3.55	0.85	31

In order to test hypotheses 2a and 2b related to intention, abstractness of language was added to the analysis. Specifically, an analysis of variance (ANOVA) was conducted to test the effect of involvement, message framing and abstractness of language on intention to follow a healthy diet in the long term. These two hypotheses were:

Hypothesis 2a: *Positively framed messages would be more persuasive when matched with abstract language compared to concrete language.*

Hypothesis 2b: *Negatively framed messages would be more persuasive when matched with concrete language compared to abstract language.*

The analysis showed that there was a main effect of involvement on the long term intention to follow a healthy diet ($F(1,124) = 25.89$, $p<.001$). Participants with high involvement showed a higher tendency to adopt a healthy diet ($M= 3.62$ $SD=0.83$) compared to participants with low involvement ($M= 2.84$ $SD= 0.98$). There was no significant interaction between message framing and abstractness of language on intention to follow a healthy diet in the long term ($F<1$). A three - way interaction between involvement, message framing and abstractness of language was evident on participants' long term intention ($F(1,121)= 7.98$, $p<.01$). The mean scores and SDs related to all variables can be seen in *Table 10.*

Table 10

Means and SDs of message framing, abstractness of language and involvement on long term intention

Low Involvement		Mean	SD	N
Positive Text	Abstract Text	2.62	0.87	13
	Concrete Text	3.00	1.03	16
Negative Text	Abstract Text	2.93	1.07	14
	Concrete Text	2.79	0.98	19
High Involvement		Mean	SD	N
Positive Text	Abstract Text	4.06	0.57	16
	Concrete Text	3.31	0.87	16
Negative Text	Abstract Text	3.35	0.88	20
	Concrete Text	3.90	0.70	11

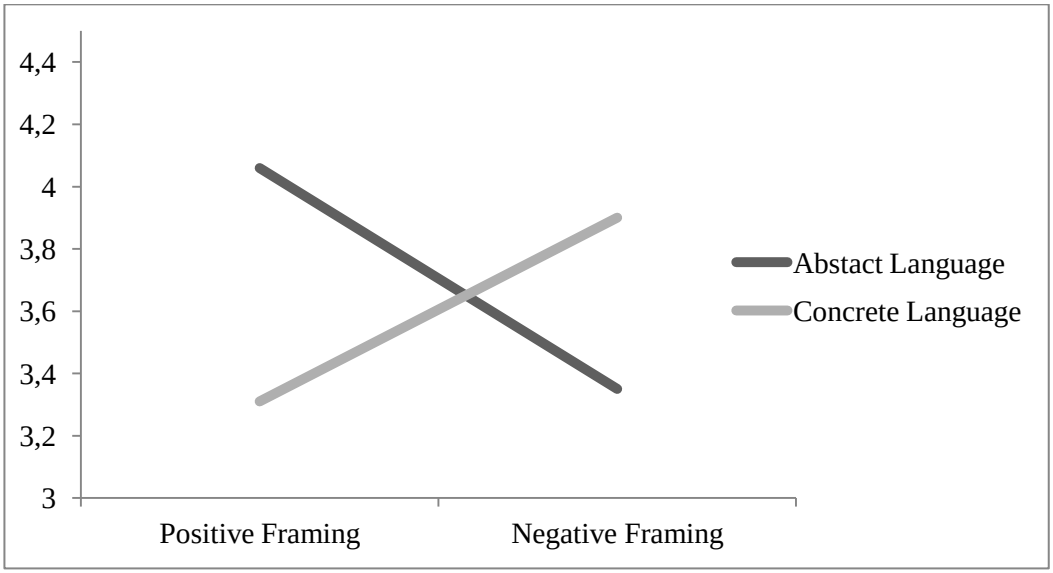
Post hoc analyses were conducted between all possible means to understand group differences. Tukey's HSD analysis indicated that positive message framing matched with abstract language was significantly more effective under high involvement than under low involvement ($p<.001$). Similarly, negative message framing matched with concrete language was significantly more effective under high involvement condition than under low involvement condition ($p<.05$).

Other post-hoc analyses showed that positive message framing matched with abstract language was found to be more persuasive under high involvement condition compared to negative message framing matched with abstract language ($p<.05$), positive framing matched with concrete language ($p<.05$) and negative message framing matched with concrete language ($p<.01$) under low involvement. Negative message framing matched with concrete language under high involvement changed more intention compared to positive message framing matched with abstract language under high involvement ($p<.05$).

An analysis of variance was conducted to test the interaction between message framing and abstractness of language on the long term intention separately for high and low involvement groups. A two-way interaction between message framing and

abstractness of language was found significant under high involvement condition (F (1, 59) = 10.61 p<.01).

Post hoc analyses were conducted between all possible pairwise contrasts to test group differences under high involvement condition. Tukey's HSD analysis showed that positive message framing matched with abstract language was more effective under high involvement condition compared to concrete language (p<.05). Likewise, positive message framing matched with abstract language was found to change intention more under high involvement condition compared to negative message framing matched with abstract language (p<.05). Hypothesis 2a was supported in that positive framing matched with abstract language was more effective than concrete language only under high involvement condition, although hypothesis 2b was not supported. Comparison of mean scores indicated that negative message framing matched with concrete language was more effective than abstract language under high involvement condition (see *Figure 1.*), although this difference was not significant according to post hoc analyses (p>.05).



. *Figure 1.* Matching condition under high involvement

Regarding the low involvement condition, there was no significant interaction under low involvement condition (F (1, 58) = 1.06 p >.05). Therefore, hypotheses 2a and 2b were not supported under low involvement condition.

4.3.4. Chi- Square Analysis: Behavior as Dependent Variable

The same hypotheses were tested for behavior by conducting chi-square analyses. A set of chi-square tests was conducted to test the effect involvement, message framing and abstractness of language on healthy behavior. A chi-square test was conducted to test the association between involvement and behavior. A statistically significant relationship between involvement and behavior was evident, χ^2 (1, N =117) = 6.58, p < .02. Participants with high involvement were more likely to choose healthy behavior and less unhealthy behavior compared to participants with low involvement (see *Table 11*).

Table 11

Crosstabulation of involvement to behavior (%)

		Low Involvement	High Involvement
Behavior Type	Healthy Behavior	42.7	57.3
	Unhealthy Behavior	68.6	31.4
Total		50.4	49.6

A Chi-square test was conducted to test hypotheses 1a and 1b related to behavior. The association between message framing, involvement and healthy behavior was tested and found significant (χ^2 (1, N =117) = 6.58, p < .02). Specifically, there was a significant difference between low involvement and high involvement groups under negatively phrased texts (χ^2 (1, N =57) = 9.76, p < .02.). Negatively phrased messages were found to be more effective in leading to healthy biscuit choice for participants with high involvement than those with low involvement (see *Table 12*).

Hypothesis 1a was supported in that negative message framing was more effective in healthy behavior under high involvement compared to low involvement condition. In

contrast, hypothesis 1b was not supported in that positive message framing was not more effective in predicting behavior under low involvement condition compared to high involvement condition.

Table 12

Crosstabulation of involvement and message framing to behavior (%)

Message Framing	Behavior Type	Low Involvement	High Involvement	Total
Positive Text	Healthy Behavior	26.7	36.7	63.3
	Unhealthy Behavior	20.0	16.7	36.7
Negative Text	Healthy Behavior	33.3	43.9	77.2
	Unhealthy Behavior	21.1	1.8	22.8
Total	Healthy Behavior	29.9	40.2	70.1
	Unhealthy Behavior	20.5	9.4	29.9

In order to test hypotheses 2a and 2b, a Chi-square test was conducted to test the association between involvement, message framing, abstractness of language and behavior. The analysis indicated that there was a significant association between involvement, message framing and abstractness of language (χ^2 (1, N =117) = 7.01, p <.02). Negative message framing matched with abstract language was more likely to determine healthy behavior for participants with high involvement compared to those with low involvement (see *Table 13 & Figure 2*). The assumption of the Chi-square test in which the expected value in each cell should be greater than 5 was violated. However, Pearson's Chi-Square analysis was considered as valid because of the expected zero count in unhealthy condition cell based on proposed hypotheses.

