



저작자표시-비영리-변경금지 2.0 대한민국

이용자는 아래의 조건을 따르는 경우에 한하여 자유롭게

- 이 저작물을 복제, 배포, 전송, 전시, 공연 및 방송할 수 있습니다.

다음과 같은 조건을 따라야 합니다:



저작자표시. 귀하는 원저작자를 표시하여야 합니다.



비영리. 귀하는 이 저작물을 영리 목적으로 이용할 수 없습니다.



변경금지. 귀하는 이 저작물을 개작, 변형 또는 가공할 수 없습니다.

- 귀하는, 이 저작물의 재이용이나 배포의 경우, 이 저작물에 적용된 이용허락조건을 명확하게 나타내어야 합니다.
- 저작권자로부터 별도의 허가를 받으면 이러한 조건들은 적용되지 않습니다.

저작권법에 따른 이용자의 권리는 위의 내용에 의하여 영향을 받지 않습니다.

이것은 [이용허락규약\(Legal Code\)](#)을 이해하기 쉽게 요약한 것입니다.

[Disclaimer](#)

언론정보학과석사학위논문

Effectiveness of Facebook for
Public Health Campaign:
Perceived Persuasive Intent as a Mediator

공중 보건 캠페인 채널로서 페이스북의 효과:
지각된 설득의도를 매개로

2018년 2월

서울대학교 대학원

언론정보학과

주 민 휘

Abstract

Keywords: persuasive communication, public health campaign, perceived persuasion intention, health concern, prior topic knowledge, Facebook

Student Number : 2014–22056

The present study focused on examining the effectiveness of SNS as a novel means of delivering health message relative to established mass media. Specifically, by measuring its effect on people’s perception of persuasion intention, the study aimed to examine communication channel’s effect on people’s attitude towards the message position and their intention to follow the advised health behavior. It was expected from past studies, that due to its possibility for interpersonal communication and its function as an informal social medium, that SNS will do better as a channel for persuasion (Park et al., 2011; Poter & Golan, 2010; Hanson et la., 2010). Also, because SNS is perceived for smaller audience, it will be considered less imposing and obstructive (Beniger, 1987). Using the elaboration likelihood model of persuasion (ELM) by Petty and Cacioppo (1986), two possible moderators were tested in this persuasion context: 1) health concern and 2) prior topic knowledge. It was suggested by the ELM that people’s initial level of interest and knowledge about the topic can affect the factors that determine persuasive effectiveness and both factors were expected to increase reliance on the message rather than the communication channel. Therefore, it was predicted that communication channel will have greater effect on persuasive outcomes when these factors are low.

Two web–based experiments were conducted using Facebook and an online portal, Naver. With 132 participants, the first study presented a

message specifying dental merits for chewing gum, and the second study (N = 394) incorporated a message on Low Carbo High Fat diet. Participants were randomly assigned to either the Facebook post or Naver article condition. After reading the message, presumably written by a health reporter, they were asked of their perception of persuasive intent of the message, attitude towards the advocated position and intention to follow the recommended behavior.

Both in Study 1 and Study 2, no direct effect of the communication channels was found. It was only among those with high levels of health concern that the communication channel showed a significant effect on people's perception of persuasive intent. Specifically, in both studies, people with a high level of health concern perceived Naver news articles to be higher in persuasive intent than the Facebook post but no such difference were found among those with moderate or low levels of health concern. Prior topic knowledge produced an insignificant moderating effect in both studies. Increased perceived persuasion intention lowered the tendency to agree with the message position and to follow the advised behavior.

Overall, the present study exhibited that communication channel alone does not affect how people perceive a persuasive message and ultimately the persuasion outcome, but with high topic interest, communication channel indeed becomes a significant factor in persuasion with Facebook being a more effective channel than online news portal.

Table of Content

1. Introduction.....	1
2. Theoretical Background.....	6
2.1 Mass Media and Persuasion	6
2.1.1 Two–Step Flow of Communication	8
2.1.2 Social Networking Sites (SNS) and Persuasion.....	10
2.1.3 Effect of Communication Channel in Persuasion	12
2.2 Possible Mechanism for Channel Effect on Persuasion.....	14
2.2.1 Perception of Persuasive Intent	14
2.2.2 Perceived Persuasive Intent and Persuasion.....	17
2.3 Moderating Factors of Channel Effects.....	20
2.3.1 The Elaboration Likelihood Model of Persuasion	20
2.3.2 Motivtional and Ability Factors in Persuasion	25
1) Health Concern.....	25
2) Prior Topic Knowledge	27
3. Study 1	30
3.1 Method	30
3.1.1 Participants and Procedure	30
3.1.2 Experiment Materials	32
3.1.3 Measures.....	38
1) Mediating & Moderating Variables	38
2) Dependent Variables	40
3) Control Variable	41
3.2 Results	42
3.2.1 Manipulation Checks.....	42

3.2.2 Preliminary Analyses	42
3.2.3 Hypothesis Tests	43
3.2.4 Research Model Testing	50
3.3 Discussion	54
4. Study 2	57
4.1 Method	57
4.1.1 Participants and Procedure	57
4.1.2 Experimental Materials	58
4.1.3 Measures.....	69
1) Mediating & Moderating Variables	69
2) Dependent Variables	71
3) Control Variable	72
4.2 Results	73
4.2.1 Manipulation Checks.....	73
4.2.2 Preliminary Analyses	73
4.2.3 Hypothesis Tests	75
4.2.4 Research Model Testing	82
5. General Discussion	87
5.1 Implications	90
5.2 Limitations.....	92
5.3 Directions for Future Research.....	94
6. References	97

List of Tables

[Table 1] Demographic Attributes of the Participants (Study 1) ...	31
[Table 2] Correlations among Key Variables (Study 1)	43
[Table 3–1] Effect of Communication Channel on Perceived Persuasive Intent: Health Concern as a Moderator (Study 1)	46
[Table 3–2] Simple Slope Analysis of the Moderation Effect of Health Concern on Persuasive Intent (Study 1)	47
[Table 4] Effect of Communication Channel on Perceived Persuasive Intent: Prior Topic Knowledge as a Moderator (Study 1)	49
[Table 5–1] Conditional Indirect Effects of Communication Channel on Attitude toward Recommended Position through Perceived Persuasive Intent: Health Concern as a Moderator (Study 1)	51
[Table 5–2] Conditional Indirect Effects of Communication Channel on Behavioral Intention through Perceived Persuasive Intent: Health Concern as a Moderator (Study 1)	52
[Table 6] Demographic Attributes of the Participants (Study 2) ..	58
[Table 7] Correlations among Key Variables (Study 2)	74
[Table 8–1] Effect of Communication Channel on Perceived Persuasive Intent: Health Concern as a Moderator (Study 2)	77
[Table 8–2] Simple Slope Analysis of the Moderation Effect of Health Concern on Persuasive Intent (Study 2)	78
[Table 9–1] Effect of Communication Channel on Perceived Persuasive Intent: Prior Topic Knowledge as a Moderator (Study 2)	80
[Table 9–2] Simple Slope Analysis of the Moderation Effect of Prior Topic Knowledge on Persuasive Intent.....	81
[Table 10–1] Conditional Indirect Effects of Communication Channel on	

Attitude toward Recommended Position through Perceived Persuasive Intent: Health Concern as a Moderator.....	83
[Table 10–2] Conditional Indirect Effects of Communication Channel on Behavioral Intention through Perceived Persuasive Intent: Health Concern as a Moderator	84
[Table 11] Effect of Communication Channel on Perceived Persuasive Intent: Message Recall as a Moderator	86

List of Figures

[Figure 1] Conditional Indirect Effects of Communication Channel on Persuasive Outcomes.....	29
[Figure 2] Effects of Chewing Gum on Dental Health: Facebook Post	36
[Figure 3] Effects of Chewing Gum on Dental Health: Naver News Article	37
[Figure 4] Interaction Graph of Communication Channel and Health Concern on Perceived Persuasive Intent (Study1)	47
[Figure 5] Conditional Indirect Effects of Communication Channel on Attitude toward the Recommended Position and Behavioral Intention(Study1)	53
[Figure 6] Low Carbo High Fat Message:Facebook Post1.....	61
[Figure 7] Low Carbo High Fat Message:Facebook Post2.....	62
[Figure 8] Low Carbo High Fat Message:Facebook Post3.....	63
[Figure 9] Low Carbo High Fat Message:Facebook Post4.....	64
[Figure 10] Low Carbo High Fat Message:Naver News Article1.	65
[Figure 11] Low Carbo High Fat Message:Naver News Article2.	66
[Figure 12] Low Carbo High Fat Message:Naver News Article3.	67
[Figure 13] Low Carbo High Fat Message:Naver News Article4.	68
[Figure 14] Interaction Graph of Communication Channel and Health Concern on Perceived Persuasive Intent (Study2)	79
[Figure 15] Conditional Indirect Effects of Communication Channel on Attitudetoward the Recommended Position and Behavioral Intention(Study 2)	84

CHAPTER 1. INTRODUCTION

In 2015, Korea's Ministry of Health and Welfare utilized mass media to conduct a national campaign to combat the spread of the Middle East Respiratory Syndrome (MERS) in the country. MERS, a viral infection caused by betacoronavirus (MERS-CoV) found in bats or camels in the Middle East, emerged via an infected tourist in May (Korean Center for Disease Control and Prevention 2015). The Government promulgated subway advertisements, and conducted television and radio advertisements to inform people of the dangers as well as to promote preventative behaviors (e.g. wearing masks, washing hands) to stop the spread of infection (Ministry of Health and Welfare Korea, 2015). However, despite the persuasive efforts, MERS in Korea emerged as among the second-most infectious disease worldwide and ranked number one for a non-Middle Eastern country, causing over 30 deaths (Korean Center for Disease Control and Prevention, 2015).

In contrast to the early studies postulating that mass media has the potential to change people's perception and behavior (Lasswell, 1927; Lippmann, 1922), subsequent studies and situations like above speak the opposite. Many studies argue that mass persuasion fails to reach its goals (Robertson, 1976; Roberts & Bachen, 1981; Skogan & Maxfield, 1981; Tyler 1980; Wakefield, Loken, & Hornik, 2010). Such social and political commentators contend that mass media messages influence people's perception about society as a whole but they lack a personal impact. Theorists claim that people do not often personally apply or heed the message from mass media (Lazarsfeld, Berleson, &

Gaudet, 1948).

On the other hand, it is well known that informal social communication with friends and families has the capacity to change one's actual attitude and behavior (Lazarsfeld et al., 1948; Tyler & Cook, 1984). However, one-to-one, face-to-face conversation with all members of a population is simply not feasible in the case of a mass campaign.

Although social network services (SNS) were initially conceived of as a revolutionary means of building and maintaining interpersonal connections, its potential as a mass persuasion channel has drawn much attention from both promotional campaign and marketing fields. As statistics show, 9 out of 10 businesses worldwide use social media for marketing purposes (Statista, 2016), and health care companies claimed that they spent four percent of their marketing budgets on social media marketing campaigns (Statista, 2015).

Recent studies have examined the possible effects of SNS on persuasion. Most of these studies focused on the channel's attributes, such as its functions to interact with other users and to engage in interpersonal communication, arguing that these social context of the medium support successful persuasion strategies (Park, Rodgers, & Stemmler, 2011; Porter & Golan, 2010; Hanson, Haridakis, Cunningham, Sharma & Ponder, 2010).

Extending this line of research, the current study investigates the effectiveness of Facebook, the world's most popular SNS, as a channel for persuasion relative to traditional mass media. It explores channel effect from a user's perspective: their experience and

perception. Accordingly, this study can provide direct evidence for the role of a communication channel in a person's cognitive process of persuasion. Specifically, the study examined perceived persuasive intent as a means of understanding why Facebook messages may be more effective in changing people's attitudes and behavioral intentions than a news article. In so doing, the study examines a user's health concerns and prior knowledge about a health issue as potential moderators that might alter the effects of communication channel.

Perceived persuasive intent of communication may be rated higher for mass media than Facebook because the former is aimed at a general audience. According to Beniger (1987), the larger the intended audience, the lower the perceived sincerity of the message (Beniger, 1987). Perceived sincerity, which refers to the believed genuineness of the message and the communicator, can also refer to the absence of persuasive intent (Beniger, 1987). Judgment of the message's persuasive intent can inhibit persuasion because it increases opposing thoughts (Brock, 1967; Petty & Cacioppo, 1979). Given that persuasive intent decreases the effectiveness of the persuasive message (Brock, 1967; Hovland, & Weiss, 1951; Petty & Cacioppo, 1979), Facebook may be more persuasive than mass media because people judge Facebook messages to have less persuasive intent and hence to be more genuine than mass-oriented messages.

Such channel effect, however, may not be uniformly found among its users. Petty and Cacioppo (1981, 1986), who devised the elaboration likelihood model (ELM), posit that depending on one's level of engagement and ability to process the message content, the

variables related to message acceptance vary. Among many factors, the current study focuses on personal interest as the motivational factor and prior knowledge as the ability factor for message processing.

Personal interest toward the message topic can affect a person's level of engagement with the message (Petty & Cacioppo, 1986). That is, the higher the level of personal interest in the message topic, the higher the motivation for cognitive engagement and hence an increase in message elaboration (Petty & Cacioppo, 1986). In terms of a health issue, interest in health can refer to people's concern about their physical wellness (Michaelidou & Hassan, 2008) and their readiness to undertake healthy actions (Oude Ophuis, 1989). The extended parallel process model (EPPM) suggests that perceptions or thoughts about health threats can affect people's motivation to evaluate health messages (Witte, 1994). If so, the channel effects suggested above may be greater among those who focus less on the message due to lower levels of health concern.

Meanwhile, prior knowledge about the message topic can enhance and facilitate message elaboration. With accumulated prior knowledge, people use what they already know to scrutinize the given message and hence make judgments based on the merits of the information rather than on other external cues (Petty & Cacioppo, 1984). Therefore, the channel effect studied in the current study can be moderated by one's level of prior topic knowledge, as for those with greater prior knowledge of the message's content, channel cue might no longer act as a critical source of persuasion judgment.

In sum, the aim of this study is to investigate how SNS platforms differ from traditional mass media in terms of persuasive effectiveness. Specifically, the study empirically examines whether Facebook messages reduce the perceived persuasive intent compared with messages conveyed via mass media. Also, the study tests whether persuasive effectiveness varies depending upon the interest and prior knowledge of the message.

CHAPTER 2. THEORETICAL BACKGROUND

2.1 Mass Media and Persuasion

Mass media is undoubtedly the most popular channel when it comes to mass persuasion. For campaign planners, mass media's ability to swiftly reach a large majority is an enormous advantage. During the 1920s and the 1930s, the assumed direct effect of mass media was dominant among scholars with multiple social events supporting this assumption. These included the mass hysteria following Orson Well's 'War of the Worlds' in 1938; the rise of individuals such as Adolf Hitler and Louisiana Senator Huey Long in the United States (Petty et al., 2009). Similarly, theorists argued that mass media messages had the ability to directly influence people's attitude and behavior (Lasswell, 1927; Lippmann, 1922). It was believed that a mere increase in information exposure was sufficient for a change in one's attitude and behavior (Lasswell, 1927; Lippmann, 1922). Early mass media theories, such as the hypodermic needle theory (Lazarsfeld, Berelson, & Gaudet, 1944) and Gerbner and Gross's (1976) cultivation theory, propose that with increase in exposure, mass media has the strength to change people's initial attitude and even their belief about social reality (Riddle, 2009).

Such an assumption was accepted not only because the media was new and intriguing but also because the audiences were perceived as vulnerable, and passively captivated by the message (Sears & Kosterman, 1994). As Sears and Kosterman (1994) describe, these audiences were considered "helpless victims" (p. 2) of the media.

However, these assumptions were criticized for a lack of empirical evidence later. As Petty and colleagues (2009) point out, studies supporting mass media's strong influence (Lasswell, 1927; Lippmann, 1922; Gerbner & Gross, 1976) relied on "informal and anecdotal evidence" (p. 126) rather than empirical evidence.

Indeed, more recent studies concluded that despite their efficiency in delivering a message to the mass audience, mass media lacked the power to change people's actual behavior. In one study on campaigns promoting prosocial behaviors (e.g. wearing seat belts), people were found to gain knowledge through campaigns but their behavior had not changed (Robertson, 1976). Likewise, the number of crime-related news stories circulating through mass media had no relevant effect on the participant's fear of victimization or their attempt to adapt their behavior (Skogan & Maxfield, 1981). In their review on mass media health campaigns, Wakefield et al (2010) have found that mass media can have a positive impact on health-related behavior, such as smoking, alcohol and other drug cessation, but they are more effective when coupled with other public services, community-based programs or policies to support behavioral changes. Without these subsidiary intervention to directly influence the recipients, they claim that mass media campaigns only have a limited effect on people's knowledge. All in all, in their review on mass media effect studies published between 1975 and early 1980, Robert and Bachen (1981) explain that study results show that mass media is effective in altering general assumptions about the world but not as effective in changing personal attitudes or behaviors.

2.1.1 Two-Step Flow of Communication

In fact, the assumption that mass media lacks influence on audience perception can be traced back to the two-step flow of communication advanced by Lazarsfeld et al. (1948). In their study of the 1940 Presidential campaign, researchers found that interpersonal encounters with acquaintances were more effective than political campaigns on mass media (Lazarsfeld et al., 1948). They explained that information from mass media did not directly influence the public; rather the campaign messages were best mediated by the minorities that were more exposed to mass media (opinion leaders) to the general population (Lazarsfeld et al., 1948). Hence, the two-step flow of communication was proposed. Other than the flow of information transmission, another fundamental proposition was that people were more influenced by interpersonal discussion than by mass media messages (Lazarsfeld et al., 1948). Referred to as personal influence, the study found that personal encounters with families and friends had a greater impact on changing people's voting decisions than the mass media. Specifically, "those who changed their minds during the course of the campaign, were more likely than other people to mention personal influence as having figured in their decisions" (Katz, 1957, p. 4, in Lazarsfeld et al., 1948)

The fact that interpersonal encounters had a greater impact on people's decisions challenged the dominant assumption that people were atomized individuals disconnected from other members of society. As such, many subsequent studies focused on the effects of interpersonal communication and the interaction between an opinion

leader and the general public (Coleman, Katz, & Menzel, 1966; Katz & Lazarsfeld, 1955). For example, Katz and Lazarsfeld's (1955) Decatur study focused on the role of interpersonal communication on people's decision making and found once more that interpersonal encounters had a greater effect than the traditional media. Specifically, relying on the personal reports of the decision makers themselves, researchers found that interpersonal communication had a greater impact on people's decisions related to marketing, fashion and movie-going (Katz & Lazarsfeld, 1955).