Table 13

Crosstabulation of involvement, message framing and abstractness of language to behavior (%)

Abstractness of Language	Behavior Type		Low Involvement	High Involvement	Total
Positive Text	Abstract Text	Healthy Behavior	28.6	39.3	67.9
		Unhealthy Behavior	14.3	17.9	32.1
	Concrete Text	Healthy Behavior	25.0	34.4	59.4
		Unhealthy Behavior	25.0	15.6	40.6
Negative Text	Abstract Text	Healthy Behavior	17.9	57.1	75.0
		Unhealthy Behavior	25.0	0.0	25.0
	Concrete Text	Healthy Behavior	48.3	31.0	79.3
		Unhealthy Behavior	17.2	3.4	20.7

Hypotheses 2a and 2b were not supported in both high and low involvement condition. Specifically, positive message framing matched with abstract language was not statistically more effective in determining healthy behavior compared to concrete language. Likewise, negative message framing matched with concrete language was not more effective in determining healthy behavior compared to abstract language. In contrast to hypothesis 2b, negative message framing matched with abstract language was found to be more effective for participants with high involvement compared to those with low involvement (see *Figure 2*).

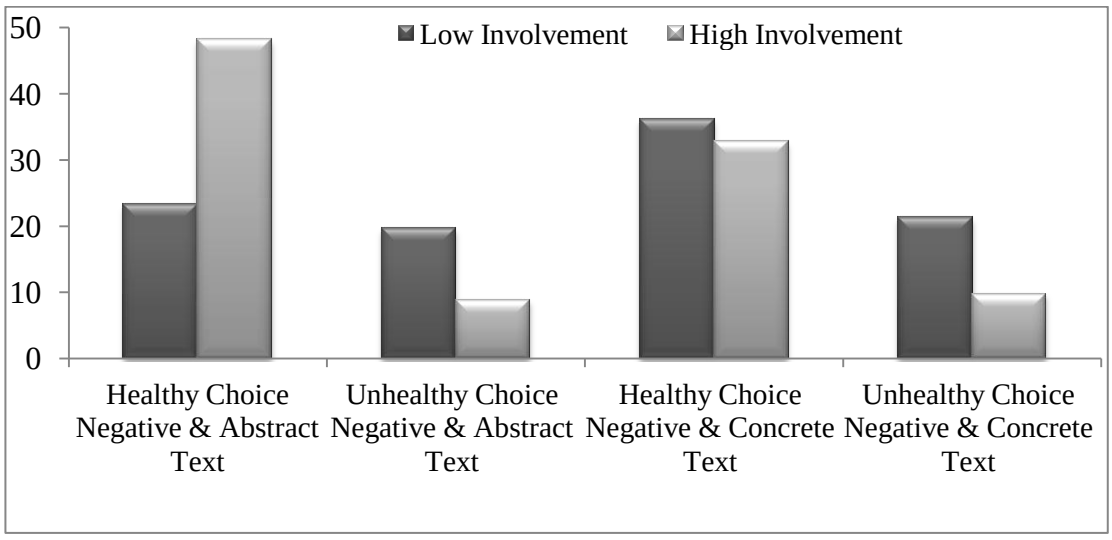


Figure 2. The relationship between involvement, message framing and abstractness of language on biscuit choice

4.3.5. An Analysis of Variance: Negative Emotion as Dependent Variable

Although not a part of the two predicted outcomes, the effect of involvement, message framing, and abstractness of language on the emotions that the participants felt while they were reading the texts was tested by analysis of variance. The analysis revealed that there was a main effect of involvement on the negative emotion. (F (1,124)= 10.11, p<.01). Specifically, participants with low involvement felt more negative emotion when they were reading the informational text (M= 11.50 SD= 3.96) than participants with high involvement (M= 9.10 SD= 4.25).

The analysis also indicated that there was a main effect of message framing on the negative emotion felt while they were reading the informational text (F (1,124)= 4.38, p<.05). Participants were more likely to feel negative emotion when they were reading negative message framing (M= 11.21 SD= 4.48) than positive message framing (M= 9.36 SD= 3.84). Mean scores and SDs of message framing on negative emotion can be seen in *Table 14.*

Table 14

Means and SDs of message framing on negative emotion

Low Involvement	Mean	SD	N
Positive Text	10.62	3.69	29
Negative Text	12.28	4.09	33
High Involvement	Mean	SD	N
Positive Text	8.22	3.67	32
Negative Text	10.03	4.67	30

4.3.6. Relationships between Related Variables

Without excluding the middle 33% percent of the sample, correlation analyses were conducted in order to examine the relationship between involvement, intention,

negative emotion, credibility, age and body mass index. The correlation results between all the variables can be seen in *Table 15*.

Table 15

Correlation between variables

	1	2	3	4	5	6
Involvement	-	-	-	-	-	-
Intention	.45**	-	-	-	-	-
Negative Emotion	-.36**	-.28**	-	-	-	-
Credibility	.09	.23**	-.09	-	-	-
Attitude Confidence	.46**	.51**	-.36**	.05	-	
Age	.21**	.12	-.07	.06	.12	-
Body Mass Index	.03	-.09	.05	-.04	.06	.48**

** p<.01
* p<.05

A correlation analysis was conducted separately for low and high involvement groups in order to test differences. The tests revealed that credibility of the texts and the positivity of the texts were strongly and positively correlated for both high and low involvement groups ($r(61) = .71$, $p < .001$, $r(60) = .70$, $p < .01$, respectively). However, there was a difference between groups in terms of the relationship between the perceived threat they felt after they read the informational text and positivity or negativity of the text. Under low involvement, there was a positive relationship between positivity of the informational text and the perceived threat ($r(60) = .34$, $p < .01$). In contrast, there was no significant relationship between the perceived threat and negativity of informational text ($r(60) = -.20$, $p > .05$). As for high involvement condition, there was a positive correlation between negativity of the informational text and perceived threat ($r(60) = .25$, $p < .01$); however, there was no significant relationship between the perceived threat and positivity of the informational text ($r(60) = -.20$, $p > .05$).

Low and high involvement groups also differed in the relationship between intention to follow a healthy diet and perceived threat the felt after reading the informational text. Although no significant relationship was observed for low

involvement group, long term intention and perceived threat were negatively correlated for high involvement group ($r(60) = -.40$, $p < .01$).

4.4. Discussion

4.4.1. Hypotheses 1a and 1b: Intention

In the hypothesis 1a, it was claimed that participants with high involvement would be persuaded more by negative message framing due to processing information in the central route, in which the perceived threat caused by negative message framing would be more effective. In contrast, in hypothesis 1b, participants with low involvement would be persuaded more by positive message framing due to processing information in peripheral route, in which positive cues would be more effective. Hypotheses 1a and 1b were not supported in that there was no interaction between message framing and involvement on the effect of intention to follow a healthy diet in the long term.

Examining the analyses on negative emotion participants felt while they were reading the informational text, participants with low involvement were found to have more negative emotion compared to those with high involvement, which also contradicted with our assumption that high involvement would cause more negative emotion. The contradictory results on the relationship between involvement and negative emotion could be explained through the effect of involvement scale participants took before they read the informational text. Participants with low involvement had more negative emotion because they became aware of their lack of action in following a healthy diet in daily life. As for participants with high involvement, the attitude confidence prevented them from feeling too much perceived threat and negative emotion and led them to show more intention to follow a healthy diet in the long term compared to those with low involvement.

Considering the effect of negative message framing on long term intention, we could claim that participants with both high and low involvement might have processed the information in central route. Specifically, participants with high involvement found the negative message framing more effective due to their long term involvement with the issue. In contrast, participants with low involvement were more likely to be persuaded with negative message framing due to a sudden increase in involvement caused by taking the General Health Scale.

4.4.2. Hypotheses 2a and 2b: Intention

Under high involvement condition, hypothesis 2a was supported in that positive message framing matched with abstract language was more effective compared to concrete language. Under high involvement, hypothesis 2b was not supported in that post hoc analysis showed no significant difference between negative message framing matched with concrete and abstract language. However, comparison of mean scores revealed that negative message framing matched with concrete language was more persuasive compared to abstract language.

Considering the three-way interaction between involvement, message framing and abstractness of language, post hoc analyses showed that positive message framing under high involvement condition was more effective compared to the low involvement condition. Likewise, negative message framing was more likely to change intention under high involvement condition compared to low involvement. However, those differences were not observed for positive message framing matched with concrete language and negative message framing matched with abstract language. The positive relationship between involvement and intention explains why match conditions were more effective under high involvement compared to low involvement condition. However, considering that only match conditions differed in high and low involvement groups, we could claim

that matching between positive message framing and abstract language was more effective than concrete language. Likewise, matching between negative message framing and concrete language was more effective compared to abstract language.

Under low involvement, on the other hand, hypotheses 2a and 2b were not supported, which could be explained by the sudden increase in involvement due to involvement scale. Since participants could not process information in peripheral route due to increase in concern about their daily eating habits, positive message framing matched with abstract language was not effective as expected. The analysis on the main effect of negative message framing on negative emotion support our argument in that participants with low involvement may not have processed information in the peripheral route.

4.4.3. Hypotheses 1 and 2: Behavior

Having clarified the hypotheses regarding the intention, there were unexpected findings regarding subsequent healthy behavior. Chi-square analyses showed that there was a main effect of involvement on behavior. Specifically, participants with high involvement showed more healthy behavior and less unhealthy behavior compared to those with low involvement. The results on the relationship between involvement and behavior could be justified through positive relationship between attitude confidence and involvement. Although there was no main effect of message framing on intention to follow a healthy diet, analyses indicated that negative message framing and healthy behavior were positively related. The results could be explained through the interaction between involvement and effect of message framing on negative emotion. Specifically, although negative emotion did not affect intention to follow a healthy diet in the long term, participants were more likely to choose healthy behavior based on negative emotion they felt while they were reading informational text.

In addition to message framing, chi-square analyses revealed that under abstract language, behavior and involvement were associated. Specifically, participants with high involvement were more likely to choose healthy behavior compared to participants with low involvement. Although participants with high involvement were more likely to show intention after they read negative message framing compared to abstract language, they were more likely to choose healthy behavior after they read negatively framed message matched with abstract language compared to concrete language.

CHAPTER 5

5. STUDY 2

In Study 1, the data was collected by distributing hardcopies of the booklets. However, due to lack of applicability, the time they spent on reading the informational text was not measured. Previous literature showed that individuals with high involvement spent more time on reading material due to processing information in central route compared to individuals with low involvement. In contrast, individuals with low involvement spent less time reading material due to processing information in peripheral route compared those with high involvement (Celci & Olson, 1988). Therefore, in Study 2, because we expected the reading time would change depending on involvement level and information processing mechanism, the same experiment was conducted in the laboratory setting with computerized tasks. The informational text was presented in eight chunks of approximately equal sizes of information. The time each participant spent reading each part of the text was measured.

5.1. Method

5.1.1. Participants and Design

In study 2, we used a similar 2(Abstractness of language: abstract vs. concrete) x 2 (Message framing: positive vs. negative) x 2(Involvement: low vs. high) design. 170 students from different departments in Koç University were randomly assigned to one of the four conditions. Descriptive statistics regarding the characteristics of the sample can be seen in *Table* 16.

Table 16

Descriptive statistics of sample characteristics (N=156)

	Mean	Median	SD	Min.	Max.
Age	21.29	21	1.68	18	31
Weight	60.56	58	11.51	41	103
Height	168.56	167	8.78	153	193
Body mass index	21.20	20.80	2.79	16.37	32.05

The sample was composed of 138 males and 32 females; therefore equal distribution of sex was not achieved. The departments of the students can be seen in *Table* 17.

Table 17

Descriptive statistics of sample (N=170)

	Frequency	Percent
Psychology	66	38.8
Sociology	20	11.8
Management	50	29.4
Engineering	10	5.9
Other	24	14.1

5.1.2. Variables

In the Study 2, the same independent and dependent variables were used as in Study 1. To test message framing, 85 positive texts and 85 negative texts were presented. Likewise, 86 abstract texts and 84 concrete texts were used to test the effects of abstractness of language.

Involvement scale (Cronbach Alpha = .84), intention scale (Cronbach Alpha = .67), negative emotion scale (Cronbach Alpha = .88) and credibility scale (Cronbach Alpha = .78) were used. Involvement was divided into two conditions as high and low involvement. 33% percent of participants cluttered around the median were removed and the rest were coded into two conditions as low and high involvement.

Different from Study 1, the time participants spent on reading informational text was measured. According to the Turkish Ministry of Education (Hızlı Okuma ve Anlama Teknikleri, 2012), reading speed for Turkish speakers was categorized into three groups as slow readers (80-160 words per minute), average readers (160-220 words per minute) and fast readers (220-320 words per minute). The average reading speed among students in Study 2 was approximately 184 words per minute. Based on the data obtained from the official website and considering that university students were mostly among average and fast readers, we eliminated outliers by removing two standard deviation of the mean.

5.2. Procedure

Undergraduate students in Koç University participated in the experiment and they were given extra credit in exchange for their contribution. Each participant sat in front of a computer and was asked to read the booklet on the computer and answer the questions. The time they spent on reading informational texts was measured as seconds on the computer. Last, experimenter thanked the participants and offered them biscuits as a gift in exchange for their contribution to the study. If participants preferred not taking any biscuits, they were asked to tell the reason. Upon choosing one of the biscuits or telling the reason why they did not prefer taking any, they were fully debriefed.

5.3. Results

5.3.1. Descriptive Statistics

Descriptive statistics regarding involvement, intention, negative emotion, reading time, positivity of information, negativity of information, perceived threat and credibility of information can be seen in *Table 18*.

Table 18

Descriptive statistics of related variables

	Mean	Median	SD	Min.	Max.	N
Involvement	59.77	61	9.77	36	81	167
Intention	7.21	7	1.65	3	10	170
Negative Emotion	10.56	11	3.45	4	20	165
Reading Time (sec.)	37.58	35.80	13.52	6.51	84.58	151
Positivity of Information	3.46	4	1.01	1	5	170
Negativity of Information	2.20	2	1.19	1	5	168
Credibility	7.01	7	.97	2	10	170
Perceived Threat	2	2	.97	1	5	170

5.3.2. Manipulation Checks

Message Framing*:* A question regarding how much the text was positive was asked to check positive message framing. Positive message framing was expected to convey more positivity compared to negative message framing. The analysis showed that there was a significant difference between positive and negative informational texts on the positivity of the text, ($F(1,168)= 56.61$, $p<.001$). The participants felt that positive texts conveyed more positivity ($M= 4.01$ $SD=0.74$) compared to negative informational text ($M=2.91$ $SD=1.13$).

Likewise, a question testing the negativity of information was asked to check negative message framing manipulation. We expected that negative message framing would convey more negativity compared to positive message framing. An analysis of variance on the relationship message framing and negativity of information revealed that message framing had a main effect on negativity of the text ($F(1,166)= 70.80$, $p<.001$). Participants felt negative informational texts conveyed more negativity ($M= 2.85$ $SD=1.21$) than positive informational text ($M= 1.55$ $SD=0.74$).

Abstractness of Language*:* The perceived threat participants felt was expected to change depending on abstractness of language. Specifically, abstract language would convey less threat compared to concrete language due to promotion orientation. Likewise,

concrete language was expected to convey more perceived threat compared to abstract language due to prevention orientation. An analysis of variance was conducted to test the effect of abstractness of language on the level of perceived threat participants felt after they read the informational text. The analysis indicated that there was no significant difference between abstract and concrete language in terms of the perceived threat ($F<1$).

Credibility of Information*:* Two questions regarding to credibility of information were asked to measure the credibility of the information. The effect of message framing and abstractness of language on credibility of the information was tested by using an analysis of variance. There was no significant difference between abstract and concrete language in terms of credibility of the texts ($F<1$).

5.3.3. An Analysis of Variance: Intention as Dependent Variables

In the Study 2, the time participants spent on reading informational text was measured to test the assumption that participants with high involvement would spend more time on reading the text due to processing information in central route compared participants with low involvement. An analysis of variance was conducted to test the effect of involvement on reading time. The analysis showed a main effect of involvement on the time participants spent on reading the informational texts (F (1,78)= 4.34, p<.05). Participants with high involvement spent more time reading the informational texts (M= 41.05 SD=9.18) compared to participants with low involvement (M= 37.09 SD=7.63).

In order to test hypotheses 1a and 1b related to intention, an analysis of covariance (ANCOVA) was conducted to examine the effect of involvement and message framing and on the long term intention to follow a healthy diet by controlling reading time. These two hypotheses are:

Hypothesis 1a: *Under high involvement condition, negatively framed messages would be more persuasive compared to positively framed ones.*

Hypothesis 1b*: Under low involvement condition, positively framed messages would be more persuasive compared to negatively framed ones.*

The analysis indicated a main effect of involvement (F (1,75)= 11.71, p<.02). Specifically, under high involvement, participants showed more intention to adopt a healthy diet (M= 3.98 SD=.84) than those under low involvement (M= 3.26 SD=.95). There was no main effect of message framing ($F<1$) or abstractness of language ($F<1$) on the long term intention.