Likewise, in Coleman and colleagues' (1966) study on doctors' decisions pertaining to new drugs, other colleagues (doctors) were the prominent source of information. However, because the study did not directly consider the relative effectiveness of the sources, it is difficult to ascertain whether their conversations were in fact more effective than the media source. Nevertheless, the time of a drug adoption was strongly related to the doctor's participation in the medical community, suggesting that the interpersonal contacts had a significant effect on their decisions (Coleman et al., 1966). Overall, the study proposed that traditional media was able to 'inform' people but interpersonal encounter played the 'legitimizing' role and directly influenced whether people accepted or rejected such information (Coleman et al., 1966).

The effectiveness of interpersonal communication on persuasion has also been discussed in campaign studies. For example, Korhonen, Uutela, Korhonen, and Puska (2010) have argued that personal interaction with specialists, health workers, neighbors, friends and

families are effective in persuading people to adopt healthy behavior. Specifically, they found that among the 1,694 current smokers or persons who quit smoking, mass media only had an influence on the male smokers. Contrastingly, interpersonal communication influenced both male and female smokers in their attempt to quit smoking. The scholars assert that interpersonal communication, as a form of social influence acts as “a catalyst” (p.12) encouraging healthy actions, and hence interpersonal intervention “should be emphasized” “to obtain a higher impact in the target population” (p.12). Also, in their study on the effect of mass and interpersonal communication on people’s health risk perception, Morton and Duck (2001) found whilst mass media coverage on skin cancer had impact on people’s perception of risk on others, interpersonal communication with peers, family, partners and health professionals had influenced their belief in personal risk to the diseases. Specifically, the results showed that people were more likely to believe that they were personally at risk with the disease when they talked about it with others than those who had read an article about it on newspapers (Morton & Duck, 2001).

2.1.2 Social Networking Sites (SNS) and Persuasion

Despite the known effectiveness of interpersonal contact, face-to-face communication is not feasible for mass-oriented campaigns. As such, Internet has emerged as a viable alternative, as the Internet can facilitate both mass and interpersonal communication means with minimal expense and time (Cassell et al., 1998). That is, posting an advertisement on a popular portal site can function as mass promotion,

whereas a direct messaging between friends on Facebook can represent interpersonal communication (Bazarova, 2012).

Specifically, contemporary campaign researchers focus on social networking services (SNS) as a possible substitute for mass-directed campaign channels. Its potential to facilitate both mass and interpersonal communication increases the reliance on SNS. In the United States, former President Barack Obama's utilization of SNS during the 2008 election provides one of the most emphatic endorsements of this type of political campaign (Robertson, Vatrappu, & Medina, 2010). It was the first truly successful event that legitimized SNS as one of the most effective methods for mass persuasion (Robertson et al., 2010). Specifically, the use of SNSs such as Facebook, Twitter and YouTube during the election campaign helped people stay involved in two-way interactions with Obama's campaign and helped to create online political communities with other campaign participants (Robertson et al., 2010). This way, people felt a greater sense of belonging and obligation to take part in the voting. As Robertson and his colleagues maintain, the use of SNSs in such political campaigns provides people with the "personalized environments" that engender "a stronger sense of participation and ownership" (p. 12).

Meanwhile, nearly 9 out of 10 companies worldwide use SNSs for marketing purposes with Twitter being the most prevalent, followed by Facebook and Instagram (Statista, 2016). Results of these SNS promotions were found to be promising. For example, the Indonesian online fashion retailer, Berrybenka, was able to boost its sales by 40%

after posting photos and carousel advertisements on Facebook (Facebook for business, 2017). Also, market share for Nestle Fitness increased by 4.7% in Taiwan after posting video and carousel advertisements on Facebook (Facebook for business, 2015).

In addition, many non-profit organizations utilize the medium for promotional purposes. For example, the American Centers for Disease Control and Prevention used Twitter and Facebook to promote disease symptoms and to publicize preventative behaviors during the breakout of the influenza virus (Parvanta, 2010) By using social media platform, the center assert they were able to reach larger number of audience, increase accessibility and emphasize important health information (Parvanta, 2010). Also, global participation in the ‘

(or the ALS Ice Bucket Challenge) to raise money and awareness for amyotrophic lateral sclerosis (also known as Lou Gehrig’s disease) was facilitated through the dissemination of relevant posts on SNSs. Facebook alone had 2.4 million tagged videos relating to the challenge (Adeyeri, 2014).

2.1.3 Effect of Communication Channel in Persuasion

Although research suggests that communication channel exerts a significant effect on persuasive outcome, it remains relatively understudied how and why. Although they focused on politicians’ SNS-based publicity efforts, Lee and Shin (2012) investigated the effect of exposure to a politician’s Twitter page (vs. his newspaper interview) on voters’ impression of the politician. They defined Twitter as a “personal or interpersonal medium through which their

personal experiences are shared among those within their online network” (p. 5) while defining mass media as institutionalized informational media. They hypothesized that the functional discrepancy between the two mediums could cause contrasting effects on the reader’s impression of the politician. Indeed, people’s evaluation for the politician differed depending on which medium they were exposed to, although such effect qualified by the individual’s transportability.

The authors argued that people adopt “medium-specific processing strategies” (p. 1), echoing Utz’s (2009) claim that mass media facilitates topic-centered processing, but SNS allows source-centered processing. Indeed, when instructed to list thoughts they had during message exposure, more thoughts about the message source were reported by participants who read Twitter messages but more thoughts about the message topic were registered by the participants of a traditional news article (Lee & Shin, 2012). Overall, the study suggests that when reading a message, people adopt different cognitive processes specific to each medium.

Meanwhile, other researchers have studied the effects of SNS on audience perception using the third-person effect (TPE). Banning and Sweetser (2007) have studied the differences in media effects across four types of media (k-log¹, personal blog, online and print newspaper) and hypothesized that three informational mediums will be judged to have greater impact on others rather than on the self,

¹ K-log is short for ‘Knowledge blog’, which refers to the informational blogs that deliver only factual information about particular issues.

compared to the personal blog. The third-person effect argues that the degree of social distance (extent of similarities) one perceives between target “other” and “self” determines the impact of the message on that person. That is, “the further the social distance (less likeness) with the “other”, the greater the third-person effect” (Banning & Sweetser, 2007, p. 454). Adopting the concept of social distance on media type, the authors argue that the medium used for personal purposes (personal blogs) could be defined as a ‘socially close medium’ as compared to the distant traditional mass media (online and print newspaper). Rather than evaluating the medium of exposure, the study evaluated the source label, for example “taken from a personal Weblog or blog”, “taken from a Weblog or blog maintained by a news organization, like Fox News or ABC” and “taken from an online version of a newspaper, like NYTimes.com” (p. 458). Therefore, these stimuli may have been insufficient to capture the actual ‘media’ effect as originally intended. In fact, the differences between TPE across all four media (k-log, personal blog, online and print newspaper) were found insignificant and even the personal blog was found to have greater influence on others as well as on self (Banning & Sweetser, 2007).

2.2 Possible Mechanism for Channel Effect on Persuasion

2.2.1 Perception of Persuasive intent

To account for why communication channel may affect persuasive outcomes, this study focused on people’s judgment of the

communicator's intention. As Beniger (1987) notes, perceived sincerity of information "depends at least in part on the inferred size of the intended audience" (p. 360). That is, those messages perceived to be directed towards me or to a small audience are judged less public and more sincere, whereas mass-oriented messages seem highly public and less sincere. For example, while we may be encouraged into clicking on an email announcing the winner of a prize directed only at oneself, it is hardly the case that we will do the same for an email directed towards multiple recipients. With regards to the latter, we instantly identify the email as junk mail not because of its content but because of the sheer size of the intended audience. Perceived sincerity, which is often interpreted as the trust and credibility of the message and of its communicator (Beniger, 1987), can also be interpreted as an individual's belief regarding an absence of persuasive intent.

Meanwhile, Brock's (1968) commodity theory argues that an audience generally responds more favorably to messages that are seen as rare or scarce. Individuals feel that rare messages are more personally intimate and confidential. That is, one's belief that specific information is available to oneself, but not to others affects his/her judgment of the value of the message and his/her degree of intimacy towards that message. Bazarova (2012) explains that this is because people perceive scarce messages as "deliberately produced for his/her consumption" (Bazarova, 2012, p. 817). Message intimacy, which encompasses one's judgement as to how personal and truthful the message is to the individual (Jones & Davis, 1965), may also

presuppose a low persuasive intention of the message.

On the other hand, perception of persuasion intention may vary according to the perceived benefit for the source. Past study explains that people place lower level of trust on mainstream news media than online information despite many characteristics of the Internet that may degrade the authority of the information content, such as reduced writing standards and selection criteria (T.J. Johnson & Kaye, 1998). Theorists explain that this is due in part to their judgment of benefit the source may earn as a result of the message exposure. As Tsfati (2010) explains, people's hostile attitude toward mainstream mass media news is due to the belief that the information source would "sacrifice accuracy and precision for personal gains" (Tsfati, 2010, p4). That is, people's feeling of source's intention to seduce people towards their own benefits, hence their level of persuasion intention, is greater for mass-oriented media. Furthermore, it is explained that such perception is subjective, independent of the objective quality of the message (Berlo, Lemert & Merts, 1969). In terms of health campaign, the present study will examine if such skeptical perception of mass media is indeed independent of message content and applies to the context of health promotion that presumably benefits the readers more than the information source.

Lee (2013) also suggests that different communication channels can induce different judgments regarding a genuine intent. In Lee's (2013) study, it was found that people responded differently to identical messages by a presidential candidate depending on the communication channels (TV vs. Twitter). For those with negative

attitudes toward the candidate, a higher level of counterarguing occurred in response to the television interview than the Twitter posts. To explain this result, Lee (2013) speculated that the TV interview may have been perceived as less sincere than the Twitter messages, and induced greater suspicion within skeptical voters about the hidden intentions of the candidate. Such “disbelief” (p. 967) in the genuineness of the candidate, could have induced further resistance to the message, which resulted in an increased level of counter-arguments. However, because the study did not measure perceived persuasive intent directly, no empirical evidence was available to support this argument. To address the limitation, the present study measures perceived persuasive intent and examine its effects on persuasion.

2.2.2 Perceived Persuasive Intent and Persuasion

Many studies on persuasion assert that an individual’s perception of the persuasive intent of the communication heightens resistance and reduces effectiveness (Hovland, & Weiss, 1951; Brock, 1967; Petty & Cacioppo, 1979). In their early work on persuasion, Hovland and Weiss (1951) quoted the finding that an awareness of the persuasive intention of a message “leads subjects to expect a biased, untrustworthy, or non-credible communicator”, which has the effect of “nullifying the communication” (rephrased in Kiesler & Kiesler, 1964, p. 547).

In his experimental study, Brock (1967) found that persuasive intent has an impact on persuasion resistance. In the study, perceived

persuasive intent was evaluated by changing the source of the message. Message content for both high and low persuasive contexts was identical. Specifically, a persuasive message about increasing college tuition was presented as either being a) written by students in the school's journalism department (low intent context) or b) by the school's faculty council (high intent context). Furthermore, in the low intent context, it appeared that the students had written the persuasive message to "fulfill an academic requirement rather than to bring about institutional change" (p. 299). Meanwhile, in the high intent condition, the message included the "express purpose of persuading the student body" (p. 300). As expected, the high persuasive context elicited greater resistance, more challenging arguments and hence a greater negative reception than the low intent condition (Brock, 1967).

Directly supporting the above results, Petty and Cacioppo (1979) also argued that perceived persuasive intent impedes persuasion by increasing resistance and by decreasing favorable thoughts. According to them, people perceive persuasive intent as a threat to one's freedom of choice and by constructing counter thoughts people try to restore their freedom (Petty & Cacioppo, 1979). Specifically, they state that "without forewarning, communication would be accepted on the basis of its merits; but with a forewarning, subjects would be motivated to counterargue the message in order to reassert their freedom" (p. 173). Consequently, people forewarned of the communicator's persuasive intent were less likely to agree with or comply with the message (Petty & Cacioppo, 1979).

Similarly, scholars studying the boomerang effect of persuasion (Byrne & Hart, 2009) explain that people's effort to restore their persuasive freedom could elicit a boomerang effect and inhibit the effectiveness of persuasion. That is, when an individual perceives that their freedom has been threatened (i.e. by realizing that the communicator is trying to make him or her perform certain actions), they try to restore their autonomy by opposing the influence that has been brought to bear (i.e. engaging in the behavior threatened or by embracing the idea challenged by the persuasion) (Byrne & Hart, 2009). That is, by generating a greater number of opposing thoughts to the position advocated in the persuasive message, individuals are able to undermine and challenge the persuasive intent of the message.

While these studies examined the effect of persuasive intent by evaluating the message content or the message source, the present study investigates the difference in persuasive intent as a function of communication channel. Specifically, in reference to Beniger (1987) and Lee's (2013) study, it is hypothesized that SNS may be more effective for persuasion because its messages are perceived as lower in persuasive intent relative to mass-directed messages.

H1: Participants attribute a higher level of persuasive intent to a news article than to a Facebook post.

H2a–b: Perceived persuasive intent of the communicator negatively affects (a) participants' attitude toward the advocated position and (b) their intention to perform the advocated behavior.

2.3 Moderating Factors of Channel Effects

2.3.1 The Elaboration Likelihood Model of Persuasion

The elaboration likelihood model of persuasion (ELM) provides a generalized framework that helps to evaluate the process of attitude change and the effectiveness of that change. According to Petty and Cacioppo (1981, 1986), the model was developed in an attempt to evaluate the contradictory findings in persuasion studies. It seeks to explain “if, when, and how the traditional source, message, recipient and channel variables affected attitude change” (Petty and Cacioppo, 1986, p. 125). Ever since it was introduced, the ELM has become one of the most widely-used models in the field of social psychology, consumer research and persuasive communication and has been supported by numerous empirical findings from a range of behavioral domains.

The ELM is based on the assumption that when people are exposed to information, it is the extent of one’s cognitive engagement to that information which determines its persuasive success rather than the exposure per se (Greenwald & Albert, 1968). However, the model suggests that persuasion does not only take place when one is thoughtfully engaged with the content. Instead, the model proposes that “persuasion can occur when thinking is high or low” (Petty, Brinol, & Priester, 2009, p. 132). Specifically, the persuasion process can follow one of two distinct routes: either 1) the central or 2) the peripheral route. The role of these two pathways in persuasion parallels Chaiken’s (1977, 1980) heuristic-systematic model (HSM).

However, whilst the ELM is based on two routes that depend upon the extent of one's cognitive engagement (Petty & Cacioppo, 1981; 1986), the HSM proposes that heuristic and systematic processing can take place simultaneously depending upon the recipient's goal (e.g. goal for accuracy) (Eagly and Chaiken, 1993).

The central route of persuasion results from the respondent's thoughtful consideration of the message content, when elaboration is high. As Petty and Cacioppo (1986) note, the central route of persuasion is a "careful and thoughtful consideration of the true merits of the information presented in support of an advocacy (central route)" (p. 125). By generating favorable or unfavorable responses to the message, recipients recognize advantages for complying with the message. Therefore, the level of favorable cognitive responses determines the compliance with the message recommendation.

However, due to situational and cognitive limitations, not every message is attentively considered. As people are bombarded with messages, it is inevitable that people will only selectively engage with messages and become 'cognitive misers' (Taylor, 1981) in some circumstances. As Petty and colleagues (2009) contend, "not every situation provides the time and opportunity for careful reflection" (p. 132). Therefore, it is only when recipients are willing and able to do so, that people can sit down, take time and consider each message in detail.

For message elaboration to occur, it is important that people are willing to commit to an evaluation of the message. By willingness, researchers are concerned with one's interest in the message; their

heightened motivation to think about the message (Petty, Brinol, & Priester, 2009). Many studies have found a variety of variables that trigger motivation. For example, personal relevance has been found as a significant motivational factor for message evaluation and engagement (Petty & Cacioppo 1979b; Petty & Wegener, 1997). When the message of a school announcement was evaluated in terms of the level of personal relevance to the participant (a change of policy at their own university vs. at a distant university), those in the high personal relevance (own university) condition were more influenced by the quality of the message than those in the low personal relevance condition (Petty and Cacioppo, 1979b). Similarly, elaboration increased when the message corresponded to the person's attitudinal basis, and hence message quality had greater impact in this condition (Wegener & Petty, 1997). Other situational factors can also act as motivational factors to increase the engagement with the message. For example, albeit for those with a low need for cognition, the evaluation of the source's trustworthiness has a significant effect on the participant's level of message elaboration. Higher message elaboration for a trustworthy source was found despite their lack of interest in the message content (Priester & Petty, 1995). As such, depending upon the situational and individual factors, message recipients will vary in "how much cognitive energy they devote" (Angst and Agarwal, 2009, p. 341) to the message.

On the other hand, to scrutinize the content of the issue thoroughly, people not only need to be motivated but also need to have the ability to do so. To the extent that one can access relevant

information from memory devices and retrieve issue-relevant images, one can now reserve final judgements until a convenient time. An analogy can be made to the development of a child's attitudinal change processes. Petty and Cacioppo (1986) state: "As children mature, they become more motivated to express correct opinions on certain issues, but their ability to scrutinize issue-relevant arguments may still be poor due to lack of knowledge ... as people's acquired knowledge and cognitive skills grow, this renders them more able to critically analyze issue-relevant information on certain topics" (p. 131). Even with high motivation, people need to have relevant information about the issue in order to scrutinize attitudes.