Regarding hypotheses 1a and 1b, the analysis revealed that there was no interaction between involvement and message framing on intention to follow a healthy diet in the long term ($F<1$). The analysis revealed that participants with low and high involvement showed approximately the same intention to adopt a healthy diet in the long term after they read negative or positive texts (see *Table 19).* Hypotheses 1a and 1b related to intention to follow a healthy diet in the long term were not supported.

Table 19

Means and SDs of message framing on long term intention

Low Involvement	Mean	SD	N
Positive Text	3.56	0.81	16
Negative Text	3.05	1.00	22
High Involvement	Mean	SD	N
Positive Text	3.90	0.79	20
Negative Text	4.05	0.90	22

In order to test hypotheses 2a and 2b related to intention, an analysis of covariance (ANCOVA) was conducted to examine the effect of involvement, message framing and abstractness of language on the long term intention to follow a healthy diet by controlling reading time. These two hypotheses are:

Hypothesis 2a: *Positively framed messages would be more persuasive when matched with abstract language compared to concrete language.*

Hypothesis 2b: *Negatively framed messages would be more persuasive when matched with concrete language compared to abstract language.*

The analysis showed that there was a main effect of involvement on the long term intention to follow a healthy diet (F (1,124) = 25.89, p<.001). Participants with high involvement showed more tendency to adopt a healthy diet (M= 3.62 SD=0.83) compared to participants with low involvement (M= 2.84 SD= 0.98). There was no significant interaction between message framing and abstractness of language on intention to follow a healthy diet in the long term ($F<1$). A three-way interaction between involvement, message framing and abstractness of language was nearly significant on participants' long term intention (F (1,71)= 3.64, p= 06). Hypotheses 2a and 2b were not supported.

Table 20

Means and SDs of message framing, abstractness of language and involvement on long term intention

Low Involvement		Mean	SD	N
Positive Text	Abstract Text	3.13	0.64	8
	Concrete Text	4.00	0.76	8
Negative Text	Abstract Text	3.22	0.83	9
	Concrete Text	2.92	1.12	13
High Involvement		Mean	SD	N
Positive Text	Abstract Text	4.00	0.91	13
	Concrete Text	3.71	0.49	7
Negative Text	Abstract Text	4.00	0.85	12
	Concrete Text	4.10	0.99	10

5.3.4. Chi – Square Analysis: Behavior as Dependent Variable

The same hypotheses were tested for behavior by conducting chi-square analysis. A set of chi-square tests was conducted to test the effect involvement, message framing and abstractness of language on healthy behavior. The analyses showed no significant main effect or interaction. None of the hypotheses were supported.

5.3.5. An Analysis of Variance: Negative Emotion as Dependent Variable

Although not a part of the hypotheses, the effects of involvement, message framing and abstractness of language on emotions participants felt while they were reading the texts were tested. An analysis of covariance (ANCOVA) was conducted to test the effect of involvement, message framing and abstractness of language on the negative emotion felt during the time participants read the informational text controlling for reading time. The analysis revealed that there was a main effect of involvement on the negative emotion, ($F(1,69)= 6.15$, $p<.02$). Specifically, participants with low involvement felt more negative emotion when they were reading the informational text ($M= 12,24$ $SD= 3,16$) than participants with high involvement ($M= 9.61$ $SD= 3,71$). No interaction was found significant. There was no significant interaction between involvement, message framing and abstractness of language (see *Table 21*).

Table 21

Means and SDs of message framing on negative emotion

Low Involvement	Mean	SD	N
Positive Text	11.88	2.85	16
Negative Text	12.52	3.41	21
High Involvement	Mean	SD	N
Positive Text	9.70	3.73	20
Negative Text	9.52	3.79	21

5.3.6. Relationship between Related Variables

Without excluding the middle 33% percent of the sample, correlation analyses were conducted in order to examine the relationship between involvement, intention, negative emotion, credibility, age and body mass index. The correlation results between all the variables can be seen in *Table 22*.

Table 22

Correlations between variables

	1	2	3	4	5	6
Involvement	-	-	-	-	-	-
Intention	.56**	-	-	-	-	-
Negative Emotion	-.36**	-.41**	-	-	-	-
Credibility	.29**	.28**	-.14	-	-	-
Attitude Confidence	.62**	.51**	-.51**	.14	-	
Age	.06	-.09	-.00	-.08	.06	-
Body Mass Index	.09	-.06	.06	-.08	-.14	.02

5.3.7. Comparison of Samples

The analysis of variance revealed that there was no significant difference between the samples of Study 1 and Study 2 in terms of involvement. However, the analysis of variance showed that students in Koç University had significantly more intention to follow a healthy diet in the long term compared to participant from the different parts of Istanbul ($F(1,354)= 9.04$, $p<.02$). Moreover, participants in the field study felt more perceived threat for their health after they read the informational text compared to students participated in laboratory study ($F(1,353)= 4.54$, $p<.05$). The analyses showed that participants in the field study significantly found the texts more credible compared to students in Koç University ($F(1,354)= 44.61$, $p<.001$). In addition, the samples were significantly different from each other in terms of age ($F(1,354)= 111.86$, $p<.001$); in other words, as expected, the mean age of the sample in the Study 1 (M=30.79 SD=11.86) was higher than the mean age of students in Study 2 (M=21.29 SD=1.68).

5.4. Discussion

5.3.1. Reading Time and Involvement

The second experiment was applied to test if involvement level would cause any difference in the time participants spent on reading the informational text. Participants with high involvement significantly spent more time reading the informational text compared to those with low involvement. However, the results on the relationship

between negative emotion and involvement showed that participants with low involvement significantly felt more negative emotion compared to those with high involvement. Since negative emotion would increase involvement level, we could not claim that participants with low involvement processed the information in peripheral route, although there was a significant difference between groups in terms of the time they spent reading the informational text.

In other words, the mean difference between high involvement (*M*= 41.05 *SD*=9.18) and low involvement (*M*= 37.09 *SD*=7.63) groups was not sufficient to determine which information processing system operated. In a study by Celci & Olson (1988), the difference in reading time between high and low involvement groups was 15.8 seconds although this difference was 3.6 seconds in Study 2. Therefore, the significant difference in reading time between high and low involvement groups could not be interpreted as there was a difference in information processing systems.

5.3.2. Comparison of Samples

Testing the proposed model, only the main effect of involvement on intention to follow a healthy life in the long term was found evident. Although a three-way interaction between involvement, message framing and abstractness of language was significant in the field study, no main effect or interaction was evident for laboratory study apart from the effect of involvement on long term intention.

The inconsistency in results between laboratory and field study could be explained by motivational differences. Since students in Koç University participated in the study to gain extra credit, it was highly possible that they did not have the same cognitive ability and motivation to process information as participants in the field study did. Moreover, the correlational analyses supported our assumption that students found the texts less credible compared to the sample in the field study, which could explain why there was no

significant differences in negative emotion based on the informational text type. Likewise, participants in the field study felt significantly more threat compared to the students in the laboratory experiment, which also proved that sample in the field experiment was more involved with the experiment due to participating in the experiment by their own will. Last, students in the Koç University were found to show more intention to follow a healthy diet compared to participants in the field study, which could have also resulted from a social desirability effect.

CHAPTER 6

6. GENERAL DISCUSSION

In Study 1 and 2, hypotheses 1a and 1b explaining the effect message framing and involvement on intention were not supported. Specifically, negative message framing was not more persuasive under high involvement condition compared to positive message framing. Likewise, positive message framing was not more effective in altering intention under low involvement compared to positive message framing. The contradictory findings would be discussed in detail based on the negative emotions participants felt while they were reading informational texts.

In Study 1, hypothesis 2a was supported under high involvement condition that they were more likely to show a higher long term intention to follow a healthy diet after they read positive message framing matched with abstract language compared to concrete language. As for hypothesis 2b, negative message framing was more effective when matched with concrete language compared to abstract language under high involvement condition, although this difference was not significant. Hypotheses 2a and 2b were not supported under low involvement condition due to sudden increase in the involvement level. The matching condition was found to be significantly more effective under high involvement condition than the mismatch condition although the matching condition did not significantly change the negative emotions that the participants felt while they were reading the informational text. Therefore, contrary to what was expected, negative emotion and feeling threatened did not explain why matching conditions were more effective compared to mismatch conditions as we suggested. Temporal perspective at construal level and "feeling right" would be introduced as alternative explanations to mechanism underlying matching conditions. As the matching effect was not observed

under low involvement condition, feeling at risk would be proposed as an explanation to differences between high and low involvement groups in Study 1.