Along with the ELM, many variables have been suggested to heighten the ability to scrutinize messages carefully, including an absence of distraction (Petty & Cacioppo, 1986). Through two of their experiments on the effect of distraction on persuasion, Osterhouse and Brock (1970) found that when people were exposed in a situation distracting their attention from the persuasion message, participants level of acceptance with the persuasion message decreased by generating greater counter thoughts; that distraction moderated people's ability to comprehend the persuasion message. Specifically, in the study, participants were instructed to count the number of lights flashing in front of them and to listen to a speech on an increase in university tuition at the same time. The results revealed that agreement with the message was reduced by the severity of the distraction (the number of light flashing). In other words, an individual's ability to recognize the relevance and personal

significance of the message, hence their cognitive process through the central route of persuasion was obstructed with heightened distractions.

In contrast to the central route, the peripheral route of persuasion occurs when a person has relatively low motivation and/or a reduced ability to comprehend the information. That is, the result of persuasion by the peripheral route is not determined by the message content but instead by other peripheral cues which “provide simple inferences to the validity of the message” (Petty & Cacioppo, 1986, p. 132).

The peripheral route of persuasion involves consideration of simple contextual cues in the persuasive process. For example, it has been found that the message source can have an effect on persuasion and often determines perceived expertise and trustworthiness. In their experiment focusing on the interaction between the type of medium and the source’s perceived trustworthiness, Andreoli and Worchel (1978) found that there was a significant source effect on a recipient’s attitude. The study employed 3 (television, radio, or a written presentation) x 4 (a political candidate, a State House representative, a former representative, or a newscaster) experiment design. Among the four different sources, significantly greater attitude change had resulted by the former State House representative and the newscaster, who were rated the highest on the trustworthy measure. Notably, the study had also found significant interaction effect between the source and the used medium (Andreoli & Worchel, 1978). Greater attitude change was found when the former representative and the newscaster delivered their message

through television than by radio or a written text (Andreoli & Worchel, 1978). Meanwhile, for the political candidate, greater attitude change resulted when he spoke behind a radio or through a written presentation than television.

2.3.2 Motivational and Ability Factors in Persuasion

The primary goal of this study is to investigate if people's judgment of the persuasive message is affected by the medium. However, when the message content is identical, if individuals engage in high message elaboration, it would matter less through which communication channel the message was delivered in deciding persuasive outcomes. After all, they will evaluate the message on the merits of arguments. However, if individuals are less motivated and/or less able to process the message thoroughly, they may become more likely to respond differently to the message depending on peripheral cues, such as communication channel. Therefore, in the current study, both a motivational factor and an ability factor are studied as possible moderators of the channel effects. Specifically, health concerns and prior knowledge are investigated as possible moderating variables.

1) Health Concern

Among those motivational factors mentioned above, personal interest in the message topic is known to increase message elaboration (Petty & Cacioppo, 1986). If the topic is of interest, the person engages in extensive cognitive processing, but if not, the

person relies on other peripheral cues.

As Michaelidou and Hassan (2008) explain, being health conscious is being concerned about one's physical wellbeing. Oude Ophius (1989) depicts interest in health as a person's readiness to take health-related actions. Song's (1995) definition of health concern points to the "consciousness of or attitude toward one's health status and health improvement."

Similar to the ELM, the extended parallel processing model (EPPM) suggests that the perception of threat, broadly defined as "cognitions or thoughts about the threat" (Witte, 1994, p. 114), during persuasive communication can affect people's decision to engage in message processing. Specifically, a perception of threat consists of two aspects: perceived severity and perceived susceptibility to the hazard. While perceived severity refers to one's beliefs regarding the significance and the magnitude of the threat, perceived susceptibility refers to one's concern about exposure to the threat. EPPM postulates that perception of threat could determine the person's motivation to process the message (Witte, 1994). Specifically, when the message is perceived to be highly concerning, people are motivated to make attentive responses to the message but when the threat is "regarded as trivial or irrelevant, there is no motivation to process the message further" (Witte, 1994, p. 115).

Also, in a study examining motives for consumption of organic food showed that people's concern for health significantly predicted health attitude (Chen, 2009). 11 items were used to measure health consciousness such as "I think that I take health into account a lot in

my life”, “I think it is important to know well how to eat healthy”, and “My health is so valuable to me that I am prepared to sacrifice many things for it”, and the results showed that health consciousness had strong relation to the positive attitude toward organic food consumption (Chen, 2009).

The fact that a high level of health concern heightens one’s motivation to engage with the message means that increased health concern may lessen the effect of communication channel. That is, one’s level of interest in their wellbeing not only affects the extent of message elaboration, but by doing so, it moderates the effect of used communication channel. As Petty and Cacioppo (1986) state, peripheral cues are more likely to affect persuasion processes “when subjects are either unmotivated or unable to process issue–relevant arguments” (p.136).

H3: The tendency to attribute stronger persuasive intent to a news article than to a Facebook post (H1) is more pronounced among those with lower levels of health concern.

2) Prior Topic Knowledge

On the basis of the ELM, the current study investigates prior knowledge as a possible moderating factor that enhances the persuasive power of the message. Prior knowledge is the accumulated informational knowledge or ‘schema’ a person has about an object. Schema is a well–developed structure of general knowledge that is stored in our memories and that develops in accordance with one’s relevant experiences. Schemas are responsible for defining the

attributes of an object as well as the person's opinions (Taylor & Fiske, 1984; Rao & Monroe, 1988). Compiled by past experiences, knowledge, feelings and beliefs, schemas are critical to the processing of a message. As Taylor and Fiske (1984) comment, schemas "help us to structure, organize and interpret new information; they facilitate encoding, storage, and retrieval of relevant information" (p. 197).

According to the ELM, prior knowledge acts as an ability factor that determines how an individual evaluates a persuasive message (Petty & Cacioppo, 1984, 1986). As determined in several studies, having relevant knowledge about an object or an issue enables people to make judgments based on the true merits of the object or the message and hence to follow the central route of persuasion (Cacioppo, Petty, & Sidera, 1982; Petty & Cacioppo, 1986). On the other hand, lacking such relevant knowledge makes it difficult to evaluate the content, and in such cases, individuals rely instead on peripheral features. For example, similarly, Smith and Wilson (2002) found that younger children had difficulties comprehending health-related news messages due to their low level of knowledge of health-related terminologies than older children. Despite no direct evidence on children's evaluation of the peripheral cues, theorists still speculated that younger children, due to their limited language comprehension ability and knowledge on relevant issue, would draw inferences about the news through its pictures or video footage (Smith & Wilson, 2002). Also, with extensive prior knowledge of a product, consumers made product evaluations using intrinsic cues (product quality such as fabric material), whereas those with a low

level of prior knowledge evaluated the product based on extrinsic information (price) (Rao & Monroe, 1988). Based on these findings, it was predicted that communication channel would exert greater effect on people’s acceptance of the message when they have lower levels of prior knowledge and thus take peripheral routes of persuasion.

H4: The tendency to attribute a higher level of persuasive intent to a news article than to a Facebook post (H1) is more pronounced among those with less prior knowledge.

Taken together, the following research model was proposed.

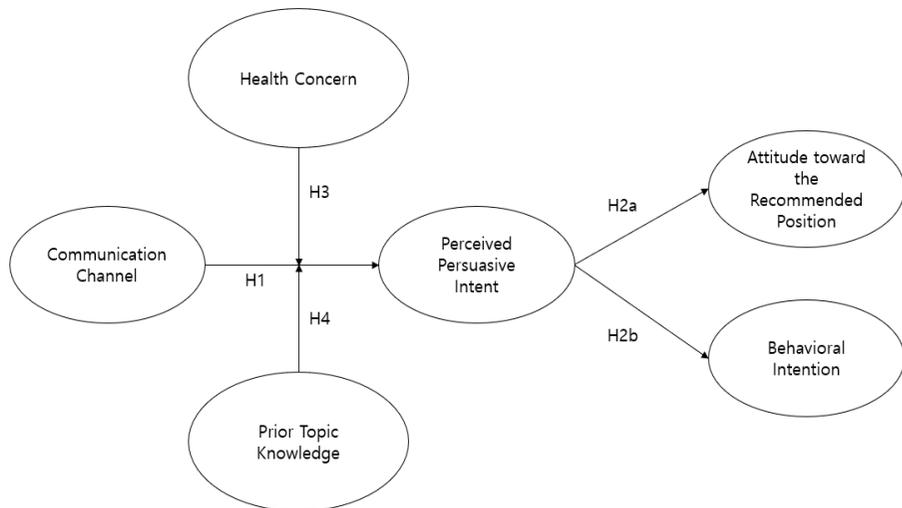


Figure 1. Conditional Indirect Effects of Communication Channel on Persuasive Outcomes

CHAPER 3. STUDY 1

3.1 Method

In order to address the above research questions and hypotheses, an online between-subjects experiment was conducted. Among variants of SNSs, Facebook, the most popular SNS site worldwide (Statista, 2015) was used in the experiment, while the interface of the most popular news portal site in South Korea, Naver News, was chosen to present the online news article.

3.1.1 Participants and Procedure

1) Participants

A total of 132 people (66 male, 66 female) were recruited via an online survey company in South Korea, in exchange for a small amount of monetary compensation. Demographic characteristics of the participants are reported in Table 1.

Table 1. Demographic Attributes of the Participants (Study 1)

Attribute		Frequency	Percentage (%)
Gender	Female	66	50.0%
	Male	66	50.0%
Age	20–29	38	28.8%
	30–39	37	28.0%
	40–49	28	21.2%
	50–59	29	22.0%
Monthly Household Income (won)	Below 1,000,000~\1,999,999	13	9.8%
	\2,000,000~\2,999,999	13	9.8%
	\3,000,000~\3,999,999	20	15.2%
	\4,000,000~\4,999,999	26	19.7%
	\5,000,000~\5,999,999	27	20.5%
	\6,000,000~\6,999,999	15	11.4%
	\7,000,000~\7,999,999	8	6.1%
	\8,000,000~\8,999,999	7	5.3%
Above \9,000,000	3	2.3%	

2) Procedure

Upon accessing the website, participants were first asked to indicate their agreement to participate in the study. Once they agreed, they were then asked questions about their demographic characteristics, health concern, their prior knowledge about the featured health issue and prior experience with the advised health behavior. Once they completed these questions, they were randomly assigned to one of the two experimental contexts (Facebook vs. Naver news). Those who indicated that they did not use Facebook were disqualified.

Prior to displaying the experimental stimuli, there was a short introduction: “Now you will read a Facebook post by a medical reporter” or “Now you will read an op-ed piece by a medical reporter”. After they read the stimulus, participants were asked questions about their perceived persuasive intent of the message, attitude towards the advocated position and intention to follow the recommended behavior.

3.1.2 Experiment Materials

For the experimental stimuli, a controversial yet relatable issue was selected after reviewing public health issues on a health news portal, Kormedi.com.

The severity of the health consequence alone could effectively influence people’s attitude and a change in behavior. Previous studies indicated that the arousal of fear increased the possibility of a successful persuasive outcome with regards to health issues (Leventhal & Niles, 1964; Leventhal, Singer & Jones, 1965). To allow room for variance due to communication channel, a health issue of medium severity was chosen: maintenance of dental health.

The content of the message was drawn from articles on Kormedi.com to avoid incorrect medical information. Specifically, an article promoting direct action, regularly chewing gum for dental health, was selected (Lee, 2015), as shown below.

Experiment Stimuli: Effects of Chewing Gum on Dental Health

Bacteria inside a mouth needs special attention as it can seep into our body through the blood vessels, can lead to cardiac disorders,

diabetes, cerebral apoplexy and even cause premature births. According to the recent Public Health Dentistry journal, most of the people suffering from periodontal disease caused by oral bacteria were also in the high-risk group for diabetes. A research team in Birmingham University proposed that the loss of periodontal bone due to gum disease increases cerebral apoplexy and transient cerebral ischemia. Also, Professor Lee from Seoul National University Bundang Hospital stated that the fewer the teeth and the greater the periodontal disease, the higher the incidence of cerebral apoplexy.

To maintain dental health, the research team in Netherlands suggested chewing gum for 10 minutes after each meal. Researchers in the Department of Biology at the University of Groningen asked their participants to chew gum for 10 minutes after their meals. As a result, the team witnessed that more than a hundred million bacteria and plaques inside a person's mouth was absorbed by the chewing gum. Likewise, flossing, by moving around mouth, the gum removed food stuck between the teeth and cleaned away the plaques. Furthermore, the team explained that chewing gum also prevented tooth cavity by stimulating saliva. Saliva helps to clear bacteria due to its antibacterial properties. Hence, researchers proposed that the act of chewing gum helped cavity protection and also improved gum and oral health in general.

Specifically, researchers encourage exactly 10 minutes of chewing gum after a meal. Chewing longer than 10 minutes increases the likelihood of the bacteria being reabsorbed into the teeth. Of course, flossing one's teeth every day is the best solution but doing

so everyday can be very difficult. However, paying no attention to our oral health can cause fatal consequences. Chewing gum could be the quick and easy way to keep our teeth healthy and clean.

For the source, a fictitious medical reporter, Seong-ho Kim, was used to avoid any contaminating effect associated with a known source. Seong-ho Kim is one of the most common male names in South Korea (Lee, 2007). As a medical journalist, writing a health-related post on Facebook and a column for a newspaper would seem plausible to the participants.

Prior to the main experiment, a pilot test was conducted to determine the profile image of the source. Participants ($N = 22$) were shown 10 different profile images. The images were evaluated according to the three most common sub-dimensions used in person perception research: competence, morality, and attractiveness (Rosenberg, Bohan, McCafferty, & Harris, 1986; Wyer et al., 1991). Specifically, nine 7-point semantic differential items were used: unintelligent(1)–intelligent(7), incompetent–competent, has no leadership–has leadership, selfish–unselfish, immoral–moral, untrustworthy–trustworthy, dishonest–honest, unlikable–likable, unattractive–attractive. Except for one photo that yielded less than the commonly recommended value of 0.6 on Kaiser–Meyer–Olkin measure, all nine photos yielded a single-factor solution (Eigen value > 4 , % of variance $> 50\%$). Among these, a photo that showed the average score closest to the scale mid-point (4.0) was selected for the actual experiment ($\alpha = .90$, $M = 4.1$, $SD = .77$). A one sample

t-test confirmed that the photo was not significantly different from the mid-point ($t = 1.32, p = .19$).

For the Facebook condition, participants were presented with a mock Facebook page of the source with his profile picture, name, profession and the location of residence. Other details were blurred to keep the amount of personal information constant between the two communication channels. The experimental material was presented as a post on the person's wall (see Figure 2).

For the news article condition, participants were shown a typical online news article found on the Naver portal site. The message was situated in the middle of the page and the advertisements, as typically found with online articles, were presented on both sides, but blurred (see Figure 3).

Figure 2. Effects of Chewing Gum on Dental Health Message: Facebook Post



Figure 3. Effects of Chewing Gum on Dental Health Message: Naver News Article

The screenshot shows a Naver News article page. At the top, there's a navigation bar with 'NAVER 뉴스' and various category links. The article title is '[칼럼] 식후 10분 껌 씹기 효과'. Below the title is a sub-header with the author's name '김성호 의학전문기자' and a date '2015-10-27 20:40'. The main text starts with a photo of the author and a paragraph explaining that chewing gum helps clean the mouth and reduce plaque. It mentions a study from the University of Twente in the Netherlands. The article concludes with a recommendation to chew gum for 10 minutes after meals to maintain dental health. The author's name and email 'seongho@gmail.com' are listed at the bottom of the article.

3.1.3 Measures

1) Mediating & Moderating Variables

(1) Health Concerns

“Health concerns” refers to the “consciousness of or attitude toward one’s health status and health improvement” (Hong, 1995). The scale included five items from the previous study (Song, 1995) and the scores were averaged: “I am currently involved in physical trainings such as fitness and yoga”, “I buy healthy food for my health”, “I get regular medical check ups”, “I read or watch health-related books or TV programs” and “I have high interest in health” (1 = *Describes me very poorly*, 7 = *Describes me very well*; $\alpha = .84$, $M = 4.11$, $SD = 6.42$).

(2) Prior Topic Knowledge

Prior Knowledge refers to the extent of information the participant has initially about the message topic (Alba & Hutchinson, 1987). Prior knowledge is suggested as the possible ability factor for message processing (Cacioppo, Petty, & Sidera, 1982; Petty & Cacioppo, 1986) that might moderate the channel effect in the persuasion process. With reference to the previous study (Averbeck, Jones, & Robertson, 2011), prior knowledge was measured by asking five multiple choice questions related to each issue before the exposure to the experimental materials:

“How often should you have your teeth scaled?” (1. Every second

week, 2. Every month, 3. Every 2 months, 4. Every 6 months, 5. Once a year), “How often should you have your tooth brush changed, even when it is not damaged?”(1. Once a week, 2. Once every 2 weeks, 3. Once every 3 weeks, 4. Once every month, 5. Once every 3 months), “Which dental habit does not help remove tooth plaque?”(1. Brushing teeth 3 times a day, 2. Getting teeth scaled 3. Chewing sugar-free gum, 4. Brushing your teeth straight after drinking soft drinks, 5. Using a small amount of tooth paste), “When is it the best time to floss your teeth?” (1. In the morning straight after you wake up 2. After every meal, 3. At night before you sleep, 4. Only when you have brushed your teeth, 5. Anytime possible) and “Which of the following is not the early signs of tooth decay?” (1. Holes in your tooth, 2. Pain when you bite, 3. Feeling of sensitivity or pain in your tooth, 4. Wiggly tooth, 5. Discoloration of the tooth). A score of 1 was given to the correct answer and 0 was given to the incorrect answers, then these scores were added and used as an index of prior knowledge ($M = 2.14$, $SD = .42$).