In the model, we proposed that negative message framing would be more effective compared to matching hypotheses due to the established link between involvement and message framing in the previous literature. However, the analyses in Study 1 and 2 showed that message framing and involvement were not significantly related. On the other hand, in Study 1, a two way interaction between message framing and abstractness of language on long term intention was found under high involvement condition. Alternative explanations regarding the effectiveness of matching conditions would be discussed.

As for behavior, there was an inconsistency between intention and behavior regarding the effect of involvement, message framing and abstractness of language. Specifically, negative message framing was observed to be more effective in determining healthy behavior for high involvement group compared to low involvement group in Study 1, although this effect was not found for long intention. Negative emotions that the participants felt while they were reading the informational texts would be proposed as an explanation for the inconsistency between intention and behavior.

Finally, there were differences regarding the findings between Study 1 and Study 2 in that involvement, message framing and abstractness of language were significantly related for both long term intention and behavior in Study 1, although no significant association was found between those variables in Study 2. Therefore, advantages and disadvantages of laboratory and field experiment would be discussed to clarify the contradictory findings.

6.1. H1a and H1b: Negative Emotion as an Explanation

The contradictory results regarding the long term intention in Hypotheses 1a and 1b for Study 1 could be explained through the negative emotions participants felt while they were reading the informational text. Participants with low involvement felt significantly more negative emotions compared to those with high involvement, which contradicted our assumption that participants with low involvement would feel less threat. Because they did not feel any threat, they would process the information in peripheral route and be persuaded with positive message framing. However, we speculate that due to the effect of the General Health Scale they took before reading the informational text, their involvement level increased instantly because this scale caused the realization that they were not following a healthy diet in daily life, which in turn caused them to feel more negative emotions. The ANOVA results on negative emotions supported our assumption that participants with low involvement felt more negative emotions compared to those with high involvement due to sudden increase in their involvement. Therefore, as suggested in Hypotheses 1b, participants did not process the information in the peripheral route due to the sudden increase in their involvement level and therefore were not persuaded by positive message framing.

As for high involvement condition, the ANOVA results on the effect of message framing on negative emotions showed that participants felt more negative emotions when they were reading negative message framing compared to positive one as expected. However, the negative correlation between negative emotion and intention showed that participants with high involvement were not likely to be persuaded by negative message framing. Based on the negative relationship between negative emotion and intention, we could claim that when participants felt a threat on their self, they showed less long-term

intention to follow a healthy diet. Therefore, negative message framing was not more effective under high involvement condition as suggested in Hypothesis 1a.

6.2. H2a and H2b: Temporal Perspective at Construal Level

The effectiveness of matching conditions could be explained through the match between orientations in terms of temporal perspective at construal level. Previous research shows that regulatory focus and construal level are associated in that individuals with chronically promotion orientation construe action at higher level in a more abstract way whereas those with chronic prevention orientation who construe action at lower level, in more concrete way (Freitas, Salovey, and Liberman, 2001). In their study, participants showed more intention to play bowling with someone who had worse skills in the near future whereas they showed more intention to play with someone who had better skills in the distant future. Pennington and Roese (2003) also supported the association between regulatory focus and temporal perspective in that a proximal temporal distance is related to prevention orientation while a distal temporal perspective is related to promotion orientation. Based on the literature, the match between positive message framing and abstract language may have fostered distant future due to approach orientation. Similarly, the match between negative message framing and concrete language may both have fostered near future due to prevention orientation.

6.3. H2a and H2b : "Feeling Right" and Ease of Processing Information

Another explanation of the mechanism underlying the effectiveness of match conditions may be related to "feeling right" and ease of processing information due to the fit in terms of goal orientations. Higgins (2000) suggested that when there was a fit between chronic orientation and their goal pursuit activity, individuals were more engaged with the task and felt more right about their behaviors. Because of the feeling right, individuals would be more persuaded by the relevant messages. Moreover, Cesario

et al. (2004) claimed that due to feeling right, participants' evaluative reaction to messages could be more intensified, specifically their positive attitudes would be more favorable while their negative attitudes would be more unfavorable. Lee and Aekers (2004) proposed another underlying mechanism by suggesting that the fit between message and regulatory focus would lead to fluency of information processing, which in turn leads to more persuasion.

Based on the previous literature, it is possible that the fit between message framing and abstractness of language may have made participants feel more right about their actions and process the information more easily and therefore be more persuaded by match conditions.

6.4. H2a and H2b : "Feeling at Risk" as an Explanation to Differences in Groups

Analysis of variance showed that although there was a two way interaction between message framing and abstractness of language under high involvement condition, this effect was not observed under low involvement condition. An explanation for the difference between low and high involvement groups could be related to initial motivation to process information. Wang and Lee (2006) found that the regulatory fit effect was only observed only under low involvement but not high involvement condition. The "feeling right" effect only occurred under low involvement because when participants were motivated to process information, the ease of processing information and feeling right was not effective due to high elaboration on the message. In other words, since high involvement leads to engagement with the issue by itself, the engagement regulatory fit created is not effective as in the case of low involvement condition. Hong and Lee (2008) also showed that people who had regulatory fit were more likely to be

tested for Hepatitis C but only when they were not feeling at risk. If they thought they were at risk, they would get tested regardless of fit or non-fit conditions.

Considering the previous literature, we may claim that the matching effect occurred only under high involvement group due to initial motivation of not feeling at risk. Specifically, the analysis on negative emotions showed that participants with low involvement felt more negative emotions due to compared to those with high involvement. The involvement scale that the participants took before reading the informational texts may have caused an increase in the involvement level of the participants with low involvement, which in turn led to more negative emotions. Since their motivation to read the texts were high due to the threat they felt, it is possible that the matching condition did not operate. On the other hand, due to their daily habits in following a healthy diet, participants with high involvement did not feel at risk, which in turn led to matching condition to be more effective.

Although we claimed that high involvement would lead to prevention orientation, it is possible that high involvement in following a healthy diet would be related to less negative feelings and more attitude confidence due to already following a healthy diet in daily life. Therefore, because of the nature of the subject, high involvement may not have led to processing information as suggested in the proposed model.

Another argument we claimed is that participants with high involvement would process the information in central route which in turn would lead them to focus on negative cues. Likewise, participants with low involvement would process the message in peripheral route; therefore, positive message framing would be more persuasive. In other words, we claimed that high involvement would lead to prevention orientation whereas low involvement would lead promotion orientation. However, negative message framing was found to be more effective in both low and high involvement conditions. In Study 1

and Study 2, the involvement scale participants had before they read the informational text may have undermined the possible relationship we proposed.

6.5. Inconsistency between Intention and Behavior

In study 1, analyses showed that there was an inconsistency between intention and behavior regarding the effect of involvement, message framing and abstractness of language. Participants did not show more long term intention to follow a healthy after they read negative message framing although they felt significantly more negative emotions after they read negative message framing compared to positive one. Therefore, negative emotion did not predict intention depending on negative or positive message framing. However, a chi-square analysis showed that negative message framing caused participants with high involvement to choose healthy behavior more frequently, compared to those with low involvement. Based on the negative relationship between negative emotion and intention, we could claim that the participants were not persuaded more by negative message framing compared to positive one due to feeling a threat on their self in both low and high involvement conditions. However, the negative emotion they felt predicted healthy behavior in that high involvement group showed more healthy behavior compared to low involvement one, although they were not likely to show more long term intention to follow a healthy diet after they read negative message framing. The difference between high and low involvement groups in choosing healthy behavior could be explained through attitude confidence and self control that the high involvement group had due to their daily habit in following a healthy diet.

Another explanation why low involvement group chose less healthy behavior compared to high involvement group could be related to the mismatch between their low involvement with the issue in daily life and their increased involvement in the study due to reading General Health Scale. In the previous literature, researchers found a link

between self-regulatory tasks and fit between orientations (Hong and Lee, 2008). Participants were more vulnerable to temptation such as choosing chocolate instead of an apple when experienced regulatory non-fit compared to those who experienced the fit. Since participants processed the information more easily due to fit between regulatory focus, they could control themselves more compared to those who did not. Based on those findings, we could claim that participants with low involvement in Study 1 were more likely to be optimistic about their health in their daily life, which made them less careful in following a healthy diet. However, taking involvement scale created an awareness of their unhealthy daily habits, which made them feel more negative emotions and become more pessimistic about their health. The mismatch between orientations may have made them not process the information easily, leading to less self-regulatory control. However, participants with high involvement were already aware of the disadvantages of following unhealthy diet, which made them feel less negative emotion compared to those with low involvement and having more self-regulatory control over choosing healthy or unhealthy behavior.