(3) Perceived Persuasive Intent

Perceived persuasive intent is the extent to which the individual feels that the communicator is trying to change his or her attitudes, opinions, and/or behaviors (Hovland & Weiss, 1951). In order to measure the participants’ subjective judgment of the persuasive intent in the message, two statements from Park and Lee’s (2009) study (“the communicator’s intent is suspicious”, “the communicator’s intention is not genuine”) and two further items adjusted from Price,

Arnould and Tierney (1995) and Lee's study (2011) ("the communicator truly cares for me" and "the communicator is sincere in what he/she is saying") as relevant to the topic in the present study were used. The later two items were reverse coded. All the statements were evaluated using 7-point Likert type response anchor (1= *Not at all*, 7= *Very much*) and the scores were averaged ($\alpha = .80$, $M = 3.83$, $SD = 3.57$).

2) Dependent Variables

(1) Attitude toward Recommended Behavior

Attitude is the tendency to react positively or negatively towards a person, a thing or an event, or the subjective evaluation of the attitude object (Petty, Cacioppo & Goldman 1981). Petty and colleagues' (1981) scale was used to measure participants' attitude toward chewing gum regularly. Specifically, participants were asked to indicate their attitudes on four 9-point semantic differential scales: good(9)–bad(1), beneficial–harmful, wise–foolish, and favorable–unfavorable. Scores were averaged ($\alpha = .89$, $M = 4.69$, $SD = 1.07$), with the higher score indicating stronger agreement with the position advocated in the message.

(2) Behavioral Intention

Behavioral intention in the present study refers to one's intention to chew gum regularly. According to Ajzen (2006), specific measures including the target, action, context and time (TACT) are required for

assessing and predicting one's behavior. Three questions were used to measure people's intention to partake in the actions advocated in the message (Jang, 2014): "I have the intention to chew gum for 10 minutes after meals", "I will make an effort to chew gum for 10 minutes after meals" and "I am planning to chew gum for 10 minutes after meals" (1 = *Strongly disagree*, 7 = *Strongly agree*). Scores were averaged ($\alpha = .96$, $M = 4.02$, $SD = 4.56$).

3) Control Variable

For those who chewed gum regularly, the behavioral intention may reflect their habit rather than the effect of the study stimuli. Therefore, participants' prior experience with chewing gum was measured and controlled in the analyses, along with the demographic variables (sex, age, income). Prior experience was measured using two 7-point scale item: "I chew gum regularly" ($M = 1.75$, $SD = .43$, 1 = *Not at all*, 7 = *Very Much*).

3.2 Results

3.2.1 Manipulation Checks

To examine if the online news article and the Facebook post were recognized by the participants as intended, participants were asked at the end of the post-test questionnaire which of the two messages they had read, 1) a news article or 2) a Facebook post. The majority of the participants correctly recognized the stimulus, $n = 48$ out of 66, 72.7 % for the news condition, $n = 55$ out of 66, 83.3% for the Facebook condition). Only those who answered correctly ($n = 103$) were included in the analyses.

3.2.2 Preliminary Analyses

Prior to hypothesis tests, correlation analyses were conducted (see Table 2).

Notably, health concern had a significant positive relationship with the intention to follow the advised behavior ($r = .22, p = .03$). Prior experience with the focal health behavior also had a significant positive relationship with behavioral intention ($r = .29, p = .003$). Perceived persuasive intent had a significant negative relationship with attitude toward the position advocated in the message ($r = -.47, p < .001$) and intention to follow the advised behavior ($r = -.60, p < .001$). Attitude toward the position advocated in the message had a significant positive relationship with behavioral intention ($r = .60, p < .001$).

Table 2. Correlations among Key Variables (Study 1)

	1	2	3	4	5	6
1.Health Concern	—					
2.Prior Experience	.17	—				
3.Prior Topic Knowledge	-.10	-.08	—			
4.Perceived Persuasive Intent	-.16	-.09	-.17	—		
5.Attitude toward Message Position	.19	.07	.04	-.47***	—	
6.Behavioral Intention	.22*	.29**	-.01	-.60***	.60**	—

Note. * $p < .05$; ** $p < .01$; *** $p < .001$

3.2.3 Hypothesis Tests

In order to test if greater persuasive intent is attributed to the news articles than the Facebook post (H1) and if these results are moderated by a person's health concern (H3) and his/her prior knowledge about the message topic (H3), moderation analyses were conducted. First, the demographic variables (sex, age and income), and prior experience were entered as control variable in the first step. In the second step, independent variable (communication channel) and

the moderator (health concern or prior topic knowledge) were entered. For the third step, the interaction term (either communication channel* health concern or communication channel* prior topic knowledge) was entered in the regression model.

H1 predicted that greater persuasion intention would be attributed to the online health news article than the Facebook post. The moderation analysis showed that the main effect of the communication channel on perceived persuasive intent ($\beta = .15$, $t = 1.50$, $p = .14$) was insignificant. Therefore, H1 was not supported.

Hypothesis 2a–b predicted that perceived persuasive intent would negatively predict a) participants' attitude toward the position advocated in the message and b) their intention to perform the health behavior. From the correlation table above, it was found that perceived persuasive intent had a significant inverse relationship with attitude toward the position advocated in the message ($r = -.47$, $p < .001$) and intention to follow the advised behavior ($r = -.60$, $p < .001$). Therefore, both H2a and H2b were supported.

Hypothesis 3 tested if an individual's health concern moderates the tendency to attribute greater level of persuasive intent to a news article than to a Facebook post. Results showed that the moderation effect of health concern was significant (see Table 3–1), ($\beta = .77$, $t = 2.16$, $p = .03$).

To decompose the interaction effect, a simple slope analysis was conducted (see Table 3–2 and Figure 4). Directly contradicting H3, participants perceived stronger persuasive intent when they read the news article than the Facebook post only when they were highly

concerned about health (75th percentile or higher). For those less concerned about health, communication channel made no significant difference in perceived persuasive intent. Therefore, H3 was not supported.

Table 3–1. Effect of Communication Channel on Perceived Persuasive Intent: Health Concern as a Moderator (Study 1)

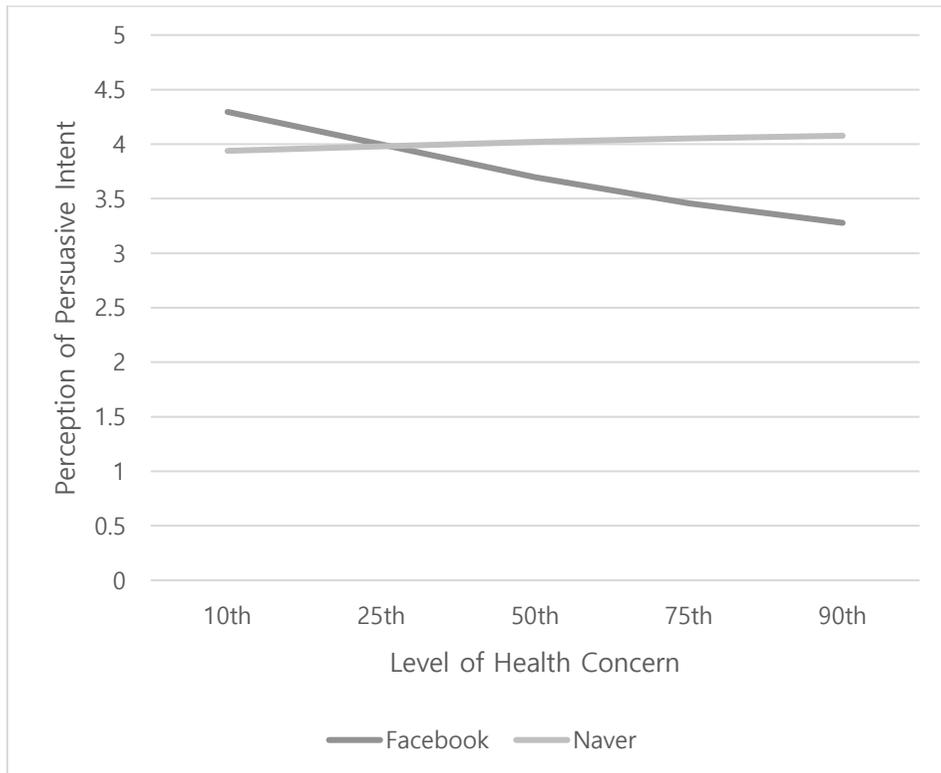
		Criterion Variable: Persuasive Intent							
Model		Unstandardized		β	t	R^2	F	R^2 Change	F Change
		Coefficients							
		B	SE						
1	(Constant)	4.56***	.37		12.50	.06	1.59	.06	1.59
	Sex	-.34	.19	-.18	-1.79				
	Age	-.01	.01	-.11	-1.05				
	Income	-.04	.05	-.08	-.79				
	Prior Experience	-.19	.24	-.08	-.79				
2	(Constant)	4.45***	.43		10.43	.09	1.55	.03	1.45
	Sex	-.32	.19	-.17	-1.69				
	Age	-.01	.01	-.08	-.76				
	Income	-.02	.05	-.03	-.30				
	Prior Experience	-.10	.25	-.04	-.38				
	Communication channel	.29	.20	.15	1.50				
	Health Concern	-.06	.08	-.09	-.78				
3	(Constant)	5.35***	.59		9.05	.07	2.05	.04*	4.68
	Sex	-.31	.18	-.16	-1.66				
	Age	-.01	.01	-.10	-.97				
	Income	.01	.05	.01	.09				
	Prior Experience	-.05	.24	-.01	-.22				
	Communication channel	-1.04	.64	-.54	-1.61				
	Health Concern	.30*	.14	-.40	-2.22				
	Communication channel* Health Concern	.34*	.16	.77	2.16				

Note. 0 = Facebook, 1 = Naver. * $p < .05$; ** $p < .01$; *** $p < .001$

Table 3–2. Simple Slope Analysis of the Moderation Effect of Health Concern on Persuasive Intent (Study 1)

Variable		β	SE	t	p	LLC I	UL CI
Health Concern	10 th percentile	-.36	.36	-1.00	.32	-1.06	.35
	25 th percentile	-.02	.24	-.07	.94	-.49	.46
	50 th percentile	.32	.19	1.68	.10	-.06	.70
	75 th percentile	.6	.24	2.51	.01	.12	1.07
	90 th percentile	.80	.30	2.64	.01	.20	1.40

Figure 4. Interaction Graph of Communication Channel and Health Concern on Perceived Persuasive Intent (Study 1)



Hypothesis 4 examined the moderation effect of prior topic knowledge on the tendency to attribute higher level of persuasive intent to a news article than to a Facebook post. Results showed no significant interaction effect of communication channel and prior topic knowledge ($\beta = .14$, $t = .61$, $p = .55$) (See Table 4). Knowledge about the given topic did not affect how people judge persuasion intent of the message transmitted through a specific communication channel. Therefore, H4 was not supported.

Table 4. Effect of Communication Channel on Perceived Persuasive Intent: Prior Topic Knowledge as a Moderator (Study 1)

Criterion Variable: Persuasive Intent								
Model	Unstandardized		β	t	R^2	F	R^2 Change	F Change
	Coefficients							
	B	SE						
1 (Constant)	4.56***	.37		12.50	.06	1.60	.06	1.59
Sex	-.34	.19	-.18	-1.79				
Age	-.01	.01	-.11	-1.05				
Income	-.04	.05	-.08	-.79				
Prior Experience	-.19	.24	-.08	-.79				
2 (Constant)	4.62***	.45		10.38	.10	1.82	.04	2.19
Sex	-.26	.19	-.13	-1.34				
Age	-.01	.01	-.11	-1.06				
Income	-.03	.05	-.07	-.61				
Prior Experience	-.16	.35	-.06	-.65				
Communication channel	.27	.20	.14	1.40				
Prior Topic Knowledge	-.13	.09	-.15	-1.43				
3 (Constant)	4.71***	.47		10.03	.11	1.60	.00	.37
Sex	-.25	.19	-.13	-1.32				
Age	-.01	.01	-.10	-.98				
Income	-.03	.05	-.07	-.62				
Prior Experience	-.16	.25	-.06	-.63				
Communication channel	.05	.42	.03	.12				
Prior Topic Knowledge	-.18	.12	-.20	-1.46				
Communication channel*								
Prior Topic Knowledge	.11	.17	.14	.61				

Note. 0 = Facebook, 1 = Naver, * $p < .05$; ** $p < .01$; *** $p < .001$

3.2.4 Research Model Testing

To examine the proposed model in its entirety, Hayes's (2016) PROCESS macro (Model 7) was used. Only health concern, the significant moderator identified by the above moderation tests, was included in the model (see Figure 5).

Results showed that there was no significant direct effect of communication channel on attitude toward the position advocated in the message ($\beta = .16, t = .85, p = .40$). More importantly, only those with high levels of health concern (75th percentile or higher) perceived higher persuasive intent in the Naver news condition than the Facebook condition, which in turn led to more negative attitudes toward the recommended position (see Table 5-1 and Figure 5). Specifically, for those with health concern at the high level (75th percentile), the indirect effects of communication channel through persuasive intent on attitude toward the position advocated in the message was statistically significant (conditional indirect effect = $-.33$, 95% bias-corrected 5000 bootstrap CI [$-.68, -.07$]). The same was true for those with very high level of health concern (90th percentile, conditional indirect effect = $-.45$, 95% bias-corrected 5000 bootstrap CI [$-.92, -.09$]) (see Table 5-1). That is, those who viewed the Naver news article showed less positive attitude toward the advocated position than those who read the Facebook post because they perceived higher levels of persuasive intent, but only when they were highly concerned about health.

Table 5–1. Conditional Indirect Effects of Communication Channel on Attitude toward the Recommended Position through Perceived Persuasive Intent: Health Concern as Moderator (Study 1)

Variable		Effect	<i>SE</i>	LLCI	ULCI
Health Concern	10 th percentile	.20	.22	-.19	.68
	25 th percentile	.01	.13	-.23	.31
	50 th percentile	-.18	.11	-.39	.03
	75 th percentile	-.33	.16	-.68	-.07
	90 th percentile	-.45	.21	-.92	-.09

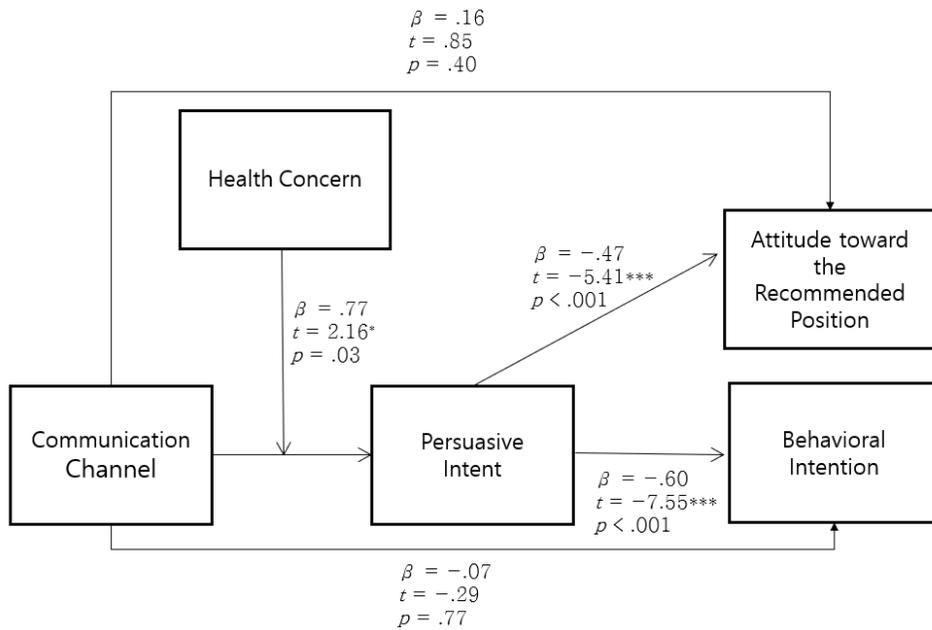
Meanwhile, results also showed that there was no significant direct effect of communication channel on the intention to perform the advised health behavior ($\beta = -.07$, $t = -.29$, $p = .77$). As noted above, only for those with high or very high levels of health concern (75th percentile or higher), behavioral intention was lower in the Naver news condition than Facebook post condition (see Table 5–2). Specifically, those with health concern level at the high (75th percentile, (conditional indirect effect = $-.56$, 95% bias–corrected 5000 bootstrap CI [-1.09 , $-.11$]), and very high level (90th percentile, conditional indirect effect = $-.75$, 95% bias–corrected 5000 bootstrap CI [-1.44 , $-.15$]) the indirect effects of communication channel on the intention to perform the advised health behavior, through perceived persuasive intent, was statistically significant. That is, those who viewed the Naver news article were less willing to perform the recommended behavior than those who read the Facebook post because they perceived higher levels of persuasive

intent, but only when they were highly concerned about health

Table 5–2. Conditional Indirect Effects of Communication Channel on Behavioral Intention through Perceived Persuasive Intent: Health Concern as Moderator (Study 1)

Variable		Effect	<i>SE</i>	LLCI	ULCI
Health Concern	10 th percentile	.33	.36	–.34	1.09
	25 th percentile	.02	.22	–.40	.50
	50 th percentile	–.30.	.18	–.65	.05
	75 th percentile	–.56	.25	–1.09	–.11
	90 th percentile	–.75	.33	–1.44	–.15

Figure 5. Conditional Indirect Effects of Communication Channel on Attitude toward the Recommended Position and Behavioral Intention (Study 1)



3.3 Discussion

Study 1 conducted a web-based experiment to test the effectiveness of Facebook as a means of delivering a health message as compared with an Internet news portal. Using the elaboration likelihood model (ELM), the study specifically compared the persuasive effect of a Facebook post with that of a news article that was published online. Nowadays there are numerous studies that focus on SNS as a preferred channel to conduct health campaigns and to disseminate important health messages (Park, Rodgers, & Stemmler, 2011; Porter & Golan, 2010; Hanson, Haridakis, & Wagstaff, 2010). It has been suggested that the social context of the medium increases the possibility of a successful outcome, because it acts as an informal mode of interpersonal communication (Park et al., 2011; Porter & Golan, 2010; Handon et al., 2010). It is also considered to be less intrusive and less overtly persuasive, because of a smaller audience size (Beniger, 1987). In this context, the study predicted that the Facebook post would be more effective in delivering health messages as compared with the op-ed article posted on an online portal.