The reason why participants with high involvement were more likely to choose healthy under abstract language condition could be explained through the match between distal temporal perspective and the subject of the research as "following a healthy diet". Since the disadvantages of not following a healthy diet were related to consequences in distal future, it is possible that negative message framing matched with abstract language created more negative emotion compared to concrete language. Analyses also showed that abstract language matched with negative message framing caused more negative emotion compared to concrete language, although this difference was not significant. More specifically, the negative emotion both negative message framing and abstract

language caused may have led participants with high involvement to choose more healthy behavior.

The findings were beneficial in terms of clarifying the debate over the inconsistency between intention and behavior. In Study 1, behavior and intention were found to be inconsistent in that negative emotion participants had while they were reading informational texts did not predict their intention to follow a healthy diet. In contrast, the increase in their negative emotion caused more preference for healthy behavior.

6.6. Study 1 and 2: Laboratory vs. Field Study Comparison

This research also has implications in terms of clarifying the advantages and disadvantages of conducting experiments in the laboratory and the field. The field study was conducted in order to test the hypotheses in natural settings where people were assumed to behave more naturally, resulting in greater ecological validity. In the field study, we aimed at increasing external validity and generalizing the results, which cannot be done in the laboratory study due to the artificial nature of laboratory experiments and because the population is not well-represented. The sample widely varying in age, occupation and socio-economic status made it more possible to generalize results to population compared the laboratory study in which the sample was composed of high socio-economic status students in Koc University. There were also some advantages of laboratory study; we had more control over the variables and limited confounding variables leading to greater internal validity. Moreover, laboratory study allowed us to measure the time participants spent on reading informational texts, which was impossible in the field experiment due to practical reasons.

Considering the debate over which research method is superior, due to nature of research, which aims at testing the effect of persuasive booklets on individuals in their natural settings, conducting field experiment was more essential for our research interest.

Specifically, collecting data from a sample composed of individuals varying in age, occupation and socio-economic status in their natural settings was more valuable to generalize results to a wider population. Moreover, we aimed at investigating the relationship between language and persuasion at the expense of confounding variables. In further detail, we intended to influence individuals in their daily life accounting for all the other parameters we could not measure. Therefore, at the expense of internal validity, field experiment was a better choice due to our research interest.

The results also supported our choice of field study in that although the analyses showed a significant three way interaction between involvement, message framing and abstractness of language on long term intention and behavior in field study, there were no significant results in the laboratory study. The motivational differences in samples showed that participants who attended the research in their natural settings with their own will were more involved with the study compared to participants in the in the laboratory study. Moreover, the sample in the field study was more representative in terms of including participants varying in age, gender, occupation and socio-economic status compared to the sample in the laboratory study. As mentioned above, the artificial nature of laboratory study, the non-representative sample and the motivation to participate in the experiment to get extra credit resulted in no significant findings.

CHAPTER 7

7. LIMITATIONS AND IMPLICATIONS

Promotional messages in health communication are great interest of both academia and practitioners such as governments and health organizations. Although there have been a lot of campaigns on preventing health issues such as intervention programs, some of the messages aiming at promoting healthy life-style have created reverse effects or have been proved to be ineffective. Considering the intervention programs in increasing number, the proposed model should be taken into account in terms of the considerable relevance and practical importance. The paper has both theoretical and practical implications by drawing the map to follow in increasing the effectiveness of health messages via elaborating on variables such as language structure, message framing and involvement.

Although there have been lots of studies on message framing in order to improve health communication, no research has established links between three variables such as involvement, message framing and abstractness of language. Hence, the paper has theoretical contributions to the previous literature in attempting to clarify the contradictory findings by establishing unexamined links. Considering the relationship between abstractness of language and message framing depending on regulatory focus has not been investigated before, the paper could be considered as a starting point for further directions. Although we found a significant relationship between involvement, message framing and abstractness of language, the research could be extended by manipulating involvement, which would be more advantageous by providing more control over variables. Moreover, our paper showed that feeling threatened did not explain the mechanism behind persuasion as proposed in previous literature; therefore, the possibility remains that other mechanisms such as temporal perspective at construal level

and feeling right and ease of processing information are operant on the relationship between involvement, message framing and abstractness of language. Our research contributed to literature on intention and behavior inconsistency by suggesting that individuals may report different behavioral intentions from their actions due to feeling a threat on their self. The paper also has implications in terms of presenting evidence regarding the debate over superiority of laboratory vs. field study. As discussed above, the paper has significant contributions to clarifying that the research interest determines the superiority of the method.

In addition, considering all the financial costs paid to the ineffective health campaigns, the paper is highly essential in making practical contributions to the improvement of health communication by establishing a bridge between the right message and right target audience. The joint effects of involvement and language structure on message framing have practical implications to institutions and government in increasing health campaigns' effectiveness. Thus far, our paper showed that individuals who are highly involved with health issue are more likely to show long term intention to follow a healthy diet after they read matched messages. Therefore, by using matched messages, institutions or government may implement influential health campaigns by eliminating waste of money, time and resources. Apart from health communication, the paper has implications in terms of consumer behavior research. Although an there has been an extensive research on effect of the regulatory fit on persuasion, no research has been conducted to understand the relationship between message framing and abstractness of language in consumer behavior literature regarding the regulatory focus; therefore the studies also could be conducted to measure effectiveness of matched messages for product advertisement in marketing communication.

It should be noted that our paper is innovative in terms of establishing unexamined link; however, the underlying mechanism behind the effectiveness of matching between message framing and abstractness of language as well as the replication of the proposed model in marketing communication need to be identified and investigated in future research.

CHAPTER 8

8. REFERENCES

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CHAPTER 9

9. APPENDICES

9.1. Appendix A

9.1.1. Positive and Concrete Text

MAKSİMUM SAĞLIK!

Maksimum sağlığa ulaşmak için yaşamın her döneminde **Yeterli ve Dengeli Beslenmemiz** gerekir.

Kişiler Yeterli ve Dengeli Beslendiğinde;

- Sağlam ve sağlıklı görünürler.
- Daha kolay hareket ederler ve bedenleri esner.
- Ciltleri parlar, saçları ve gözleri de canlanır.
- Kasları kuvvetlenir ve düzgün gelişir.
- Motivasyonları yükselir.
- Beyinleri normal gelişir.
- Vücut ağırlıkları boylarına göre uygun gelişir.
- İştahları artar ve dayanıklılık geliştirirler.
- Sağlıklı yaşarlar.

Yeterli Ve Dengeli Beslenmek İçin Yapmamız Gerekenler

- Dört besin grubundan her gün yeterli miktarda yiyin.
- Şeker ve tuz tüketiminizi azaltın.
- Tam tahıl ürünlerini yiyin.
- Doymuş yağlar içeren hayvansal kaynaklı yağlar yemek doymamış yağ asitlerini içeren bitkisel sıvı yağları kullanın.

9.1.2. Positive and Abstract Text

MAKSİMUM SAĞLIK!

Maksimum sağlık için yaşamın her döneminde **Yeterli ve Dengeli Beslenme** temel unsurdur.

Yeterli ve Dengeli Beslenen Kişiler;

- Sağlam ve sağlıklı bir görünüşe,
- Hareketli ve esnek bir bedene,
- Parlak bir cilde, canlı ve parlak saçlara ve gözlere,
- Kuvvetli, gelişimi normal kaslara,
- Yüksek motivasyona,
- Boy uzunluğuna uygun vücut ağırlığına,
- Normal zihinsel gelişime,
- Açık iştaha ve dayanıklı bir bedene,
- Sağlıklı bir yapıya sahiptir.

Yeterli ve Dengeli Beslenmek İçin Yapmamız Gerekenler

- Dört besin grubundan her gün yeterli miktarda ,
- Az tuz ve şeker kullanımı,
- Tam tahıl ürün tercihi,
- Doymuş yağlar içeren hayvansal kaynaklı yağlar yerine doymamış yağ asitlerini içeren bitkisel sıvı yağ seçimi **ÖNEMLİDİR.**

9.1.3. Negative and Concrete Text

MİNİMUM HASTALIK RİSKİ!