Persuasive effectiveness of the communication channels were measured by the participants' change of attitude towards the message position and the intention to follow the induced health behavior as a result of the perceived persuasive intent of the message. In the process of judging persuasion intention, two possible moderators were considered: 1) people's level of health concern and 2) their prior knowledge of the message topic. According to the ELM (Petty & Cacioppo, 1984), when people lack the motivation or the

ability to comprehend the given message, they consider peripheral cues, such as the communication channel, as a meaningful indicator for judgment. Study 1 employed people's level of health concern and their prior knowledge of the health topic as motivational and an ability factor, studying how these factors impacted their responses to a persuasive message.

Interestingly, the channel effect on a participant's perception of persuasive intent was only significant when the level of health concern was high rather than low. Specifically, for those with an elevated level of health concern, the Naver news article was perceived to be higher in persuasive intent than the Facebook post, which negatively affected attitude toward the advocated position and the willingness to perform the recommended behavior. There was no main effect of communication channel upon the participant's perception of the persuasive intent. This seems to contradict the notion that high interest in the message topic induces greater engagement with the message content (Petty & Cacioppo, 1986). Instead, those more concerned about their physical health were more likely to factor in communication channels when evaluating persuasive intent of a given message.

Prior topic knowledge had no significant moderating effect on the persuasion process. That is, the extent to which a person knew about the message topic did not alter how they perceived persuasive messages conveyed through different channels, Facebook and online news portal. This may be because the message was relatively easy to understand, limiting the role prior knowledge can play in the message

processing. Perhaps the moderating effect of prior knowledge is more likely to occur when the message is rather difficult to comprehend, making those less knowledgeable individuals to rely on peripheral cues instead.

Meanwhile, as found in the past studies (Hovland, & Weiss, 1951; Brock, 1967; Petty & Cacioppo, 1979), when people believed that the communicator has an intention to persuade, they became more negative toward the advocated position and moved away from the recommended behavior. High levels of perceived persuasive intention resulted in the decreased likelihood of complying with the message position and the intention to follow the advised behavior.

At the same time, Study 1 had some limitations. Firstly, the findings had limited generalizability due to the fact that it focused on just one health issue. Although there is no particular reason to suspect that the issue might have interacted with any of the variables examined, using a single issue poses a threat to generalizability. Secondly, the small number of participants may have lowered the statistical power and the reliability of the findings. The fact that only 103 people participated in the experiment could have rendered some differences uncovered. Thus, a replication of study 1 with an increased number of participants is necessary. Finally, Study 1 did not investigate the individual's message processing. Because it did not measure message recall, it remains unknown if, a high level of prior knowledge indeed prompted greater message elaboration.

CHAPTER 4. STUDY 2

Study 2 is an extension of Study 1 conducted to address its limitations. First, multiple profile images of the message source were used to avoid any confounding effects of the source's physical appearance. Second, message recall was measured to better evaluate the mechanism of the persuasion process. Third, a larger sample was employed in order to improve statistical power. Fourth, a different health issue was used for enhanced generalizability.

4.1 Method

4.1.1 Participants and Procedure

1) Participants

A total of 394 people were recruited through the online survey company in South Korea in exchange for a small monetary compensation. Demographic attributes of the participants are reported in Table 6.

2) Procedure

The procedure was identical to that of Study 1, except that (a) to avoid any effects associated with the communicator's physical appearance, 4 different profile pictures were used, and (b) participants were asked questions related to the information in the message for message recall.

Table 6. Demographic Attributes of the Participants (Study 2)

Attribute		Frequency	Percentage (%)
Gender	Female	197	50.0%
	Male	197	50.0%
Age	20–29	116	29.4%
	30–39	126	32.0%
	40–49	75	19.0%
	50–59	77	19.5%
Monthly Family Income (won)	Below \1,000,000~1,999,999	45	11.4%
	\2,000,000~\2,999,999	75	19.0%
	\3,000,000~\3,999,999	70	17.8%
	\4,000,000~\4,999,999	75	19.0%
	\5,000,000~\5,999,999	66	16.8%
	\6,000,000 or higher	63	16.0%

4.1.2 Experiment Materials

A different health issue was selected for Study 2. Like in Study 1, another controversial, but relatable, issue was selected: a Low Carbo High Fat diet. The message content was drawn from NCA presentation (Hornik, Mello, Forquer, Tan, Johnson, & Schwarts, 2012). The message is presented below.

Experiment Stimuli: Low Carbo High Fat Diet

The act of losing weight involves maximizing your movement and minimising your food intake. Above all, everyone would agree on the fact that eating meat and a high fat dairy product is forbidden when on a diet. But a recently introduced dietary meal is grabbing much attention as it seems to challenge this long-held truth. This is the ‘Low Carbo High Fat’ diet.

Unlike the vegetable-oriented diet familiar to us, ‘Low Carbo High Fat’ diet puts fatty food such as baked salmon and pork belly with cheese in the center of the meal.

The diet induces weight loss by using material called ‘ketone’ in our body. Ketone is the brain’s secondary energy used in the case of extreme condition such as famine and starvation when its main material, glucose, hits rock bottom. As such, the ‘Low Carbo High Fat’ diet was originally prescribed to induce ketone material for epilepsy patients who lacked the capacity to deliver glucose to their brains. Weight loss was an unintended side effect for this prescription. An increase in the level of Ketone material helped lipolysis.

In order to generate ketone material, the body has to feel that it is lacking energy. But because we cannot starve all day, instead we delude our body into a false belief that we are by lowering the intake of carbohydrates and by increasing satiety through the consumption of fat.

Specialists say that sufficient consumption of water, salt, vegetable fruit and green is essential when trying the ‘Low Carbo High Fat’ diet. Because an increased level of ketone material is detrimental

to our muscle and bone density, ‘Low Carbo High Fat’ should only be sustained for two months at the most.

This is a diet which frees you from the constraints of calories and lets you eat what you want. This fairytale-like meal has finally become a reality. Let’s become diesels this summer with a proper ‘Low Carbo High Fat’ diet.

The same fictitious medical reporter, Seong-ho Kim was used as the source, but associated with one of the four different profile pictures within each channel(see Figure. 6~13)

Figure 6. Low Carbo High Fat Message: Facebook Post 1



Figure 7. Low Carbo High Fat Message: Facebook Post 2



Figure 8. Low Carbo High Fat Message: Facebook Post 3



Figure 9. Low Carbo High Fat Message: Facebook Post 4

김성호 (의학전문기자)

6월 21일 20:40 · 4

패진 여러분, 살을 빼려면 식사량은 줄이고 운동량은 늘려야 하는 것 아니죠? 무엇보다도 고기나 고지방의 유제품이 다이어트에 급물이라는 건 모두들 상식처럼 알고 계시는데요, 최근에 이처럼 잘 알려진 다이어트 진리에 도전하는 체중 감량 식단이 나와 있습니다. 바로 '저탄수-고지방' 식단입니다.

가운데 우리가 알고 있는 야채 위주의 다이어트 식단과는 달리, '저탄수-고지방' 다이어트는 구은 연어, 치즈를 얹은 삼겹살과 같이 체중감량을 위해서는 절대 멀리해야 했던 지방을 식단의 중심에 두고 있습니다. 이 식이요법은 몸속 케톤이라는 물질을 사용해 체중 감량을 유도합니다. 케톤은 뇌의 주원료인 포도당이 부족한 기아나 단식과 같은 극한 상황에서 뇌가 2차 에너지원으로 삼는 물질로, '저탄수-고지방' 식사는 뇌에 포도당 공급이 제대로 이루어지지 않는 뇌전증 환자들에게 대신 케톤 물질을 유도하기 위해 처방되어 왔던 식이요법입니다. 처방량 감소는 사실 이 처방의 부작용이었는데 케톤 물질이 늘어나면서 지방분해를 도왔던 것입니다.

케톤을 생성시키려면 몸에 '에너지가 부족하다'고 느끼게 해야 합니다. 그렇다고 무작정 굶을 수는 없는 노릇이니, 탄수화물 섭취를 낮추고 대신 지방으로 포만감을 느껴 몸이 인식하고 있다고 착각하도록 만드는 게 '저탄수-고지방' 식단의 핵심입니다.

전문가들은 '저탄수-고지방' 식단을 시도하는 경우 충분한 물과 소금을 섭취하고 식이섬유가 풍부한 식물성 열매와 채소 등을 정제 곡물 것들을 권합니다. 무엇보다도 탄수화물을 극도로 제한하면 케톤산이 증가해 근육과 뼈에 좋지 않으니 '저탄수-고지방' 다이어트는 최대 2달까지 단기간만 유지해야 합니다.

먹고 싶은 것을 먹고 칼로리에 얽매이지 않으며 체중 감량이 가능한 식단. 마치 상상 속에서만 가능할 것 같은 식이요법이 드디어 우리들 앞에 모습을 드러냈습니다. 패진 여러분, 잘 갖춰진 '저탄수 고지방' 식단으로 이번 여름은 몸짱에 도전해봅시다.

좋아요 댓글 달기 공유하기

Figure 10. Low Carbo High Fat Message: Naver News Article 1

The screenshot shows a Naver News article page. At the top, there's a navigation bar with 'NAVER 뉴스' and various category links. The article title is '[칼럼] 저탄수화물 고지방 식이요법'. Below the title is a sub-header '체중 감량은 먹는 것을 최소화하고 움직임을 최대화하는 것을 의미합니다. 무엇보다 고기나 고지방의 유제품이 다이어트에 금물이라는 건 모두들 상식처럼 알고 있는데, 최근에 이처럼 잘 알려진 다이어트 진리에 도전하는 체중 감량 식단이 나와 이슈입니다. 바로 '저탄수-고지방' 식단입니다.' The main text starts with '기존에 우리가 알고 있는 야채 위주의 다이어트 식단은 과는 달리, '저탄수-고지방' 다이어트는 구운 연어, 치즈를 얹은 삼겹살과 같이 체중감량을 위해서는 절대 멀리해야 했던 지방을 식단의 중심에 두고 있습니다.' The article continues to explain the benefits of this diet, mentioning ketosis and the importance of protein and healthy fats. The author's name '김성호 의학전문기자' is visible at the bottom of the article.

Figure 11. Low Carbo High Fat Message: Naver News Article 2

The screenshot shows a Naver News article page. At the top, there's a navigation bar with 'NAVER 뉴스' and various category links. Below that, a weather and date bar shows '6.21 (수) 서울 10°C'. The article title is '[칼럼] 저탄수화물 고지방 식이요법'. The author's name '김성호' and a small profile picture are visible. The main text discusses the benefits of a low-carb, high-fat diet, mentioning that it can help with weight loss and improve metabolic health. The article is dated '2017-6-21 20:40'.

Figure 12. Low Carbo High Fat Message: Naver News Article 3

NAVER 뉴스 TV연예 스포츠 뉴스스탠드 날씨 로그인

6.21(수) 서울 10°C 주야간 · 신원생 이담 재경 압박에 - 자시고도 직자생존 삼척뉴스 언론사뉴스 라이브러리 기사하첨이력

뉴스홈 속보 정치 경제 사회 생활/문화 세계 IT/과학 오피니언 모토 TV 행정뉴스 뉴스검색

오피니언 [칼럼] 저탄수화물 고지방 식이요법

A3면2단 · 기사일력 2017-6-21 20:40 · 기사원문

저탄수화물 고지방 식이요법

김성호 의학전문기자

체중 감량은 먹는 것을 최소화하고 움직임을 최대화하는 것을 의미합니다. 무엇보다 고기나 고지방의 유제품이 다이어트에 금줄이라는 건 모두들 상식처럼 알고 있는데, 최근에 이처럼 잘 알려진 다이어트 진리에 도전하는 체중 감량 식단이 나와 이슈입니다. 바로 '저탄수-고지방' 식단입니다.

기존에 우리가 알고 있는 야채 위주의 다이어트 식단은 달걀, '저탄수-고지방' 다이어트는 구운 연어, 치즈를 얹은 삼겹살과 같이 체중감량을 위해서는 절대 멀리해야 했던 지방을 식단안 주신에 두고 있습니다.

이 식이요법은 몸속 케톤이라는 물질을 사용해 체중 감량을 유도합니다. 케톤은 뇌의 주원료인 포도당이 부족한 기아나 단식과 같은 극한 상황에서 뇌가 2차 에너지원으로 삼는 물질로, '저탄수-고지방' 식사는 뇌에 포도당 공급이 제대로 이루어지지 않는 뇌전증 환자들에게 대신 케톤 물질을 유도하기 위해 처방되어 왔던 식이요법입니다. 체지방 감소는 사실 이 지방의 부작용이었는데, 케톤 물질이 늘어나면서 지방분해를 도왔던 것입니다.

케톤을 생성시키려면 몸에 '에너지가 부족하다'고 느끼게 해야 합니다. 그렇다고 무작정 굶을 수는 없는 노릇이니, 탄수화물 섭취를 낮추고 대신 지방으로 포만감을 높여 몸이 단식하고 있다고 착각하도록 만드는 게 '저탄수-고지방' 식단의 핵심입니다.

전문자들은 '저탄수-고지방' 식단을 시도하는 경우 충분한 물과 소금을 섭취하고 식이섬유가 풍부한 식물성 열매와 채소 등을 챙겨 먹을 것을 권합니다. 무엇보다 탄수화물을 극도로 제한하면 케톤산이 증가해 근육과 뼈에 좋지 않으니 '저탄수-고지방' 다이어트는 최대 2달까지 단기간만 유지해야 합니다.

먹고 싶은 것을 먹고 칼로리에 얽매이지 않으며 체중 감량이 가능한 식단. 마치 상상 속에서만 가능할 것 같은 식이요법이 드디어 우리를 앞에 모습을 드러냈습니다. 잘 갖춰진 '저탄수 고지방' 식단으로 이번 여름은 몸짱에 도전해봅시다.

김성호(의학전문기자) seongho@gmail.com

Figure 13. Low Carbo High Fat Message: Naver News Article 4

NAVER 뉴스 TV연예 | 스포츠 | 뉴스스탠드 | 날씨

6.21(수) 서울 10°C 주말뉴스 | 신임생 이담 재경 임박에 -- 지사고도 적지않은 | 삼척뉴스 | 인문사뉴스 | 라이선스리 | 기사배달 이력

뉴스룸 | 속보 | 정치 | 경제 | 사회 | 생활/문화 | 세계 | IT/과학 | 오피니언 | 포포 | TV | 행안뉴스 | 뉴스 검색

오피니언

전체 | 사실 | 칼럼 | 독자투고 | 기자수첩 | 연재 | 단평

[칼럼] 저탄수화물 고지방 식이요법

A31면간 | 기사입력 2017-06-21 20:40 | 기사원문

 **김성호 의학전문기자**

체중 감량은 먹는 것을 최소화하고 움직임을 최대화하는 것을 의미합니다. 무엇보다 고기나 고지방의 유제품이 다이어트에 금물이라는 건 모두들 상식처럼 알고 있는데, 최근에 이처럼 잘 알려진 다이어트 진리에 도전하는 체중 감량 식단이 나와 이슈입니다. 바로 '저탄수-고지방' 식단입니다.

기존에 우리가 알고 있는 야채 위주의 다이어트 식단과는 달리, '저탄수-고지방' 다이어트는 구운 연어, 치즈를 얹은 삼겹살과 같이 체중감량을 위해서는 절대 멀리해야 했던 지방을 식단의 중심에 두고 있습니다.

이 식이요법은 몸속 케톤이라는 물질을 사용해 체중 감량을 유도합니다. 케톤은 뇌의 주원료인 포도당이 부족한 기아나 단식과 같은 극한 상황에서 뇌가 2차 에너지원으로 삼는 물질로, '저탄수-고지방' 식사는 뇌에 포도당 공급이 제대로 이루어지지 않는 뇌전증 환자들에게 대신 케톤 물질을 유도하기 위해 처방되어 왔던 식이요법입니다. 체지방 감소는 사실 이 지방의 부작용이었는데, 케톤 물질이 늘어나면서 지방분해를 도왔던 것입니다.

케톤을 생성시키려면 몸에 '에너지가 부족하다'고 느끼게 해야 합니다. 그렇다고 무작정 굶을 수는 없는 노릇이니, 탄수화물 섭취를 낮추고 대신 지방으로 포만감을 느껴 몸이 단식하고 있다고 착각하도록 만드는 게 '저탄수-고지방' 식단의 핵심입니다.

전문가들은 '저탄수-고지방' 식단을 시도하는 경우 충분한 물과 소금을 섭취하고 식이섬유가 풍부한 식물성 열매와 채소 등을 정겨 먹을 것을 권합니다. 무엇보다 탄수화물을 극도로 제한하면 케톤산이 증가해 근육과 뼈에 좋지 않으니 '저탄수-고지방' 다이어트는 최대 2달까지 단기간만 유지해야 합니다.

먹고 싶은 것을 먹고 칼로리에 얽매이지 않으며 체중 감량이 가능한 식단. 마치 상상 속에서만 가능할 것 같은 식이요법이 드디어 우리를 앞에 모습을 드러냈습니다. 잘 갖춰진 '저탄수 고지방' 식단으로 이번 여름은 몸짱에 도전해봅시다.

김성호(의학전문기자) seongho@gmail.com

4.1.3 Measures

1) Mediating & Moderating Variables

(1) Health Concerns

The same five items used in Study 1 were also used in Study 2 : “I am currently involved in physical trainings such as fitness and yoga”, “I buy healthy food for my health”, “I get regular medical check-ups”, “I read or watch health-related books or TV programs” and “I have high interest in health” (1 = *Not at all*, 7 = *Very much*; $\alpha = .80$, $M = 4.26$, $SD = 1.18$).

(2) Prior Topic Knowledge

As in Averback and Robertson’s (2011) study, five multiple choice questions related to low carbo high fat diet were presented to the participants prior to their exposure to the experimental materials.

For low carbo high fat diet, dietary intake was used: “What is the recommended fat ratio for ‘Low Carbo High Fat Diet?’” (1. 30%, 2. 40%, 3. 50%, 4. 60%, 5. 70%), “What is the recommended carbohydrate ratio for ‘Low Carbo High Fat Diet?’” (1. 50%, 2. 40%, 3. 30%, 4. 20%, 5. 10%), “What is the carbohydrate ratio for our general meal?” (1. 30%, 2. 40%, 3. 50%, 4. 60%, 5. 70%), “What is the national Body Mass Index(BMI) for adult obesity?” (1. 20 or more, 2. 25 or more, 3. 30 or more, 4. 35 or more, 5. 40 or more) and “Which of the exercises below are aerobic exercise?” (1. Hiking, 2. Wrestling,

3. Tennis, 4. Volleyball, 5. Diving). A score of 1 was given to the correct answer and 0 was given to the incorrect answers, then these scores were added and were used as an index for participants' prior knowledge ($M = 1.93$, $SD = 1.03$)

(3) Perceived Persuasive Intent

In order to measure perceived persuasive intent, three 7-point Likert type questions (1 = *Not at all*, 7 = *Very Much*) were used in Study 2. An item from Brock's (1967) study ("the communicator was making an active attempt to persuade me") and two statements from Park and Lee's (2009) study ("the communicator's intent is suspicious", "the communicator's intention is not genuine") were used. Scores were averaged ($\alpha = .73$, $M = 3.94$, $SD = 1.01$).

(4) Message Recall

Message recall concerns the amount of message-related information a person remembers subsequent to message exposure (Cacioppo & Petty, 1979; Petty & Cacioppo, 1979). In the present study, message recall was measured in order to investigate whether the level of health concern enhanced message relevant thinking. This way, both the central and the peripheral routes of the persuasion process could be studied.

Subsequent to message exposure, participants were asked 4 multiple choice questions related to the low carbo high fat diet

discussed in the experiment stimuli: “Low Carbo High Fat diet uses () substance in order to induce weight loss” (1. Amino acid, 2. Ketone, 3. Glucose, 4. Potassium), “Low Carbo High Fat diet was originally a diet prescription for ()” (1. Obese patients, 2. Dementia patients, 3. Epilepsy patients, 4. Cancer patients), “When trying Low Carbo High Fat diet, you should take sufficient amount of () and ()” (1. Water and salt, 2. Water and nut products, 3. Water and olive oil, 4. Water and milk), “Low Carbo High Fat diet should be carried out for () at the most” (1. A month, 2. Two months, 3. Three months, 4. Four months). The number of correct answers were added and used as an index for participants’ message recall with higher scores indicating greater message recalled ($M = 2.35$. $SD = 1.27$)

2) Dependent Variables

(1) Attitude toward Recommended Behavior

The same four 9–point semantic differential scales used in Study 1 were presented for participants to rate their attitude toward the low carbo high fat diet (good/bad, beneficial/harmful, wise/foolish, and favorable/unfavorable) (Petty et al., 1981). Scores were averaged ($\alpha = .91$, $M = 4.02$, $SD = .95$) with the higher score indicating more favorable attitudes toward the position advocated in the message.

(2) Behavioral Intention

Three identical questions from study 1 were used to measure people's intention to partake in the actions advocated in the message (Jang, 2014); 1 = *Strongly disagree*, 7 = *Strongly agree*), "I have the intention to go on a Low Carbo High Fat Diet for the next two months", "I will make an effort to go on a Low Carbo High Fat Diet for the next two months" and "I am planning to go on a Low Carbo High Fat Diet for the next two months". Scores were averaged ($\alpha = .96$, $M = 2.84$, $SD = 1.52$)

3) Control Variable

The participants' prior experience with the low carbo high fat diet was measured by the following statement: "I have tried Low Carbo, High Fat diet before" (1 = *yes*, 0 = *no*; $M = .82$, $SD = .38$). Among 394 participants, 69 (17.5%) reported that they had tried a low carbo high fat diet before and 325 (82.5%) of them reported that they had not.

4.2. Results

4.2.1 Manipulation Checks

To examine if the online news article and the Facebook post were recognized by the participants to represent each condition as intended, participants were asked “which of the following message did you read?” with the choice of 1) online article, 2) Facebook post. Most of the participants perceived online articles as online articles ($n = 160$, 82.5%) and Facebook post as Facebook post ($n = 178$, 89%). Only those answered correctly to the question ($n = 338$) were included in the analyses.

4.2.2 Preliminary Analyses

Correlation between the key variables showed (see Table 7), health concern had a significant positive relationship with the intention to follow the advised behavior ($r = .25$, $p < .001$) but had significant negative relationship with prior experience with the focal behavior ($r = -.20$, $p < .001$). Meanwhile, prior experience had significant positive relationship with perceived persuasive intent of the message source ($r = .13$, $p = .02$) but significant negative relationship with attitude toward the recommended position ($r = -.17$, $p = .002$) and behavioral intention ($r = -.33$, $p < .001$). Message recall had positive significant relationship with prior topic knowledge ($r = .19$, $p < .001$) but negative significant relationship with perceived persuasive intent ($r = -.11$, $p = .04$) and behavioral intention ($r = -.11$, $p = .04$).

Perceived persuasive intent had a negative relationship with attitude toward the recommended position ($r = -.25, p < .001$) and intention to follow the advised behavior ($r = -.19, p < .001$). Finally, attitude toward the position advocated in the message had positive relationship with behavioral intention ($r = .39, p < .001$).

Table 7. Correlations among Key Variables (Study 2)

	1	2	3	4	5	6	7
1.Health Concern	—						
2.Prior Experience	.20***	—					
3.Message Recall	-.08	.03	—				
4.Prior Topic Knowledge	-.04	.07	.19***	—			
5.Perceived Persuasive Intent	.04	-.13*	-.11*	-.07	—		
6.Attitude toward low Message Position	.05	.17**	-.02	-.02	-.25***	—	
7.Behavioral Intention	.25***	.33***	-.11*	-.04	-.19***	.39***	—

Note. * $p < .05$; ** $p < .01$, *** $p < .001$

4.2.3 Hypothesis Tests

As in study 1, moderation analyses were conducted to test the research hypothesis proposed in the study. Analysis consisted of the following steps: first, participants' demographic variables (sex, age and income) and prior experience with focal behavior were entered as control variables. In the second step, the independent variable (communication channel) and possible moderator (health concern or prior topic knowledge) were entered as predictor variables. For the next step, the interaction terms (communication channel*health concern or communication channel*prior topic knowledge) were entered one at a time.

Hypothesis 1 predicted that greater persuasive intent is attributed to a news articles than a Facebook post. As in study 1, the moderation analysis results showed that the main effect of the communication channel on perceived persuasive intent ($\beta = .52$, $t = .97$, $p = .33$) was not significant. Therefore, H1 was not supported.

Hypothesis 2a and 2b proposed that perceived persuasive intent would negatively predict a) participants' attitude toward the position advocated in the message and b) their intention to perform the advised health behavior. As shown in correlation table, perception of persuasive intent negatively predicted attitude toward the position advocated in the message ($r = -.24$, $p < .001$), and behavioral intention to perform the advised health behavior ($r = -.29$, $p < .001$), supporting H2a–b.

Hypothesis 3 examined if an individual's health concern moderates the tendency to attribute greater level of persuasive intent

to a news article than to a Facebook post. The results confirmed that moderation effect of health concern was significant ($\beta = .19, t = 2.07, p = .04$) (see Table 8-1).

To decompose the interaction effect, a simple slope analysis was conducted (see Table 8-2 and Figure 14). As in study 1, results showed that participants perceived stronger persuasive intent when they read a news article than the Facebook post only when they were highly concerned about health (75th percentile or higher). No significant difference was found in persuasive intent perception between the two communication channels for those with lower level of health concern.

Table 8–1. Effect of Communication Channel on Persuasive Intent: Health Concern as a Moderator (Study 2)

		Criterion Variable: Persuasive Intent							
Model		Unstandardized		β	t	R^2	F	R^2 change	F change
		Coefficients							
		B	SE						
1	(Constant)	3.64***	.29		12.53	.05	4.44	.05**	4.44
	Sex	-.21	.11	-.11	-.19				
	Age	.01*	.01	.14	2.62				
	Income	-.04	.03	-.06	-1.12				
	Prior Experience	.30	.14	.11	2.06				
2	(Constant)	3.41***	.34		0.94	.06	3.31	.01	1.05
	Sex	-.19	.11	-.10	-1.86				
	Age	.01*	.01	.13	2.46				
	Income	-.05	.03	-.08	-1.38				
	Prior Experience	.32*	.15	.12	2.18				
	Communication channel	.10	.11	.05	.97				
	Health Concern	.05	.05	.06	1.12				
3	(Constant)	3.80***	.39		9.74	.07	3.48	.01*	4.29
	Sex	-.19	.11	-.10	-1.93				
	Age	.01*	.01	.14	2.52				
	Income	-.06	.03	-.10	-1.70				
	Prior Experience	.33*	.15	.12	2.21				
	Communication channel	-.67	.39	-.34	-1.73				
	Health Concern	-.03	.06	-.04	-.54				
	Communication channel* Health Concern	.19*	.09	.42	2.07				

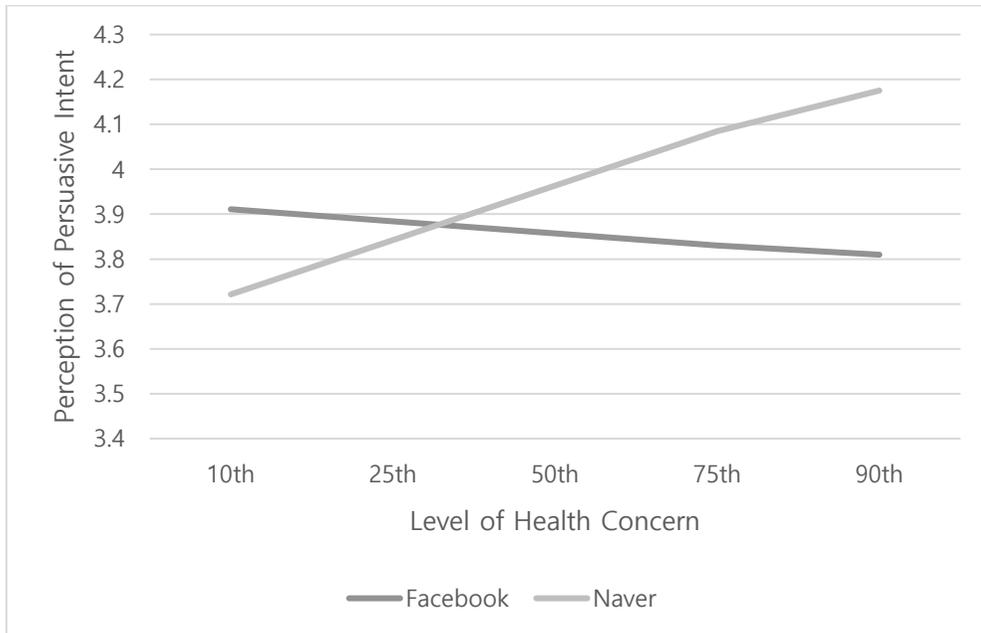
Note. 0 = Facebook, 1 = Naver, * $p < .05$; ** $p < .01$; *** $p < .001$

Table 8–2. Simple Slope Analysis of the Moderation Effect of Health Concern on Persuasive Intent (Study 2)

Variable	β	<i>SE</i>	<i>t</i>	<i>P</i>	LLCI	ULCI
10 th percentile	-.19	.18	-	.28	-.54	.16
25 th percentile	-.04	.13	-.33	.74	-.29	.21
Health Concern 50 th percentile	.11	.11	1.02	.31	-.10	.31
75 th percentile	.26*	.13	1.99	.05	.00	.51
90 th percentile	.37*	.17	2.22	.03	.04	.69

Note. * $p < .05$

Figure 14. Interaction Graph of Communication Channel and Health Concern on Perceived Persuasive Intent (Study 2)



Hypothesis 4 examined the moderation effect of prior topic knowledge on the tendency to attribute higher level of persuasive intent to a news article than to a Facebook post. Results showed only a marginally significant interaction effect of communication channel and prior topic knowledge ($\beta = -.22, t = -1.72, p = .09$) (See Table 9-1). Therefore, H4 was not supported.

Table 9–1. Effect of Communication Channel on Perceived Persuasive Intent: Prior Topic Knowledge as a Moderator (Study 2)

		Criterion Variable: Persuasive Intent							
Model		Unstandardized		β	t	R^2	F	R^2 change	F change
		Coefficients							
		B	SE						
1	(Constant)	3.64***	.29		12.53	.05	4.44	.05**	4.44
	Sex	-.21	.11	-.11	-1.19				
	Age	.01*	.01	.14	2.62				
	Income	-.04	.03	-.06	-1.12				
	Prior Experience	.30*	.14	.11	2.06				
2	(Constant)	3.69***	.32		11.67	.06	3.18	.00	.68
	Sex	-.20	.11	-.10	-1.85				
	Age	.01*	.01	.14	2.50				
	Income	-.04	.03	-.06	-1.18				
	Prior Experience	.28	.15	.11	1.94				
	Communication channel	.10	.11	.05	.96				
	Prior Topic Knowledge	-.04	.05	-.04	-.72				
3	(Constant)	3.55	.33		10.86	.06	3.17	.02*	2.97
	Sex	-.20	.11	-.10	-1.92				
	Age	.01*	.01	.14	2.57				
	Income	-.04	.03	-.07	-1.20				
	Prior Experience	.29	.15	.11	1.95				
	Communication channel	.44	.22	.22	.197				
	Prior Topic Knowledge	.04	.07	.04	.59				
	Communication channel*								
	Prior Topic Knowledge	-.17	.10	-.22	-1.72				

Note. 0 = Facebook, 1 = Naver, * $p < .05$; ** $p < .01$; *** $p < .001$

Although the interaction failed to reach statistical significance, to better understand the pattern, it was decomposed. Results showed no significant difference in perception of persuasive intent between the two communication channels for all levels of prior topic knowledge. However, it is notable that the channel difference approached statistical significance ($p = 0.06$) for those lower on prior topic knowledge (25th percentile or lower) (see Table 9–2). This supports the prediction that less knowledgeable people are more likely to rely on the channel to judge persuasive intent than those with greater knowledge, who are more likely to focus on the message content.

Table 9–2. Simple Slope Analysis of the Moderation Effect of Prior Topic Knowledge on Persuasive Intent

Variable	β	<i>SE</i>	<i>t</i>	<i>P</i>	LLCI	ULCI	
Prior Topic Knowledge	10 th percentile	.27	.14	1.87	.06	-.01	.54
	25 th percentile	.27	.14	1.87	.06	-.01	.54
	50 th percentile	.09	.11	.87	.39	-.12	.30
	75 th percentile	-.08	.15	-.55	.58	-.38	.21
	90 th percentile	-.08	.15	-.55	.58	-.38	.21

Note. * $p < .05$

4.2.4 Research Model Testing

Hayes's (2016) PROCESS macro (Model 7) was used to test the proposed research model. Only health concern, the significant moderator identified by the above moderation tests, was included in the model (see Figure 15).

Results showed that there was no significant direct effect of communication channel on attitude toward the position advocated in the message ($\beta = .02, t = .21, p = .83$). More importantly, only those with very high level of health concern (75th percentile or higher) perceived higher persuasive intent in the Naver news condition than the Facebook condition, which in turn led to more negative attitudes toward the recommended position (see Table 10–1 and Figure 15). Specifically, for those with health concern at the high level (75th percentile), the indirect effect of communication channel through persuasive intent on attitude toward the position advocated in the message was statistically significant (conditional indirect effect = $-.06$, 95% bias–corrected 5000 bootstrap CI [$-.16, -.00$]). The same was true for those with a very high level of health concern (90th percentile, conditional indirect effect = $-.09$, 95% bias–corrected 5000 bootstrap CI [$-.22, -.01$]). That is, those who viewed the Naver news article showed less agreement with the attitude toward the advocated position than those who read the Facebook post because they perceived higher levels of persuasive intent, but only when they were highly concerned about health.

Table 10–1. Conditional Indirect Effects of Communication Channel on Attitude toward the Recommended Position through Perceived Persuasive Intent: Health Concern as Moderator (Study 1)

Variable	Effect	SE	LLCI	ULCI
10 th percentile	.04	.05	–.04	.15
25 th percentile	.00	.03	–.05	.07
Health Concern 50 th percentile	–.03	.03	–.10	.02
75 th percentile	–.06	.04	–.16	–.00
90 th percentile	–.09	.05	–.22	–.01

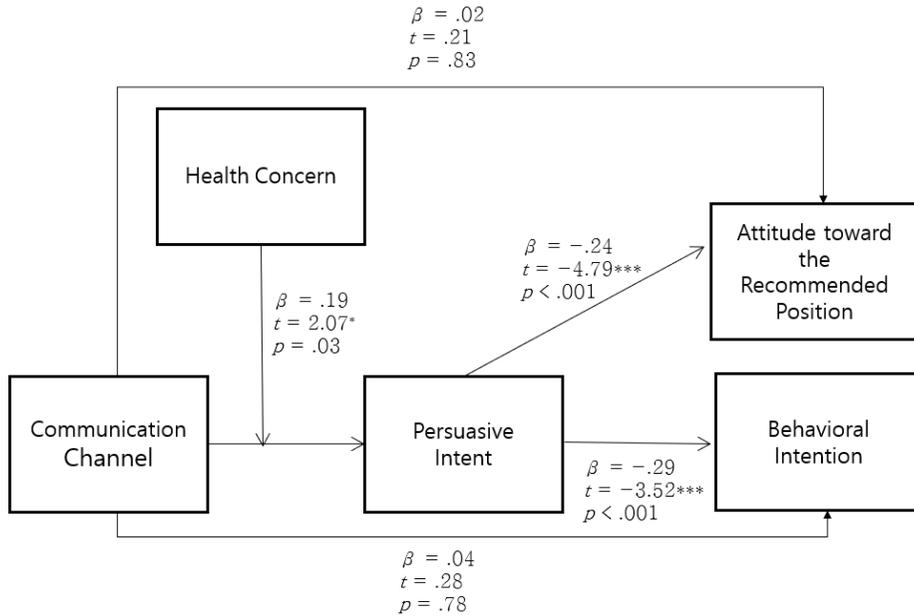
Results also showed no significant direct effect of communication channel on the intention to perform the advised health behavior ($\beta = .04$, $t = .28$, $p = .78$). As noted above, only for those with high or very high level of health concern (75th percentile or higher), behavioral intention was lower in the Naver news condition than Facebook post condition (See Table 10–2). Specifically, those with health concern level at the high (75th percentile, conditional indirect effect = $-.07$, 95% bias–corrected 5000 bootstrap CI [$-.19$, $-.00$]) and very high level (90th percentile, conditional indirect effect = $-.09$, 95% bias–corrected 5000 bootstrap CI [$-.26$, $-.01$]) the indirect effects of communication channel on the intention to perform the

advised health behavior, through perceived persuasive intent, was statistically significant. That is, those who viewed the Naver news article were less willing to perform the recommended behavior than those who read the Facebook post because they perceived higher levels of persuasive intent, but only when they were highly concerned about health.

Table 10–2. Conditional Indirect Effects of Communication Channel on Behavioral Intention through Perceived Persuasive Intent: Health Concern as Moderator (Study 1)

Variable	Effect	SE	LLCI	ULCI	
Health Concern	10 th percentile	.04	.05	–.04	.17
	25 th percentile	.00	.04	–.07	.08
	50 th percentile	–.03	.03	–.12	.01
	75 th percentile	–.07	.05	–.19	–.00
	90 th percentile	–.09	.06	–.26	–.01

Figure 15. Conditional Indirect Effects of Communication Channel on Attitude toward the Recommended Position and Behavioral Intention (Study 2)



Although no specific hypothesis was proposed, message recall was measured in Study 2 to better understand the message processing. First, prior knowledge was positively associated with message recall ($r = .19$, $p < .001$). Second, health concern had no significant association with message recall ($r = -.08$, $p = .17$). To test if message recall moderates the effect of communication on perception of persuasive intent, a moderation analysis was conducted. No significant interaction effect of communication channel and message recall was found ($\beta = -.11$, $t = -1.28$, $p = .20$) (See Table 11)

Table 11. Effect of Communication Channel on Perceived Persuasive Intent: Message Recall as a Moderator

		Criterion Variable: Persuasive Intent							
Model		Unstandardized		β	t	R^2	F	R^2 change	F change
		Coefficients							
		B	SE						
1	(Constant)	3.94***	.26		15.06	.05	4.44	.05**	4.44
	Sex	-.21*	.11	-.11	-1.94				
	Age	.01**	.01	.14	2.62				
	Income	-.04	.03	-.06	-1.12				
	Prior Experience	-.30	.14	-.11	-2.06				
2	(Constant)	4.01***	.28		14.49	.06	3.50	.01	1.58
	Sex	-.18	.11	-.09	-1.69				
	Age	.01*	.01	.14	2.54				
	Income	-.04	.03	-.06	-1.09				
	Prior Experience	-.28*	.14	-.11	-1.96				
	Communication channel	.10	.11	.05	.95				
	Message Recall	-.06	.04	-.08	-1.52				
3	(Constant)	3.90***	.29		13.42	.06	3.24	.01	1.65
	Sex	-.17	.11	-.09	-1.60				
	Age	.01**	.01	.14	2.61				
	Income	-.04	.03	-.07	-1.21				
	Prior Experience	-.30	.15	-.11	-2.04				
	Communication channel	.35	.22	.18	1.58				
	Message Recall	-.02	.06	-.02	-.32				
	Communication channel* Message Recall	-.11	.08	-.16	-1.28				

Note. 0 = Facebook, 1 = Naver, * $p < .05$; ** $p < .01$; *** $p < .001$

CHAPTER 5. GENERAL DISCUSSION

The aim of this research was to study the effect of communication channel on people's perception of public health message and their decision to consent with the induced attitude and health behavior. Specifically, relative to mass media, the study examined if Facebook as a novel communication channel that, due to people's perception of its posts being intended for a smaller, more intimate audience, lowers perceived persuasive intent and hence induce greater persuasion success (Beniger, 1987).

In order to explain the cognitive process of message acceptance, the study used Petty and Cacioppo's (1984; 1986) the Elaboration Likelihood Model of persuasion (ELM). According to the ELM, factors that become an important source of persuasive outcomes vary in relation to individual differences such as topic involvement and prior topic knowledge (Cacioppo, Petty, & Sidera, 1982; Petty & Cacioppo, 1984, 1986; Taylor & Fiske, 1984; Chen, 2009). One's level of interest and prior knowledge of the message topic can affect the extent of cognitive engagement with the message; those with greater interest will show greater attention towards the message than those with less interest, and those with higher level of prior topic knowledge will be more capable of scrutinizing the detailed information than those without. In other words, both factors will increase people's attention towards the message (Petty & Cacioppo, 1986), undermining their attention towards the communication channel. Therefore, in this research, health concern and prior topic knowledge were studied as the moderating factors of communication effect on people's

persuasion judgment.

First, the used communication channel on its own had no significant effect on people's perception of persuasion intention. This means that the predicted functional discrepancy between the two communication channels was not robust enough to affect how people perceived a persuasion message delivered by each channel. Instead, both Study 1 and Study 2 showed that communication channel had a significant effect on people's perception of persuasion intention when only their level of health concern was high. This contradicts the proposed hypothesis that communication channel effect will only be significant on perception of persuasive intent when the level of health concern is low. Prior to the study, in reference to the ELM (Petty & Cacioppo, 1986), it was expected that people would come to consider communication channel as a cue for persuasion judgment only when they were less interested and hence less motivated to elaborate the given message. However, the results demonstrated the opposite. Communication channel became an influential cue only amongst those with high level of interest. Indeed, the insignificant association between health concern and message recall in Study 2 implies that health concern does not foster systematic message processing.

Secondly, online portal news article was perceived to be higher in persuasive intent than a Facebook post when a person's level of health concern was high. For those with a greater measure of concern towards their health condition, a portal news article was perceived intentional than a Facebook post, whilst no difference was found between the two channels among those with a low level of health

concern. This implies that at least for those highly interested in the topic, portal news articles are considered higher in persuasion intention than a Facebook post, as suggested in Hypothesis 1.

Third, prior topic knowledge did not affect how people perceived the message of each channel. Both Study 1 and Study 2 established that regardless of the health message topic, people's level of prior topic knowledge did not have a significant effect on how differently people judge the persuasion intention of Facebook post and the online portal news article. However, it is notable that in Study 2, prior topic knowledge was positively associated with message recall, suggesting that prior topic knowledge may have promoted message elaboration instead. Moreover, although the channel effect fell short of statistical significance ($p = .06$), those lower in level of prior topic knowledge were more likely to factor in communication channel when judging persuasive intent of the communicator than their more knowledgeable counterparts. Such result seems to indicate that message elaboration indeed suppresses channel effect. However, when message recall was examined as a moderator of channel effect, no statistically significant results were found, challenging such an interpretation.

Finally, when perception of persuasion intention was high, people's intention to change their attitude and behavior towards the position advocated in the message decreased. That is to say, when they believed that the communicator was deliberately trying to change their behaviors, people become more negatively inclined toward the suggested behavior and less willing to follow the health behavior advised in the message. Such results were consistently found in both

Study 1 and 2.

5.1 Implications

First, the fact that the communication channels did not have a direct significant effect on people's perception of persuasion intention of the message may imply that the communication channel is not a critical component for persuasive outcome. However, the results can also imply that its users no longer perceive Facebook and an online news article different. Facebook's role as an information channel has been noticeable in several articles (Allcott & Gentzkow, 2017; Isaac, *The New York Times*, 2016, 2017). Especially, distribution of fake news on Facebook has been a compelling social issue with regards to the US election. For example, fake news claiming that Pope Francis endorsed Donald Trump for president and that President Obama had banned reciting the Pledge of Allegiance in schools were widely shared on Facebook (Isaac, *The New York Times*, 2016; Silverman, *Buzzfeed News*, 2016). Moreover, half of the people who recalled reading such fake news have been found actually believing it (Allcott & Gentzkow, 2017). After Donald Trump was elected the 45th US president, Facebook has been questioned responsible for the unexpected results (Isaac, *The New York Times*, 2016). As a response, the site has announced 'Facebook Journalism Project', signing partnership with news publishers and outside groups for fact-checks (Isaac, *The New York Times*, 2017).

Moreover, the fact that the post in the Facebook condition was written by an unknown source could have encouraged perception of it

being targeted towards mass audience, as compared to typical posts written by one's friends, overcasting the distinction between Facebook and Naver articles. Using a medical journalist as a communicator was necessary to ensure ecological validity, but it could have contributed to such perception. In that sense, the current research was a very conservative test of the channel effect.

Secondly, the fact that communication channel effect became significant when the level of health concern was high than low seems to contradict the ELM (Petty & Cacioppo, 1986). According to the ELM, greater topic interest increases the motivation to engage with the message content rather than other peripheral cues (Petty & Cacioppo, 1986). If so, communication channel effect should have been significant for those who are less, not more, interested in their health condition and hence less inclined to focus on the actual content of the message but rely on other easy cues to make quick, intuitive judgments.

However, only those with high interest in health perceived Naver articles to be higher in persuasive intent than the Facebook post in both studies. Possibly, considering the varying nature of the communication channel when interpreting the message and deciding whether or not to accept the advocated position may indicate more systematic processing.

At the same time, albeit only for those with high level of health concern, the fact that perception of persuasion intention varied across used communication channels in a health campaign context is worth noticing. Such results imply that even when the message was only

providing beneficial information to them. the very fact that the information was directed at mass audience heightened perceived persuasive intent. With such, past studies explaining that people place greater mistrust towards mainstream mass media message than online information due to their judgment of resulting benefit on the source (Tsfati, 2010) and that such perception stays stable regardless of the message attributes, such as its topic and message content (Berlo, Lemert & Merts, 1969) is partly supported.

Finally, the overall persuasion result in the study confirms that heightened persuasion intention deteriorates persuasion success. Both Study 1 and 2 revealed that when people perceive persuasion intention to be high, they are more inclined to respond negatively to the message recommendation and reject to follow the suggested health behavior (Hovland, & Weiss, 1951; Brock, 1967; Petty & Cacioppo, 1979). At the same time, the results support the assumption that once people fear that their freedom is threatened by increased perception of persuasive intent, people try to restore this by opposing the influence (Byrne & Hart, 2009), hence rejecting to follow the attitude towards the position advocated in the message or to adapt suggested health behavior.

5.2 Limitations

First, in the current study, perception of persuasion intention was measured by asking participants their perception of persuasion intention directed by the source of the message, such as “The communicator’s intent is suspicious”; “The communicator’s intention

is not genuine”; “the communicator was making an active attempt to persuade me”, “The communicator cares for me”, “The communicator is sincere in what she/he is saying”. Using these items, there is a possibility that the measurement measured people’s perception of the source, rather than the message per se. This may explain, in part, why communication channel had only limited effects – as the source was identical between the two communication channels, asking about the source might have restricted the variance in participants’ perceptions.

Secondly, although Study 2 employed message recall, message elaboration needs to be measured more precisely. The results showed that neither health concern nor prior topic knowledge had a significant relationship with message recall. One may conclude from the results that the extent of one’s message elaboration was not altered by how much they were interested in or how much they knew about the message topic. However, message recall may not be the best measure of message elaboration. Specifically, participants were asked 4 multiple-choice questions, filling in the missing gap of the sentences found in the message. There is a chance that these multiple-choice questions failed to correctly capture one’s level of message elaboration but instead measured the degree of their memory, how much they remember from the message. Therefore, to better address how message elaboration and channel effect are related, and thereby, better understand under what conditions and why channel effect emerges, message processing needs to be examined more directly.

Thirdly, in terms of the statistics, mediation model tested in the

present study cannot be evaluated in the most rigorous manner, for perception of persuasive intent (mediator), attitude towards the advocated behavior and intention to follow the induced health behavior (dependent variables) were all measured subsequent to the message exposure. Therefore, the sequence of the variables cannot be unambiguously determined empirically.

Finally, as mentioned earlier, using a stranger for a source of Facebook post may have suppressed the distinction between the channels. A deliver of information being one of my 'friends' is a critical element differentiating Facebook from an online article, of it being more personal than other channels (Bazarova, 2012). However, since the study introduced an unfamiliar medical journalist as the source, Facebook post written by this particular person may not have been perceived significantly different from an article that he wrote. Notwithstanding, when Facebook is used for mass persuasion, chances are that the message indeed comes from someone not personally known to the message recipient. The current results should help understand how people would respond to campaign messages in such contexts, rather than during their usual Facebook usage.

5.3 Directions for Future Research

Given these limitations, future research needs to address the following issues.

Firstly, new measurements should be used for perceived persuasive intent and message recall. As mentioned in the limitations,

future measurement for perceived persuasion intention need to be carefully adjusted to measure the felt level of persuasion intended by the message, rather than perceptions of the source. For message recall, the measurement should capture the extent of relevant thoughts conceived of by the message recipient rather than the information people remember from the message content.

Secondly, a replication with participants outside of Korea can increase generalizability of the results. In their study investigating the relationship between cultural background and SNS usage, Cho and Park (2013) found that cultural differences do indeed have an impact on how people use the medium. In particular, whilst Korean users use Facebook as a channel to reinforce their close intimate offline relationships, US users tended not to consider Facebook as a good communication channel for close social relationships. Therefore, it is possible that the Korean users perceive Facebook as a means of their social relationship and intended for small audience more than the US users perceive. Consequently, the observed effect of the channel in the current work may not be found for non-Korean users.

Finally, whilst understanding the role of SNS as a new means for delivering persuasion message is important, it is also vital to identify then, which of the channel's components are responsible for eliciting or otherwise prohibiting such effect. For example, past study has found that web site design can affect users' perception of the persuasion message. Fogg, Soohoo and Danielson's (2003) study established that how the site is organized and how its messages are presented can affect people's credibility judgment. Thus, future

studies should identify specific components of Facebook that heighten or degrade its effectiveness as a persuasion channel in order to contribute to a more thorough understanding of its role for mass persuasion.

CHAPTER 6. REFERENCES

- Adeyeri, Eb. (2014, August 27). Ice Bucket Challenge: what are the lessons for marketers?. The Guardian. Retrieved from <https://www.theguardian.com/media-network/media-network-blog/2014/aug/27/ice-bucket-challenge-lessons-marketing>
- Ajzen, I., Brown, T. C., & Rosenthal, L. H. (1996). Information bias in contingent valuation: effects of personal relevance, quality of information, and motivational orientation. *Journal of Environmental Economics and Management*, 30(1), 43–57.
- Ajzen, I. (2006). Constructing a theory of planned behaviour questionnaire. Umaa. Edu/aizen/pdf/tpb. Measurement. Pdf
- Alba, J. W., & Hutchinson, J. W. (1987). Dimensions of Consumer Expertise. *Journal of Consumer research*, 13(4). 411–454
- Andreoli, V., & Worchel, S. (1978). Effects of Media, Communicator, and Message Position on Attitude Change. *Public Opinion Quarterly*, 42(1), 59–70.
- Angst, C. M., & Agarwal, R. (2009). Adoption of electronic health records in the presence of privacy concerns: The elaboration likelihood model and individual persuasion. *MIS Quarterly*, 33(2), 339–370.
- Averbeck, J. M., Jones, A., & Robertson, K. (2011). Prior knowledge and health messages: An examination of affect as heuristics and information as systematic processing for fear appeals. *Southern Communication Journal*, 76(1), 35–54.
- Banning, S. A., & Sweetser, K. D. (2007). How much do they think it

- affects them and whom do they believe?: Comparing the third-person effect and credibility of blogs and traditional media. *Communication Quarterly*, 55(4), 451–466.
- Bazarova, N. N. (2012). Public intimacy: Disclosure interpretation and social judgments on Facebook. *Journal of Communication*, 62(5), 815–832.
- Bazarova, N. N., Choi, Y. H., Sosik, V. S., Cosley, D., & Whitlock, J. (2015). Social sharing of emotions on Facebook: Channel differences, satisfaction, and replies. Paper presented at the proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing. Vancouver, BC.
- Beniger, J. (1987). Personalization of mass media and the growth of pseudo-community. *Communication Research*, 14(3), 352–371.
- Berelson, B R., Lazarsfeld, F. P., & McPhee, W. N. (1954). *Voting: A study of opinion formation in a presidential campaign*, Chicago: University of Chicago Press.
- Brock, T. C. (1967). Communication discrepancy & intent to persuade as determinants of counterargument production. *Journal of Experimental Social Psychology*, 3(3), 296–309.
- Brock, T. C. (1968). Implications of commodity theory for value change. In A. Greenwald, T. C. Brock & T. M. Ostrom (Eds.), *Psychological foundations of attitudes* (pp. 243–276). New York, NY: Academic.
- Byrne, S., & Hart, P. S. (2009). The Boomerang Effect A Synthesis of Findings and a Preliminary Theoretical Framework. *Annals of the International Communication Association*, 33(1), 3–37.

- Cacioppo, J. T., & Petty, R. E. (1979). Effects of message repetition and position on cognitive response, recall, and persuasion. *Journal of personality and Social Psychology*, 37(1), 97–109.
- Cacioppo, J. T., & Petty, R. E. (1981). Social psychological procedures for cognitive response assessment: The thought-listing technique. In T. V. Merluzzi, C. R. Glass, & M. Genest (Eds.), *Cognitive assessment* (pp. 309–342). New York, NY: Guilford Press.
- Cassell, M. M., Jackson, C., & Chevront, B. (1998) Health communication on the Internet: an effective channel for health behavior change?. *Journal of health communication*, 3(1), 71–79.
- Chaiken, S. (1977). *The use of source versus message cues in persuasion: An information processing analysis*. (Unpublished doctoral dissertation). University of Massachusetts Amherst, United States of America
- Chaiken, S. (1980). Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of personality and social psychology*, 39(5), 752–766.
- Chen, M. F. (2009). Attitude toward organic foods among Taiwanese as related to health consciousness, environmental attitudes, and the mediating effects of a healthy lifestyle. *British Food Journal*, 111(2), 165–178.
- Cho, S. E., & Han, W. P. (2013). A qualitative analysis of cross-cultural new media research: SNS use in Asia and the West. *Quality & Quantity*, 1–12.

- Coleman, J. S., Katz, E., & Menzel, H. (1966). *Medical innovation: A diffusion study* (2nd Ed.). Indianapolis: Bobbs–Merrill.
- Nestle Fitness. (n.d.). Facebook for business. Retrieved from <https://www.facebook.com/business/success/nestlefitnessglobal>
- Gerbner, G., & Gross, L. (1976). Living with television: The violence profile. *Journal of communication*, 26(2), 172–194.
- Greenwald, A. G., & Albert, R. D. (1968). Acceptance and recall of improvised arguments. *Journal of personality and social psychology*, 8(1 pt1), 31.
- Hanson, G., Haridakis, P. M., Cunningham, A. W., Sharma, R., & Ponder, J. D. (2010). The 2008 presidential campaign: Political cynicism in the age of Facebook, MySpace, and YouTube. *Mass Communication and Society*, 13(5), 584–607.
- Hornik, R. C., Mello, S., Forquer, H., Tan, A. S. L., Johnson, M., Rusko, J., & Schwartz, J. S. (2012). Results from a randomized controlled trial testing the effects of routine health information exposure on cancer prevention and screening behaviors. *In 98th Annual Convention of the National Communication Association*.
- Hovland, C. I., & Weiss, W. (1951). The influence of source credibility on communication effectiveness. *Public Opinion Quarterly*, 15(4), 635–650.
- Jang, S. J. (2014). *The effect of social capital and social support on behavioural intention of dementia prevention: Regulation effect of family strengths as the cultural characteristic of Korea*. (Unpublished doctoral dissertation). The Graduate School of Ewha Womans University. Department of Communication. Korea

- Jones, E. E., & Davis, K. E. (1965). From acts to dispositions the attribution process in person perception. *Advances in Experimental Social Psychology*, 2, 219–266.
- Katz, E. (1957). The two-step flow of communication: An up-to-date report on an hypothesis. *Public Opinion Quarterly* 21(1), 61–78.
- Katz, E., & Lazarsfeld, P. F. (1955). *Personal Influence: The part played by people in the flow of mass*. New York: The Free Press.
- Kiesler, C., & Kiesler, S. (1964). Role of forewarning in persuasive communications. *Journal of Abnormal and Social Psychology*, 68(5), 547–549.
- Korea Centers for Disease Control and Prevention, (2015, May 21). Press Release, Retrieved from http://www.cdc.go.kr/CDC/intro/CdcKrIntro0201.jsp?menuIds=HOME001-MNU1154-MNU0005-MNU0011&fid=21&q_type=title&q_value=메르스&cid=62905&pageNum=1
- Korhonen, T., Uutela, A., Korhonen, H., & Puska, P. (2010) The impact of mass media and interpersonal health communication on smoking cessation attempts: A study in North Karelia, 1989–1996. *Journal of Health Communication*, 3(2), 105–118.
- Lasswell, H. D. (1927). The theory of political propaganda. *The American Political Science Review*, 21(3), 627–631.
- Lazarsfeld, P. F., Berelson, B., & Gaudet, H. (1948). *The People's Choice*. New York: Columbia University Press.
- Lee, B. M. (2015, September 14). New guideline suggested for the

- thyroid cancer ultrasonography examination. MBN news, Retrieved from <http://news.mk.co.kr/newsRead.php?year=2015&no=887155>
- Lee, E. J. (2013). Effectiveness of politicians' soft campaign on Twitter versus TV: Cognitive and experiential routes. *Journal of Communication, 63*(5), 953–974.
- Lee, E. J., & Jang, J. W. (2011). Not so imaginary interpersonal contact with public figures on social network sites: How affiliative tendency moderates its effects. *Communication Research, 40*(1), 27–51.
- Lee, E. J., & Shin, S. Y. (2014). When the medium is the message: How transportability moderates the effects of politicians' Twitter communication. *Communication Research, 41*(8), 1088–1110.
- Lee, M. Y. (2011). The Influence of Corporate Social Responsibility on the Corporate Attitude, Unpublished Doctor's thesis). Korea University Graduate School of Journalism and Mass Communication.
- Leventhal, H., & Niles, P. (1964). A field experiment on fear arousal with data on the validity of questionnaire measures. *Journal of Personality, 32*(3), 459–479.
- Leventhal, H., Singer, R., & Jones, S. (1965). Effects of fear and specificity of recommendation upon attitudes and behavior. *Journal of Personality and Social Psychology, 2*(1), 20–29.
- Lippmann, W. (1922). The world outside and the pictures in our heads. *Public opinion, 4*, 1–22.
- Michaelidou, N., & Hassan, L. M. (2008). The role of health

- consciousness, food safety concern and ethical identity on attitudes and intentions towards organic food. *International Journal of Consumer Studies*, 32(2), 163–170.
- Ministry of Health and Welfare Korea, (2017, June 19). Middle East Respiratory Syndrome Information promotional material, Retrieved from http://www.mers.go.kr/mers/html/jsp/Menu_C/list_C2.jsp
- Moon, S. Y. (2015, October 26). Bacteria's trap? The great effect of 10 minute chewing gum. Naver News, Retrieved from <http://news.naver.com/main/read.nhn?mode=LSD&mid=shm&sid1=103&oid=296&aid=0000025032>
- Morton, Thomas A., and Julie M. Duck. (2001). Communication and health beliefs: Mass and interpersonal influences on perceptions of risk to self and others. *Communication Research*, 28(5), 602–626.
- Osterhouse, R. A., & Brock, T. C. (1970). Distraction increases yielding to propaganda by inhibiting counterarguing. *Journal of Personality and Social Psychology*, 15(4), 344.
- Oude Ophuis, Peter AM. (1989). Measuring health orientation and health consciousness as determinants of food choice behavior: Development and implementation of various attitudinal scales. G.J. Avlonitis, N.K. Papavasiliou & A.G. Kouremenos (Eds.) *18th Ann. Conf. Eur. Marketing Academy: Marketing thought and practice in the 1990's Proceedings*, p. 1723 – 1725. Athens: EMAC.
- Park, H., Rodgers, S., & Stemmler, J. (2011). Health organizations' use of Facebook for health advertising and promotion. *Journal of*

interactive advertising, 12(1), 62–77.

- Park, H. S., & Lee, J. H. (2009). Effects of proactive public relations strategy on consumers' attitudes for nutritional information: An application of persuasion knowledge model. *Korean Journal of Journalism & Communication Studies*, 53(3), 241–266.
- Parvanta, C. F. (2010). *Essentials of public health communication*. Jones & Bartlett Publishers.
- Petty, R. E., Brinol, P., & Priester, J. R. (2009). Mass Media Attitude Change. In J. Bryant and M. B. Oliver (Ed.), *Media effects: Advances in theory and research*. New York: Routledge.
- Petty, R. E., & Cacioppo, J. T. (1977). Forewarning, cognitive responding, and resistance to persuasion. *Journal of Personality and Social Psychology*, 35(9), 645–655.
- Petty, R. E., & Cacioppo, J. T. (1979). Effects of forewarning of persuasive intent and involvement on cognitive responses and persuasion. *Personality and Social Psychology Bulletin*, 5(2), 173–176.
- Petty, R. E., & Cacioppo, J. T. (1979). Issue involvement can increase or decrease persuasion by enhancing message–relevant cognitive responses. *Journal of personality and social psychology*, 37(10), 1915–1926.
- Petty, R. E., & Cacioppo, J. T. (1981). Issue involvement as a moderator of the effects on attitude of advertising content and context. *Advances in consumer research*, 8(1), 20–24.
- Petty, R. E., & Cacioppo, J. T. (1984). The effects of involvement on responses to argument quantity and quality: Central and

- peripheral routes to persuasion. *Journal of Personality and Social Psychology*, 46(1), 69–81.
- Petty, R. E., & Cacioppo, J. T. (1986). *The Elaboration Likelihood Model of Persuasion*. New York: Springer.
- Petty, R. E., Cacioppo, J. T., & Goldman, R. (1981). Personal involvement as a determinant of argument-based persuasion. *Journal of personality and social psychology*, 41(5), 847–855.
- Petty, R. E., & Krosnick, J. A. (1995). *Attitude strength: Antecedents and Consequences*. London: Psychology Press.
- Petty, R. E., & Morris, K. J. (1983). Effects of need for cognition on message evaluation, recall, and persuasion. *Journal of Personality and Social Psychology*, 45(4), 805–818..
- Petty, R. E., & Wells, G. L., & Brock, T. C. (1976). Distraction can enhance or reduce yielding of propaganda: Thought disruption versus effort justification. *Journal of Personality and Social Psychology*, 34(5), 874–884.
- Porter, L. & Golan, G. J. (2006). From subservient chickens to brawny men: A comparison of viral advertising to television advertising. *Journal of Interactive Advertising*, 6(2). 30–38.
- Price, L. L., Arnould, E. J., & Tierney, P. (1995). Going to extremes: Managing service encounters and assessing provider performance. *The Journal of Marketing*, 59, 83–97.
- Rao, A. R., & Monroe, K. B. (1988). The moderating effect of prior knowledge on cue utilization in product evaluations. *Journal of consumer research*, 15(2), 253–264.
- Riddle, K. (2009). Cultivation Theory Revisited: The Impact of

- Childhood Television Viewing Levels on Social Reality Beliefs and Construct Accessibility in Adulthood. Conference Papers, *International Communication Association*, 1–29.
- Robertson, L. S. (1976). The great seat belt campaign flop. *Journal of Communication*, 26(4), 41–45.
- Roberts, D. F., & Bachen, C. F. (1981). Mass communication effects. *Annual Review of Psychology*, 32(1), 307–356.
- Sears, D. O., & Kosterman, R. (1994). Mass media and political persuasion. In *Persuasion: Psychological Insights and Perspectives*, Needham Heights, MA: Allyn & Bacon, 251–278.
- Skogan, W. G., & Maxfield, M. G. (1981). *Coping with crime: Individual and neighborhood reactions*. Beverly Hills, CA: Sage Publications.
- Smith, S. L., & Wilson, B. J. (2002). Children's comprehension of and fear reactions to television news. *Media psychology*, 4(1), 1–26.
- Song, J. A. (1997). Senior citizens level of health concern, health practice behaviour and health status. (Unpublished masters thesis). University of Kyungpook University Graduate School of Public Health, Korea.
- Statista (2017, November). Number of active Facebook users worldwide as of 2nd quarter 2015 (in millions). Retrieved from <http://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/>
- Statista (2016, August). Best social media platforms for influence marketing according to influencers in the United States as of July 2016. Retrieved from <https://www.statista.com/statistics/617525/best-social-media->

for-influence-marketing-per-influencers/

- Korean Center for Disease Control and Prevention (2015, May 20). Confirmation of influx of Middle Eastern respiratory syndrome (MERS) into domestic. Retrieved from <http://cdc.go.kr/CDC/info/CdcKrInfo1001.jsp?menuIds=HOME001-MNU1154-MNU0725-MNU1375-MNU1084&cid=62906>
- Taylor, S. E. (1981). The interface of cognitive and social psychology. In J. H. Harvet, (Ed.), *Cognition, social behavior, and the environment* (pp. 189–211). Hillsdale, NJ: Erlbaum.
- Tyler, T. R. (1980). The impact of directly and indirectly experienced events: The origin of crime-related judgments and behaviors. *Journal of Personality and Social psychology*, 39(1), 13–28.
- Tyler, T. R., & Cook, F. L. (1984). The mass media and judgments of risk: Distinguishing impact on personal and societal level judgments. *Journal of Personality and Social Psychology*, 47(4), 693–708.
- Utz, S. (2009). The (potential) benefits of campaigning via social network sites. *Journal of Computer mediated Communication*, 14(2), 221–243.
- Wakefield, M. A., Loken, B., & Hornik, R. C. (2010). Use of mass media campaigns to change health behaviour. *The Lancet*, 376(9748), 1261–1271.
- Wegener, D. T., & Petty, R. E. (1997). The flexible correction model: The role of naive theories of bias in bias correction. *Advances in experimental social psychology*, 29, 141–208.
- Witte, K. (1994). Fear control and danger control: A test of the

extended parallel process model (EPPM), *Communications Monographs*, 61(2), 113–134.

국문 초록

공중 보건 캠페인 채널로서 페이스북의 효과: 지각된 설득의도를 매개로

본 연구는 공중 보건 캠페인 채널로서 페이스북의 효과를 확인하고자 했으며, 이를 매스미디어의 효과와 비교하고자 하였다. 특별히 커뮤니케이션 채널이 메시지가 유도하는 방향으로의 태도의 변화를 낳는가, 건강 행동을 따르도록 사람들을 설득하는 효과가 있는가, 그리고 이를 지각된 설득 의도가 매개하는가를 검증하고자 했다.

본 연구는 페이스북이 매스 미디어와는 달리 사람들이 일상적으로 사용하는 소셜 미디어이고 동시에 이용자들 간의 대인 커뮤니케이션을 가능하게 한다는 점에서(Park et al., 2011; Poter & Golan, 2010; Handon et la., 2010) 기존의 매스 미디어보다 설득 채널로서 더 효과적일 것이라고 예상했다. 메시지가 더 적은 대상을 상대로 쓰여졌다고 여겨질 때 신뢰도가 높다는 Beniger (1987)의 주장에 따라, 매스 미디어보다 적은 이용자들을 대상으로 공개되었으리라고 여겨지는 SNS의 메시지가 설득에 더 효과적일 거라 제안했다. Petty와 Cacioppo (1986)의 정교화 가능성 모델(elaboration likelihood model of persuasion: ELM)을 사용해, 본 연구는 두 개의 조절 변인으로, 1) 건강 관심도와 2) 주제 관련 사전 지식을 제시했다. ELM에 따르면 사람들이 기존에 가지고 있는 주제 관련 관심도나 지식 수준이 설득 과정에서 사용되는 요인들을 결정하며, 그 중에서도 커뮤니케이션 채널보다는 메시지에 대한 의존도를 높인다고 한다. 따라서, 본 연구는 건강 관심도와 주제 관련 사전 지식이 낮을 때에 커뮤니케이션 채널이 설득 결과에 더욱 강한 영향을 줄 것이라고 예상했다.

Facebook과 온라인 포털 사이트 네이버를 사용해 두 번의 웹 기

반 실험을 수행했다. 온라인 리서치 회사의 응답자 패널에 가입된 참여자들을 대상으로 첫 번째 실험(N = 132)은 껌 씹기가 치아에 미치는 긍정적 효과를 다룬 메시지를 처치했다. 두 번째 실험(N = 394)은 고지방저탄소 다이어트에 대한 메시지를 사용했다. 실험자극물은 Facebook 레이아웃과 네이버 뉴스 기사 레이아웃을 사용해 제작되었다. 모든 실험 참여자들은 웹사이트를 통해 개별적으로 실험에 참가했으며 Facebook과 Naver 조건에 무작위로 배정되었다. 메시지를 읽은 참가자들은 메시지에 대한 자신들의 지각된 설득 의도와 메시지에서 유도된 방향으로의 태도, 추천된 건강 행동을 따르고자 하는 의도를 묻는 질문에 답하였다.

실험 1과 실험 2 모두에서 커뮤니케이션 채널의 단독적인 효과는 나타나지 않았다. 다만 높은 건강 관심도를 가진 사람들의 경우, 커뮤니케이션 채널이 사람들의 지각된 설득 의도에 유의미한 영향을 미치는 것으로 나타났다. 구체적으로는, 높은 건강 관심도를 가진 참여자들은 두 실험에서 모두 네이버 뉴스 기사가 페이스북 포스팅보다 설득 의도가 높게 지각되었다. 반면 건강 관심도가 보통, 혹은 낮은 수준의 참여자들의 경우 채널 간 유의미한 차이가 나타나지 않았다. 예상된 바와 같이, 지각된 설득 의도의 증가는 메시지에서 유도하는 태도로에 대한 동의와 제안된 건강 행동을 따르고자 하는 의도에 부정적인 영향을 미쳤다.

종합하면, 본 연구는 커뮤니케이션 채널이 단독적으로는 사람들의 설득 의도 지각과 궁극적으로는 설득 결과에 유의미한 효과를 미치지 못한다는 것을 발견하였다. 그러나 메시지 주제에 대한 관심이 높을 경우 커뮤니케이션 채널이 설득 결과에 실질적인 영향을 미치고, 이 경우에는 페이스북이 온라인 포털 보다 설득에 더 효과적임을 발견하였다.

주요어 : 설득 커뮤니케이션, 공중 보건 캠페인, 지각된 설득의도, 건강 관심도, 사전 지식, 페이스북

학번 : 2014-22056