Minimum hastalık riski için yaşamın hiçbir döneminde **Yetersiz ve Dengesiz Beslenmememiz** gerekir.

Kişiler Yetersiz ve Dengesiz Beslendiğinde;

- Hastalıklı ve sağlıksız görünürler.
- Harekette zorlanırlar ve bedenleri esnemez.
- Ciltleri parlamaz, saçları ve gözleri solgun görünür.
- Kasları zayıflar ve düzgün gelişmez.
- Motivasyonları düşer.
- Vücut ağırlıkları boylarına göre aşırı yükselir.
- Beyinleri normal gelişmez.
- İştahlarını kaybederler ve dayanıksızlaşırlar.
- Hastalıklı yaşarlar.

Yetersiz ve Dengesiz Beslenmemek İçin Kaçınmamız Gerekenler

- Dört besin grubundan her gün yetersiz miktarda yemeyin.
- Şeker ve tuz tüketiminizi artırmayın.
- Tam tahıllı olmayan ürünlerden yemeyin.
- Doymuş yağlar içeren hayvansal kaynaklı yağlar yemeyin, onun yerine doymamış yağ asitlerini içeren bitkisel sıvı yağlarını kullanmayı ihmal etmeyin.

9.1.4. Negative and Abstract Text

MİNİMUM HASTALIK RİSKİ!

Minimum hastalık riski için yaşamın hiçbir döneminde **Yetersiz ve Dengesiz Beslenmemek** temel unsurdur.

Yetersiz ve Dengesiz Beslenen Kişiler;

- Sağlıksız görünüşe,
- İsteksiz ve ağır hareketlere,
- Pürüzlü, kuru, sağlıksız cilt yapısına,
- Zayıf ve düzgün gelişmemiş kaslara,
- Düşük motivasyona,
- Boy uzunluğuna orantısız vücut ağırlığına,
- Normal olmayan zihinsel gelişime,
- Kapalı iştaha ve dayanıksız bir bedene,
- Hastalıklı bir yapıya sahiptir.

Yetersiz ve Dengesiz Beslenmemek İçin Kaçınmamız Gerekenler

- Dört besin grubundan her gün yetersiz miktarda tüketimden,
- Aşırı tuz ve şeker tüketiminden,
- Tam tahıllı olmayan ürün tercihinden,
- Doymamış yağ asitlerini içeren bitkisel sıvı yağları yerine doymuş yağlar içeren hayvansal kaynaklı yağ seçiminden **KAÇINMAK ÖNEMLİDİR.**

9.2. Appendix B

9.2.1. Coding Guideline for Abstract vs. Concrete Language

Soyut ve Somut Dil Puan Verme	
Bu bölümde metindeki kelimelerin soyut ve somut olma durumuna göre puan vermenizi istiyoruz. Metinde puan vereceğiniz kelimeler 4 ana gruba ayrılmıştır.	
Betimsel Hareket Fiilleri	Bu fiillerin kesin bir başlangıcı ve bitişi vardır. Ayrıca fiziksel çevreden bağımsız yorumlanamaz. Eylem ve kesinlik içerdiği için 4 grup içinde en somut olan kelime grubu budur. ▪ Örnek Fiiller: Vurmak, bağırmak, yürümek, koşmak, silmek, aramak, buluşmak vb.
Puan:	1
Yorumlayıcı ya da Durumsal Hareket Fiilleri	Bu fiiller de hareket bildirir ve aynı şekilde kesin bir başlangıç ve bitiş zamanları vardır. Bu fiiller 2 şekilde yorumlanabilir. İlk grup fiilde yapılan bir eylem vardır ancak bu eylem farklı şekillerde de yapılabilir. Mesela "Ayşe yoldaki teyzeye yardım etti." Cümlesinde "yardım etmek" fiili birçok şekilde yapılabilir, örneğin eşyalarını taşıyabilir ya da karşıdan karşıya geçmesine yardımcı olabilir. ▪ Örnek Fiiller: yardım etmek, sataşmak, kaçınmak. İkinci gruptaki fiiller ise duygusal sonuçlar gerektiren fiillerdir. ▪ Örnek Fiiller: şaşırtmak, kızdırmak, üzmek vb.
Puan	2
Durum Fiilleri	Bu gruptaki fiiller ise değişmeyen ve sürekli devam eden bir durumu gösterirler. Bu durumlarda kesin bir başlangıç ve bitiş yoktur. ▪ Örnek Fiiller: Sevmek, nefret etmek, fikri olmak, takdir

	etmek, hayran olmak, düşman olmak vb.
Puan	3
Sıfatlar ve İsimler	Sıfatlar ise kişinin belli bir karakter özelliğini gösterir. Sıfatlar zamanla ve fiziksel çevreyle değişmediği için uzun süreli devam eden özellikleri yansıtır. Bu yüzden de 4 grup içinde en çok soyut olan kelime grubudur. Aynı şekilde isimler de sürekli bir duruma atıfta bulunduğu için bu grupta yer alır. ▪ Örnek Sıfatlar: güvenilir, dürüst, güçlü, zayıf, görünüş, durum vb.
Puan	4

9.2.2. Coding Guideline for Negative vs. Positive Language

Pozitif ve Negatif Dil Puan Verme	
Bu bölümde metindeki kelimelerin pozitif ve negatif olma durumuna göre puan vermenizi istiyoruz. Metinde puan vereceğiniz kelimeler 2 ana gruba ayrılmıştır.	
Pozitif Kelimeler	Metinde göreceğiniz kelimelerde pozitif anlamı olanın yanına 1 puanını yazmanızı istiyoruz. Pozitif kelimeler hem anlam olarak olumlu olabilir (örneğin iyi, güzel, sevimli, yönelmek) ya da olumsuzluk ekini almamış kelimeler olabilir. ▪ Örnek Kelimeler**:** yürümek, yazmak, uyumak.
Negatif Kelimeler	Metinde 2 şekilde olumsuz kelime görebiliriz. Birincisi, anlamı olumsuz olan kelimeler; örneğin kötü, çirkin, olumsuz, zayıf, uzaklaşmak gibi. İkinci grupta " –me, -ma," ya da "-siz, sız" gibi fiilleri, isimleri ya da sıfatları olumsuz yapan eklerden oluşan kelimeler bulunmaktadır. ▪ Örnek Kelimeler**:** düzensiz, uyumamak, ilgisiz,

	düşünmemek vb.

9.3. Appendix C

9.3.1. General Health Scale

Lütfen aşağıdaki ifadeleri dikkatle okuyunuz ve bu ifadelerin sizin için ne kadar doğru olduğunu işaretleyiniz.					
	Hiç Doğru Değil	Doğru Değil	Ne Doğru Ne Yanlış	Doğru	Çok Doğru
Herhangi bir belirti hissetmesem dahi sağlığımla ilgili olası problemleri önlemeye çalışırım.					
Kendime yönelik bir sağlık tehdidini önlemeye çalışmaktansa hayatımı yaşarım.*					
Sağlığımın tehlikeye girmesinden endişe duyar bu konuda önlem alırım.					
Günümüzde insana zarar verebilecek çok şey var. Bunlar hakkında endişe etmiyorum.*					
Sağlığımla ilgili bir sorun çıkmadıkça duyduğum sağlık					

sorunları hakkında bir şey yapmam.*					
Çevremden duyduğum sağlık problemlerine karşı kendimi korumaya çalışırım.					
Yakın bir arkadaşımın ya da benim başıma gelmedikçe sağlığımın tehlikeye girmesinden endişe duymam.*					
Çevremden duyduğum sağlık problemleri hakkında endişe duysam dahi bu konuda bir şey yapmam.*					
Stresten uzak dururum.					
Lütfen aşağıdaki ifadeleri okuyunuz ve bu davranışları sıklıkta yaptığınıza göre işaretleyiniz.					
	Hiç	Bazen	Arada sırada	Sıklıkla	Her zaman
Dengeli beslenirim.					
Yeterli derecede uyurum ve dinlenirim.					
Taze meyve ve sebze yerim.					

Alkol tüketimine dikkat ederim.					
Sigara içerim.*					
Yeterli derecede su içerim.					
Bol şekerli gıda tüketirim.*					
Abur cubur yerim.*					
Spor yaparım.					

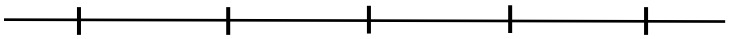
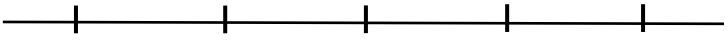
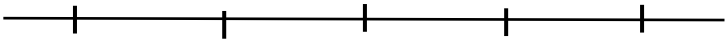
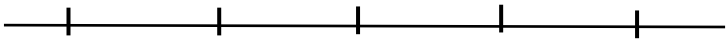
*Reverse items.

9.3.2. Intention Scale and Manipulation Check

Lütfen aşağıdaki ifadeleri okuyunuz ve hangi sıklıkta yaptığınıza göre işaretleyiniz.					
	Hiç	Biraz	Orta	Çok	Oldukça çok
Kısa dönemde sağlıklı ve dengeli beslenme ihtimaliniz nedir?*					
Uzun dönemde sağlıklı ve dengeli beslenme ihtimaliniz nedir?*					
Broşürde okuduğunuz yazı ne kadar inandırıcıydı?**					
Broşürdeki bilgiden ne kadar eminsiniz?**					
Broşürdeki bilgi ne kadar olumluydu?***					
Broşürdeki bilgi ne					

kadar olumsuzdu?***					
Broşürdeki bilgiyi okuduktan sonra sağlığınız için tehlike hissettiniz mi?****					
Sağlıkla ilgili tavrınızın doğruluğundan ne kadar eminsiniz?*****					

Lütfen aşağıdaki soruyu okuyunuz ve sizin için doğru olan cevaba yakın yeri işaretleyiniz. ***

Mutlu		Mutsuz
Rahatlamış		Endişeli
Sakin		Tedirgin
Güvende		Tehlikede

Lütfen aşağıdaki soruları yanıtlayınız.

Cinsiyet: Yaş: Meslek:

Boy: Kilo:

* Indicated items related to long term and short term intention

** Indicated manipulation check items related to credibility

*** Indicated manipulation check items related to positivity vs. negativity.

**** Indicated manipulation check item related to promotion vs. prevention orientation.

***** Indicated item related to attitude confidence.

****** Indicated manipulation check item negative emotion.

9.4. Appendix D

9.4.1. Healthy Product Survey

Lütfen aşağıdaki ürünleri inceleyiniz ve bu ürünlerin sizin için ne kadar "sağlıklı" olduğuna göre ürünlere 1'den 5'e kadar değer veriniz.Değerlendirme yaparken, değerlendirdiğiniz ürünü sadece aşağıda listelenmiş diğer bisküvilerle karşılaştırınız.

		Sağlıksız				Sağlıklı
		1	2	3	4	5
Biskrem						
Tutku						
Burçak Klasik						
Burçak Yulaflı						
Burçak Kepekli						
Hanımeller Fındıklı						
Hanımeller Damla Çikolata						
Çizi						
Petibör						

Negro						
Eti Form Kepekli						
Eti Form Limonlu						
Eti Form Çikolata Kaplı						
İkram Fındıklı						
İkram Çikolatalı						
Rondo Çikolatalı						
Rondo Kremalı						
Petibör Kakao						

9.4.2. Healthy Product Survey Results

Means and SDs of products (N=79)

	Mean	SD
Eti Form Kepekli	3.62	1.08
Burçak Kepekli	3.61	1.06
Burçak Yulaflı	3.44	1.18
Burçak Klasik	3.41	1.10
Eti From Limonlu	3.19	1.20
Eti Form Çikolata	2.87	1.09
Petibör	2.48	0.97
Petibör Kakao	2.34	0.86
Hanımeller Damla Çikolata	2.00	0.89
Çizi	1.99	0.94
Hanımeller Fındıklı	1.99	1.04
Negro	1.81	0.79
İkram Çikolata	1.77	0.83
İkram Fındıklı	1.72	0.77
Tutku	1.68	0.89
Biskrem	1.67	0.81
Ronda Sade Kremalı	1.62	0.74
Rondo Çikolatalı	1.58	0.71

9.5. Appendix E

9.5.1. Example Booklet

BESLENME ALIŞKANLIKLARI ANKETİ

Beslenme Alışkanlıkları

Lütfen aşağıdaki ifadeleri dikkatle okuyunuz ve bu ifadelerin sizin için ne kadar doğru olduğunu işaretleyiniz.

	Hiç doğru değil	Doğru değil	Ne doğru ne de yanlış	Doğru	Çok Doğru
Herhangi bir belirti hissetmesem dahi sağlığımla ilgili olası problemleri önlemeye çalışırım.					
Kendime yönelik bir sağlık tehdidini önlemeye çalışmaktansa hayatımı yaşarım					
Sağlığımın tehlikeye girmesinden endişe duyar bu konuda önlem alırım.					
Günümüzde insana zarar verebilecek çok şey var. Bunlar hakkında endişe etmiyorum.					
Sağlığımla ilgili bir sorun çıkmadıkça duyduğum sağlık sorunları hakkında bir şey yapmam.					
Çevremden duyduğum sağlık problemlerine karşı kendimi korumaya çalışırım.					
Yakın bir arkadaşımın ya da benim başıma gelmedikçe sağlığımın tehlikeye girmesinden endişe duymam.					
Çevremden duyduğum sağlık problemleri hakkında endişe duysam dahi bu konuda bir şey yapmam					
Stresten uzak dururum.					

Lütfen aşağıdaki ifadeleri okuyunuz ve hangi sıklıkta yaptığınıza göre işaretleyiniz.

	Hiç	Bazen	Arada sırada	Sıklıkla	Her zaman
Dengeli beslenirim.					
Yeterli derecede uyurum ve dinlenirim.					
Taze meyve ve sebze yerim.					
Alkol tüketimine dikkat ederim.					
Sigara içerim.					
Yeterli derecede su içerim.					
Bol şekerli gıda tüketirim.					
Abur cubur yerim.					
Spor yaparım.					

MAKSİMUM SAĞLIK

NASIL?

Yeterli ve Dengeli Beslenmek İçin Yapmamız Gerekenler

- Dört besin grubundan her gün yeterli miktarda,
- Az tuz ve şeker kullanımı,
- Tam tahıl ürün tercihi,
- Doymuş yağlar içeren hayvansal kaynaklı yağlar yerine doymamış yağ asitlerini içeren bitkisel sıvı yağ seçimi **ÖNEMLİDİR.**

NEDEN?

Maksimum sağlık için yaşamın her döneminde **Yeterli ve Dengeli Beslenme** temel unsurdur.

Yeterli ve Dengeli Beslenen Kişiler;

- Sağlam ve sağlıklı bir görünüşe,
- Hareketli ve esnek bir bedene,
- Parlak bir cilde, canlı ve parlak saçlara ve gözlere,
- Kuvvetli, gelişimi normal kaslara,
- Yüksek motivasyona,
- Boy uzunluğuna uygun vücut ağırlığına,
- Normal zihinsel gelişime,
- Açık iştaha ve dayanıklı bir bedene,
- Sağlıklı bir yapıya sahiptir.

Beslenme Alışkanlıkları

Lütfen aşağıdaki ifadeleri okuyunuz ve hangi sıklıkta yaptığınıza göre işaretleyiniz.					
	Hiç	Biraz	Orta	Çok	Oldukça çok
Kısa dönemde sağlıklı ve dengeli beslenme ihtimaliniz nedir?					
Uzun dönemde sağlıklı ve dengeli beslenme ihtimaliniz nedir?					
Broşürde okuduğunuz yazı ne kadar inandırıcıydı?					
Broşürdeki bilgiden ne kadar eminsiniz?					
Broşürdeki bilgi ne kadar olumluydu?					
Broşürdeki bilgi ne kadar olumsuzdu?					
Broşürdeki bilgiyi okuduktan sonra sağlığınız için tehlike hissettiniz mi?					
Sağlıkla ilgili tavrınızın doğruluğundan ne kadar eminsiniz?					

Lütfen aşağıdaki soruyu okuyunuz ve sizin için doğru olan cevaba yakın yeri işaretleyiniz

Broşürdeki bilgiyi okurken nasıl hissettiniz?

Mutlu	——|——|——|——|——	Mutsuz
Rahatlamış	——|——|——|——|——	Endişeli
Sakin	——|——|——|——|——	Tedirgin
Güvende	——|——|——|——|——	Tehlikede

Lütfen aşağıdaki soruları cevaplayınız.

Cinsiyet: Yaş: Meslek:

Boy: Kilo: