

The effects of cause-related marketing (CRM) on social media and in health communication:

How does CRM-based social media message influence health perception?

By

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## Abstract

Given that cause-related marketing (CRM) frequently features health issues in marketing, this study examined how and to what extent cause-related marketing (CRM) on social media affect millennials' responses to both marketing and health information embedded in CRM. A total of 300 undergraduate students (71% female,  $M_{age}=19.66$  for all participants) participated in a 2 (brand-cause fit: low vs. high) X 2 (cause proximity: local vs. international) between-subjects experiment. In addition, cause involvement (high vs. low) was the third independent variable.

In terms of marketing perspectives, this study found main effects of brand-cause fit, cause proximity, and cause involvement on marketing related dependent variables (e.g., attitudes toward brand, campaign participation intention). However, this study did not find two-way and three-way interactions on attitudes toward brand, attitudes toward non-profit organization, attitude toward the CRM message, campaign participation intention and engagement on social media.

In terms of health communication variables, main effects of cause involvement on attitudes toward sunscreen use, and attitudes toward skin cancer were found. Moreover, this study found a three-way interaction on behavioral control for sunscreen use as well as two two-way interactions: a two-way interaction between fit and cause involvement on behavioral control for sunscreen use, and a two-way interaction between brand-cause fit and cause proximity on attitudes toward skin cancer. Taken together, these interaction effects indicate a great potential of using CRM to target those who are less involved with the cause in health communications.

The findings suggest that a CRM message with low brand-cause fit and a local cause, and a CRM message with high brand-cause fit and an international cause can motivate consumers who are less involved with the cause to have a higher level of behavioral control for sunscreen

use and more positive attitudes toward skin cancer. Moreover, as for the theoretical contributions of this study, it is noted that the effects of level of involvement contradict prior results using the Elaboration Likelihood Model (ELM). The results showed that individuals who are less involved with the cause are more likely to have more positive attitudes toward marketing variables and health communication variables than those who are more involved with the cause. Thus, future research should examine whether cause involvement in the digital and CRM context plays a role as a moderator in ELM from both the marketing and health communication standpoints.

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## **Chapter 1**

### **Introduction**

This dissertation examines how and to what extent cause-related marketing (CRM) affects consumers' responses to both marketing (e.g., attitudes toward brand) and health information (e.g., attitudes toward a particular health issue) embedded in CRM. CRM is a part of the corporate social responsibility (CSR) that focuses on social causes. It involves a for-profit organization's contribution of a portion of its product sale proceeds to a non-profit organization.

Research on CRM effectiveness has examined how the fit between a brand and cause, cause proximity and consumer's involvement can impact consumers' attitudes towards and perceptions of a brand. In terms of brand-cause fit, a high fit between a brand (or a company) and the cause it sponsors produced more positive effects on (1) sponsor credibility, (2) consumers' attitudes toward the sponsor (Rifon, Choi, Trimble, & Li, 2004), and (3) consumers' attitudes toward a CRM program (Chéron, Kohlbacher, & Kusuma, 2012).

Cause proximity is another factor that affects consumers' attitudes toward a campaign and a brand. For example, Grau and Folse (2007) found that local donations elicit more positive attitudes toward a campaign than national donations. They also found that consumers who are highly involved with a cause are more likely to participate in a campaign than those who are less involved with cause. Because consumers' engagements with CRM lead to the increasing donations to the social cause and because CRM frequently features health issues in marketing, it is possible that CRM messages could play a role in educating consumers on health issues and affect health perceptions (e.g., perceived behavioral control and behavioral intention) toward a particular health issue in the CRM.

Indeed, according to Cause Marketing Forum (2010), among the 10 most influential cause marketing campaigns, five of them were health-related causes, including Yoplait Save Lids to Save Lives (breast cancer), American Express The Members Project (the Alzheimer's Association and U.S. Fund for UNICEF), Lee National Denim Day (breast cancer), Product (Red) (AIDS, Tuberculosis and Malaria), and Live Strong Bracelet (supercyclist's cancer charity). In academic research, the most prevalent context of the CRM research is health-related causes. Yet, the applicability of health-related causes is relatively unexamined in enhancing consumers' specific health perceptions and knowledge. Indeed, health cue messages in the CRM product packaging, for example, could play a role in affecting consumers' nutritional perceptions (Minton & Cornwell, 2015). Further, exploring other health outcomes (e.g., perceived behavioral control and behavioral intention) toward the particular health issue in CRM would expand the scope of CRM in health communication.

CRM marketers have extended their messages to social media platforms to further engage consumers and promote participation (Furlow, 2011). For example, Kellogg's "Share breakfast" campaign has used social media such as Facebook, Twitter, Pinterest, and YouTube. It includes CRM messages on social media and asks consumers to share the post by promising to feed one child breakfast for every share. Moreover, according to the Cone Communications Millennial CSR Study (2015), more than 90% of millennials responded that they are willing to switch to brands that participate in CRM. The majority of them (66%) use social media to engage with CSR, such as sharing information about companies and issues they care about and participating in direct communication with companies about the issues. However, whether or not their engagement with CRM affects their understanding and perception of a health issue is still questionable.

## **Purpose of the study**

My overarching research question asks how the level of involvement can affect the effectiveness of CRM on a brand's social media accounts and how CRM-based social media messages affect health perceptions toward a particular health issue (e.g., attitude toward the health issue, behavioral control, and behavioral intention).

To explore how millennials perceive health-related CRM and to advance research on CRM, theoretical frameworks, such as Elaboration Likelihood Model (ELM) (Petty & Cacioppo, 1984; Petty, Cacioppo, & Schumann, 1983; Petty, Priester, & Brinol, 2002; Petty & Wegener, 2014) and Theory of Planned Behavior (TPB) (Ajzen, 1991; Ajzen, & Sheikh, 2013; Andrews, Silk, & Eneli, 2010), provide insight into how the effectiveness of CRM on millennials' health perceptions and behavioral change may be impacted by moderating factors, such as the individual's level of cause involvement. The ELM provides a framework to explain how individuals process CRM messages and how the level of involvement can affect the effectiveness of CRM. Moreover, TPB provides a framework to explain how CRM affects the individual's specific health-related outcomes, such as attitude toward the health issue, behavioral control, and behavioral intention.

Specifically, this dissertation examines how brand-cause fit (low vs. high), cause proximity (local vs. international), and the individual's cause involvement (low vs. high) affect millennials' responses to both marketing and health information embedded in CRM. This study also investigates how CRM-based social media messages influence their attitudes toward CRM by examining their social media engagement behaviors (e.g., like, comment, and share).

## **Contributions/Implications**

Findings of this study have theoretical implications for future study as well as practical implications for marketers and health practitioners. Theoretically, this study contributes to expanding our understanding of the effects of CRM in terms of health communication perspectives as well as marketing perspectives. By investigating how and to what extent CRM messages affect consumers' responses to both marketing and health information embedded in CRM based on the integration of Elaboration Likelihood Model (ELM) and Theory of Planned Behavior (TPB) frameworks, this study provides theoretical explanations of the effects of message factors in CRM context and how level of involvement moderates information processing. Moreover, the findings of this study can contribute to our understanding of how and to what extent the use of social media plays a role in promoting CRM participation. This study can be the first step to examine the mechanisms related to why people are willing to participate in CRM on social media. Furthermore, this study can contribute to investigating whether ELM is an applicable framework in the context of digital marketing.

From a practical standpoint, there are important implications of this study for marketers. First, this study can suggest how the marketers can create and design effective CRM messages to create a positive brand image and increase their sales and campaign participation. Moreover, it also suggests that the findings of this study can provide insights regarding with whom a company could partner and which cause the company supports, which would allow them to maximize the effects of CRM for not only the company but also the non-profit organization. Second, the findings of this study can contribute to our understanding of how the use of social media may provide benefits to companies that participate in CRM campaigns. Last, this study can offer

further suggestions for how health practitioners can use CRM campaigns to increase consumers' awareness of a particular health issue.

## **Chapter 2**

### **Literature review**

This literature review focuses on eight primary topics: 1) cause-related marketing (CRM), 2) effectiveness of CRM, 3) advertising in social media, 4) CRM in health communication and social media, 5) social media in health communication, 6) the role of involvement in Elaboration Likelihood Model (ELM), 7) health issue: skin cancer, 8) the role of CRM toward health perceptions in Theory of Planned Behavior (TPB), and 9) proposed theoretical conceptual model: Integrating Elaboration Likelihood Model (ELM) and the Theory of Planned Behavior (TPB).

### **Overview of cause-related marketing (CRM)**

Corporate social responsibility (CSR) is defined as “corporations’ voluntary behaviors to accomplish sustainable development” (Idowu & Pappasolomou, 2007). Since the late 1800s, it has become one of the prevalent corporate philanthropy efforts (Sethi, 1977). It can also be described broadly as a for-profit organization’s efforts to support its shareholders as well as society, as “good citizenship,” or being a “good” company in areas ranging from human resource management to environmental protection (Sheikh & Beise-Zee, 2011, p.27). The use of CSR is growing at a staggering pace as companies attempt to appeal to consumers while putting forth an image of social cooperation.

As a component of CSR, cause-related marketing (CRM) can promote consumers' purchases wherein the for-profit organization contributes a portion of sales to a cause when consumers purchase their products. Varandarajan and Menon (1988) define CRM as a “process of formulating and implementing marketing activities that are characterized by an offer from the firm to contribute a specified amount to a designated cause when customers engage in revenue-

providing exchanges that satisfy organizational and individual objectives” (p. 60). The CRM creates mutually favorable relationships among three parties: the corporation, the non-profit organization, and the consumers. The corporations take advantage because donations are created by consumers’ purchasing behaviors. They can increase their profits as well as improve their images (Webb & Mohr, 1998). For non-profit organizations, the CRM campaigns help non-profit organizations to continue their mission with monetary support and enhance target audiences’ awareness and engagement of the cause (Polonsky & Wood, 2001).

Since American Express launched the Statue of Liberty renovation program in 1985 (<http://about.americanexpress.com/csr/pip.aspx>), many for-profit organizations have engaged in CRM. One of the most noticeable examples is General Mill’s Yoplait campaign with the slogan “Save Lids to Save Lives,” which was created in 1998 to support breast cancer. This program is still ongoing through expanding beyond Yoplait to include other General Mills products. This program promises to donate 10 cents to one of three charities, Susan G. Komen, Bright Pink, and Living Beyond Breast Cancer by entering the code on the lids, and it would donate once every year (<http://friendsinthefight.yoplait.com>).

### **Effectiveness of CRM**

Previous studies focusing on consumers’ responses to cause-related marketing (CRM) have demonstrated that CRM promotes consumers’ positive attitudes toward companies, attitudes toward the brand and attitude toward the cause (Lafferty & Goldsmith, 2005; Lafferty, Goldsmith, & Hunt, 2004; Pracejus & Olsen, 2004). For example, Lafferty and Goldsmith (2005) conducted an experiment to investigate the effects of cause-brand alliances. This study compared consumers’ attitudes toward the cause and attitude toward the brand before and after exposure to

an advertisement with CRM components. The results showed that both attitudes toward the cause and attitudes toward the brand were significantly higher after exposure to the advertisement with CRM components than before exposure to the advertisement with CRM components.

In addition to the general positive effects of CRM (i.e., presence of CRM) on consumers' attitudes toward the cause and the brand, many studies have further investigated the relative effects of different types of CRM on consumers by considering factors influencing CRM, such as brand-cause fit (Chéron et al., 2012; Nan & Heo, 2007; Pracejus & Olsen, 2004), cause proximity (Grau & Folse, 2007; La Ferle, Kuber & Edwards, 2013), and individual factors (e.g., level of involvement) (Grau & Folse, 2007). Because there has been no study that examines how brand-cause fit and cause proximity in CRM affects consumers, the following section will focus on how these two factors can be applied to the CRM context.

**Brand-cause fit in CRM.** One of the most considered message factors influencing CRM is the effects of brand-cause fit (Chéron et al., 2012; Lafferty et al., 2004; Nan & Heo, 2007; Pracejus & Olsen, 2004) or congruence effects (Kuo & Rice, 2015; Rifon et al., 2004) -- two terms that have been used interchangeably in the literature. In these studies, brand-cause fit is defined as “the overall perceived relatedness of the brand and the cause with multiple cognitive bases” (Nan & Heo, 2007, p.66). In other words, it is the degree to which consumers accept the pairing of the brand with the cause. A related concept to brand-cause fit, congruence is defined as “relatedness” and “relevance” (Johar & Pham, 1999) or “compatibility” (Ruth & Simonin, 2003). Generally, perceived fit can be defined as “the degree of similarity and compatibility that consumers perceive exists between a social cause and brand” (Bigné, Currás-Pérez, & Aldás-Manzano, 2012, p.577; Lafferty, 2009; Samu & Wymer, 2009).

The strength of the fit can be explained in terms of functional-based and image-based similarity (Bigné et al., 2012; Gwinner, 1997; Gwinner & Eaton, 1999; Lafferty et al., 2004; Rifon et al., 2004). Gwinner (1997) defined “functional-based similarity” occurring when the company’s product is used during the event, while “image-based similarity” occurring when there is a link between core values of the consumer to the values represented by the company and the event. Other definitions are also offered. Bigné et al. (2012) defined a functional type fit as being “determined on the basis of a comparative analysis of product functions and social cause characteristics and intentions” and image fit as being “based on the existence of related characteristics in the brand and social cause image or positioning” (p. 576).

Previous studies on functional fit dominate the literature (Rifon et al., 2004). But only two studies (Alcañiz, Cáceres, & Pérez, 2010; Bigné et al., 2012) distinguished brand-cause fit into two brand-cause fit categories: functional fit and image fit. They analyzed consumers’ perceptions of corporate social responsibility in a cause-brand alliance context. Bigné et al. (2012) showed that consumers perceive functional and image fit differently, demonstrating that functional fit has a direct, positive influence on CSR perception, while image fit has an indirect influence on that perception. Alcañiz et al. (2010) revealed that functional fit influences perceived company expertise, while image fit is used to evaluate company trustworthiness.

Some studies revealed that a high fit between a company and the cause it sponsors produced more positive effects on sponsor credibility and attitudes toward the sponsor (Rifon et al., 2004), brand image (Gwinner & Eaton, 1999), and a high fit between a product and the cause produced a more positive attitude toward a CRM program (Bigné et al., 2012; Chéron et al., 2012). For example, Rifon et al. (2004) used a health website with contraception information as a health topic and, to show low congruence, paired it with a shoe product company on the site as a

sponsor. To portray high congruence, they paired the contraception information with a pharmaceutical company on another site as a sponsor. They found that a good fit between a company and the cause it sponsors increases sponsor credibility and attitudes toward the sponsor. Even though Rifon et al. (2004) found brand-cause fit and its effects on consumer attitudes, their examples were not grounded in the context of CSR and CRM.

Aligning brand-cause fit research more closely with the context of CRM and non-profit organization, studies regarding brand-cause fit in CRM context showed inconsistent results in brand-cause fit. This is likely due to different types of manipulation of brand-cause fit and participants' nationality. Samu and Wymer (2009) used Canadian participants, a bookstore, and "a children's charity" (high fit) versus "a charity to help the homeless" (low fit). They found that higher perceived fit between the brand and cause led to more positive attitudes toward cause, higher intention to contribute, more positive attitudes toward the brand and higher intention to purchase than low fit did. On the other hand, Moosmayer and Fuljahn (2013) used German participants, a laptop computer, and a "new IT system for hospitals in Africa" (high fit) versus "medical instruments for hospitals in Africa" (low fit). Their study revealed low brand-cause fit produced more positive attitudes toward a campaign. Given the distinctions of brand-cause fit are unclear between these studies and the participants' different nationality, these variations might produce contradictory results. A close examination of how previous studies in the U.S. manipulated the brand-cause fit may help clarify the directionality of the literature.

Nan and Heo (2007) discovered that, regardless of the level of brand-cause fit, when an advertisement contains an embedded CRM message (i.e., involving either high brand-cause fit or low brand-cause fit), consumers are more likely to have a more favorable attitude toward the company, than when an advertisement does not contain an embedded CRM message. In Nan and

Heo's study, brand-cause fit was manipulated by differing the non-profit organization involved in the CRM. For the high brand-cause fit condition, they matched orange juice and a health-related non-profit organization (Healthy Diet Research Association) as a matching partner, because orange juice is perceived as a healthy drink. For the low brand-cause fit condition, they matched orange juice and a non-profit organization (Traffic Safety Research Association). They revealed that an advertisement with a CRM component involving high brand-cause fit led to a more favorable attitude toward the company than an advertisement without a CRM component. Moreover, an advertisement with a CRM component involving low brand-cause fit led to a more favorable attitude toward the company than an advertisement without a CRM component.

However, the interaction effect between brand-cause fit and brand consciousness, defined as "an individual trait characterized by the degree to which a consumer is oriented toward buying well-known branded products" (Nan & Heo, 2007, p.66), was found on the attitudes toward the advertisement and the brand. In detail, college students who were high in brand consciousness showed a more positive attitude toward an advertisement and the brand, when brand-cause fit was high than when brand-cause fit was low. However, for those who were low in brand consciousness, there was no significant effect of the level of brand-cause fit on either attitudes toward the advertisement or the brand.

A summary of Rifon et al. (2004) and Nan and Heo (2007) found inconsistent results about the effects of the level of brand-cause fit. Investigating different types of brand-cause fit in different contexts may be the cause of these discrepancies. That is, Rifon et al. (2004) investigated congruence effects on sponsor credibility and attitudes toward the sponsor in sponsorship context by using a health website and sponsor's products (shoe product vs. pharmaceutical product). However, Nan and Heo (2007) investigated brand-cause fit effects on

attitudes toward the company in CRM context by using a company's product (orange juice) and non-profit organizations (Healthy Diet Research Association vs. Traffic Safety Research Association).

Although there are inconclusive and inconsistent results in these two studies, given that many studies have revealed that a high fit between a product and the cause produced more positive attitudes toward the sponsor (Rifon et al., 2004), brand image (Gwinner & Eaton, 1999; Pracejus & Olsen, 2004), and a CRM program (Bigné et al., 2012; Chéron et al., 2012) than a low fit, further investigation about the effects of brand-cause fit in CRM is still needed. The following hypothesis is proposed.

H1: Participants exposed to a CRM message with a high brand-cause fit are more likely to exhibit more positive attitudes toward brand (H1a), more positive attitudes toward non-profit organization (H1b), more positive attitudes toward CRM message (H1c), and a higher campaign participation intention (H1d) than a CRM message with a low brand-cause fit.

In addition to the effects of brand-cause fit, previous studies have investigated whether different types of messages (e.g., framing, and donation proximity) induced effects of CRM (e.g., attitudes toward company, attitudes toward campaign, and purchase intention) and whether the effects of CRM are moderated by individual factors, such as the level of involvement and an individual's temporal orientation (Grau & Folse, 2007; Tangari, Folse, Burton, & Kees, 2010). Moreover, cause proximity, which describes the location of the cause or that of a non-profit organization that the CRM supports, may impact consumers' responses.

**Cause proximity in CRM.** Grau and Folse (2007) examined the role of donation proximity (local versus national) on attitudes toward the campaign and participation intention. They manipulated the donation proximity by stating that the company makes a donation to (local versus national) skin cancer research when consumers purchased its product (e.g., “BioCalth will donate 50 cents from the sale of each bottle to The National Cancer Institute’s Center for Cancer Research.”). They found that local donations elicit more positive attitudes toward a campaign than national donations. However, they did not find any difference of donation proximity in terms of campaign participation. They also found interaction effects between the level of involvement and donation proximity in CRM. Specifically, consumers who are less involved with a particular cause are more likely to show more participation intention for local donations than national donations. However, for those who are more involved, there was no difference between donation proximity in terms of their participation intention. These results suggest that involvement is a key moderating factor. La Ferle, Kuber and Edwards (2013) also found that while Indian participants were more favorable toward Indian companies than a multinational company in terms of attitude toward the CRM offer, advertisement, and company image, there were no differences between location of cause (national vs. international), in terms of Indian consumers’ attitudes toward the CRM offer, advertisement, and company image, suggesting that the effects may differ based on nationality of the participants or where they experiment was conducted.

It is likely that different operationalization of donation proximity may introduce these different results. Grau and Folse (2007) operationalized local versus national into local community versus U.S. in response to the null effects from Ross, Patterson and Stutts (1992).

They argue that because consumers respond easily to a more tangible value, the local donation will signal a more concrete or tangible value of the campaign than the national donation.

Advancing prior research on cause proximity, La Ferle et al. (2013) manipulated locations of causes into national versus international (U.S. versus India). Despite these seemingly distal locations, no differences were found for this variable (La Ferle et al, 2013). The null findings may be the results of participants' lack of connection with the national charity (Kids Charitable Foundation). To improve how cause proximity affects attitudes toward CRM offer, advertisement and company image, they suggested further study to use a local charity rather than a national charity.

Another possible explanation of inconsistent results of cause proximity is the differences of participant characteristics in previous studies. Even though Grau and Folse (2007) and La Ferle et al. (2013) used participants with a similar age range (ages 18-40 versus 18-30, respectively) and gender (about 55% of female in both studies), one used U.S. population (Grau & Folse, 2007) and the other used Indian population (La Ferle et al., 2013). Thus, it is one possibility for explaining the discrepancy in cause proximity.

Taken together, these two studies have various operationalization on donation proximity. As Grau and Folse (2007) said that consumers are more affected by a more concrete or tangible value, such as donation location, a clear distinction of cause proximity in terms of location may further clarify the role of cause proximity in CRM. Therefore, to distinguish donation proximity clearly, this study operationalizes cause proximity at the local (the most tangible cause proximity) versus international (the least tangible cause proximity) level, with the goal of bringing clarity to the variable. The following hypothesis is proposed.

H2: Participants exposed to a CRM message with a local cause are more likely to exhibit more positive attitudes toward brand (H2a), more positive attitudes toward non-profit organization (H2b), more positive attitudes toward CRM message (H2c), and a higher campaign participation intention (H2d) than a CRM message with an international cause.

In addition to the effects of message factors in CRM, it is important to consider media platforms for CRM messages. This is particularly important given that social media has been one of the most prevalent platforms to deliver CRM campaigns and that millennials feel more positively toward engaging in CRM campaigns on social media (Cone Communications Millennial CSR study, 2015). Thus, the next section explains how millennials have used social media and how they perceive advertising on social media. The section also explains CRM in health communication and on social media.

### **Advertising in social media**

As social media is the most prevalent media in the U.S. for millennials aged 18-24, potential impacts of social media have become more powerful in their lives. According to the 2014 Pew Research Center, 89% of young adults aged 18-29 use social networking sites (Pew Research Center, 2014a). In particular, among social media, Facebook is the most popular social media site for U.S. college students and teens (Pew Research Center, 2014a, 2015). According to a report by BI Intelligence in 2013, 75% of college students and 71% of high school graduates and younger students have used Facebook (Guimaraes, 2013). Moreover, another 2014 report from the Pew Research Center reported that “Facebook users are highly engaged with the platform. Fully 70% say they use Facebook daily (including 45% who do so several times a day),

a significant increase from the 63% who visited daily in August 2013. Some 17% visit Facebook weekly, while 12% of users log on less often” (Pew Research Center, 2014b).

Social media not only has played a role in providing a virtual community for people to communicate with each other, but also has allowed advertisers and marketers to create brand pages to form an online brand community. They have used these pages for the purpose of not only connecting with fans, but also conveying brand information and thoughts to friends via their personal profile pages (Lipsman, Mudd, Rich, & Bruich, 2012)

Prior studies have investigated what motivates consumers to follow or join brand pages on Facebook and Twitter. According to Wang, Yu, and Wei (2012), consumption-related peer communication using social media affects attitudes toward product and purchase decisions. Logan (2014) found that perceived ease of use and usefulness of following brands, and subjective norms all affect intention to follow brands on both Facebook and Twitter. Moreover, Muk and Chung (2014) found that attitudes toward brand pages and subjective norms are significant factors that predict consumers’ intentions to join brand pages.

Additionally, users’ perceptions toward the virtual brand community have been extensively studied. Chi (2011) surveyed college students in Taiwan who use Facebook to measure perceptions toward interactive digital advertising versus a virtual brand community. College students expressed that the virtual brand community on Facebook is more favorable, trustworthy, informative, entertaining, and less irritating than interactive digital advertising in Facebook. Moreover, they showed more positive intention to engage with the virtual brand community than with advertising. Similarly, Chu (2011) investigated whether there are differences in the degree of self-disclosure between Facebook group members and non-group members. Results showed group members showed a more favorable attitude toward social media

and advertising in general than non-group members. These two studies suggest how the popularity of social media shapes millennials' positive attitudes toward brands on social media. Thus, examining how millennials react to social media based CRM messages may offer insight into their perceptions of health messages and their role in health promotion.

### **Cause-related marketing (CRM) in health communication and social media**

As General Mill's Yoplait campaign with the slogan "Save Lids to Save Lives," and Kellogg's breakfast program with the slogan "Give a child breakfast" have shown, many companies have engaged in CRM related to health-related cause. However, few studies have been conducted to examine effects of CRM in the context of health communication.

Previous studies have conducted experiments to investigate how cause-related marketing (CRM) affects companies that sponsor CRM, the brand, or the cause. Much of the research used health-related products (e.g., calcium supplement drug) and the health-related cause (e.g., bone cancer, heart disease) as stimuli (Grau & Folse, 2007; Kuo & Rice, 2015; Nan & Heo, 2007; Tangari et al., 2010). The health-related causes used in the studies included skin cancer research (Grau & Folse, 2007), bone cancer research (Grau & Folse, 2007; Tangari et al., 2010), heart disease (Tangari et al., 2010), Healthy Diet Research Association (Nan & Heo, 2007), and breast cancer research (Kuo & Rice, 2015). However, these health-related causes were only used as stimuli without examining how these messages may affect participants' health decision-making.

Moreover, even though CRM is never designed to be educational, health cue messages in the CRM can play a role in changing consumers' perceptions toward a health-related cause. Minton and Cornwell (2015) showed the potential of using CRM to change health perceptions. Specifically, their study found that including a health cause on a product package can make

consumers believe that the product of cookies or crackers are healthier than it actually is. Moreover, including a health cause on a product package increased consumers' attitudes toward product and purchase intention. However, their study was limited to examining the effects of health cues on product packages on consumers' nutritional perceptions. Given that including a health cause on a product package affects consumer's misinformation or misperception of the nature of the product (Minton & Cornwell, 2015), it is important to examine how and to what extent CRM can contribute to the enhancement of health behavioral intention and raise awareness about specific health issues the CRM addresses.

Previous studies have argued that Millennials or Generation Y, who were born between 1985 and 2005, are important targets for CRM (Cui, Trent, Sullivan, & Matiru, 2003; Furlow, 2011). Millennials are willing to pay more for products with a social benefit (Barkley, 2011; Furlow, 2011). Not surprisingly, nine-tenths of these millennials are willing to switch brands involved in CRM and more than 60 percent of them use social media to engage in CSR with brands (Cone Communications, 2015).

Thus, given the popularity of social media and millennials' favorable attitudes toward CRM, CRM on social media may have potential of influencing health promotion. However, so far, few studies have investigated how CRM is affected by social media. Only one study by Jeong, Paek, and Lee (2013) conducted an experiment to examine whether CRM on social networking sites (SNSs) increases membership on brand pages on SNSs. The results showed that CRM on SNSs increased consumers' intentions to join the SNS brand page, and to invite friends to the brand page. Given a lack of research that examines the relationship between social media and CRM in the context of health communication, this dissertation will consider the effects of

CRM on social media as well as the use of CRM in health promotion. The following section addresses the role of social media in health communication.

### **Social media in health communication**

According to survey reports on U.S. adults' use of the Internet and social media, one in three adult Internet users use the Internet to get health information using web search engines such as Google or health-specific sites like WebMD (Pew Research Center, 2013). As social media use for health promotion increases, a study by Korda and Itani (2013) provides how and to what extent social media has implications for health communication. Social media has powerful potential in health promotion, because it provides social support and assists the feeling of connectedness among individuals. Moreover, it also allows consumer to share and control the information. Korda and Itani (2013) also proposed the role of social media in health communication and how social media affects people's health outcomes. They found that social media provides an audience's health information preferences. More and more people are using Internet and social media to find health-related information, but generational differences (such as gender, age, etc.) shows different social media patterns across different health topics. They also argued that using social media can influence health knowledge and behavioral outcomes by using behavioral change theory and technologies and delivering messages.

Even though previous studies argued that the use of social media is effective in health communication, few studies have been conducted to examine how and to what extent health-related organizations has applied increased affordability and availability of digital communication technologies for health communication. One study by Park, Rodgers, and Stemmler (2011) examined how and to what extent health organizations use interactive features

and social media channels on Facebook for brand promotional purposes. Their study content analyzed 1,760 wall comments posted on the Facebook pages of 35 health organizations (government centers or agencies, health care institutions, schools or universities, business/corporations/pharmaceutical companies, community/advocacy/nonprofit groups, and other). Their results showed that while about half of the comments are from non-profit organizations, they did not effectively use interactive features of social media (e.g., video-sharing, RSS feeds, and blogging).

Taken together, social media is an effective platform for health promotion and CRM on social media may effectively engage millennials via matrices, such as like, share, and comment. The following hypotheses are proposed.

H1 (e): Participants exposed to a CRM message with a high brand-cause fit are more likely to exhibit a higher engagement (like, share, and comment) on social media than a CRM message with a low brand-cause fit.

H2 (e): Participants exposed to a CRM message with a local cause are more likely to exhibit a higher engagement (like, share and comment) on social media (H2e) than a CRM message with an international cause.

As previous studies said, social media has powerful implications for health promotion. Given that U.S. adults' use of the Internet and social media increases, more research is needed to examine the role of social media in health communication on people's health perceptions and behaviors. These perceptions and behaviors can be examined using communication and behavior change theories such as ELM and TPB.

### **The Role of Involvement in Elaboration Likelihood Model (ELM)**

Research has examined how moderating factors, such as involvement, affect the process of CRM (Lafferty & Edmondson, 2000; Lafferty & Goldsmith, 2005; Lafferty et al., 2004) using ELM. According to Petty, Priester and Briñol (2002), ELM provides a dual-process framework to explain the psychological approaches to mass media influence and persuasion (yielding) processes related to how mass media and variables affect attitude change. This model proposes that the processes and consequences of persuasion occur differently, according to the level of thinking (high vs. low) and explained these differences with “routes of persuasion” (central route vs. peripheral route). The degree of motivation and ability to think about the issue-relevant information determine whether message recipient takes the message centrally or peripherally. When the recipient processes the information using the central routes, more cognitive activity is applied. When he or she is highly motivated to process the message and has a high perceived ability to the message process, he or she scrutinizes the issue-relevant information presented. Those who receive the message through the central route will generate favorable or unfavorable thoughts in response to the persuasive communication.

On the other hand, the peripheral route to persuasion does not involve effortful evaluation of the information. In the peripheral route, persuasion occurs by peripheral cues, and heuristics such as “experts are correct,” when an individual’s motivation and ability to process issue-relevant information is low. The individual makes a quick decision without careful consideration. That is, when the perceived elaboration likelihood is high, the central route to persuasion dominates. On the other hand, when the perceived elaboration likelihood is low, the peripheral route to persuasion dominates.

One of the important factors that influence information processing is perceived personal relevance (level of personal involvement). According to Petty et al. (2002), as personal involvement of the message increases (in high relevance condition), strong arguments are more persuasive and favorable, but weak arguments are less persuasive than in the low relevance condition. Moreover, source trustworthiness influences information processing. For example, when the message source is from an expert and a trustworthy person, people feel more confident in their attitudes and just accept the position promoted. On the other hand, when the message is from a less trustworthy source, the recipient cannot be sure of accuracy and he or she must scrutinize the message. Furthermore, when the elaboration likelihood is high, argument quality of issue-relevant information becomes an important determinant of the persuasion. On the other hand, as the elaboration likelihood is low, peripheral cues become a more powerful determinant of the persuasion. For example, Park, Lee, and Han (2007) revealed that the quality of online-reviews and the number of reviews have a positive effect on consumers' purchase intention. Moreover, consumers with low-involvement with the situation are affected by review quantity rather than quality. On the other hand, consumers with high-involvement with the situation are affected both by review quantity and by review quality.

Recent studies on various formats of advertising support the ELM. A recent study found that when individuals are highly involved with the product, they are more likely to show positive attitudes toward product and purchase intention in mobile display advertising (Bart, Stephen, & Sarvary, 2014). Moreover, two studies of direct-to-consumer (DTC) prescription drug advertising showed that consumers who have a high involvement with the disease showed more favorable attitudes toward advertisement, higher drug inquiry intentions, and higher likelihood to search for information (Bhutada, Rollins, & Perri, 2017; Rollins & Bhutada, 2014).

According to Petty et al. (2002), the variables in the ELM play multiple roles. The same feature of a persuasion message serves as an issue-relevant argument or a peripheral cue depending on the situation. First, in terms of source factors, such as expertise and attractiveness, these source factors serve as the peripheral cues in the low elaboration likelihood condition. However, in the high elaboration likelihood condition, if the source factors are relevant to the merits of the message, the factors serve as the persuasive arguments. In terms of message factors, the number of argument messages serves as the peripheral cues when the elaboration likelihood was low, while these numbers of arguments can be processed when the elaboration likelihood was high (Petty et al., 2002; Petty & Cacioppo, 1984). Trampe, Stapel, Siero and Mulder (2010) revealed that product relevance is important when elaboration likelihood is high, while the relevance is not important when elaboration likelihood is low.

Elaboration Likelihood Model (ELM) provides a framework to explain how the level of involvement can affect the effectiveness of CRM. First, level of involvement is one of the primary individual factors. In general, involvement is often considered as personal relevance, meaning the degree to which perceived individual value and/or interest is elicited by a stimulus in certain situations (Antil, 1984). Consumers who are highly involved with a cause are more likely to participate in a campaign than those who are less involved with cause (Grau & Folse, 2007). They also found a relationship between cause involvement and donation proximity. Because cause proximity is expected to work as peripheral cues to evaluate the messages for those who are less involved with a cause, campaign attitudes and participation intentions were greater for those who are less involved with the cause when the donation is targeted locally rather than nationally. However, there was no difference between local donation and national donation for those who are highly involved with the cause.

Another study by Berger, Cunningham, and Kozinets (1999) also revealed that causes in CRM act as peripheral cues or heuristic cues when consumers have low involvement with a product in an advertisement. That is, individuals who are less involved with a product in an advertisement used cause information to develop perceptions of argument quality. However, Bigné-Alcañiz et al. (2010) showed that for a consumer who feels more involved with a social cause, the identification with the company (company-consumer identification) has a positive influence on purchase intention. Thus, for consumers who are more involved with a cause, the causes in CRM do not act as peripheral cues.

Second, three studies examined how the degree of familiarity of the cause affects the effectiveness of cause-brand alliances as a moderator (Lafferty & Edmondson, 2000; Lafferty & Goldsmith, 2005; Lafferty, Goldsmith, & Hunt, 2004). In terms of attitudes toward the cause, when consumers are less familiar with a cause, exposure to cause-brand alliance increases their positive attitudes toward the less familiar cause. On the other hand, when the consumer is highly familiar with the cause, exposure to cause-brand alliance does not increase the positive attitudes toward a cause. In terms of attitudes toward a brand, however, cause-brand alliance produced a positive attitude toward a brand, regardless of the degree of familiarity of the cause.

However, two studies revealed that traditional ELM may not be replicated in a digital context. Karson and Krganonkar (2001) found that there is no interaction between involvement and argument strength for purchase intention in the context of Internet advertising. Moreover, they did not find an interaction between the peripheral cue and involvement on brand attitudes, which means there is no moderating effect of involvement in peripheral cues. A recently replicated study of ELM found contradicting results of involvement (Kerr, Schultz, Kitchen, Mulhern, & Beede, 2015), revealing that individuals who are less involved with the object were

more skeptical and had lower level of attitudes toward the object than those who are highly involved.

ELM in digital contexts produced inconclusive and inconsistent results (Karson & Korgaonkar, 2001; Kerr et al., 2015), when compared to prior studies. Moreover, given that a brand-cause fit and cause proximity cues are expected to work as peripheral cues to evaluate the messages for those who are less involved with a cause (Grau & Folse, 2007; Lafferty & Edmondson, 2000; Lafferty & Goldsmith, 2005; Lafferty et al., 2004), this study expects that the level of involvement plays a moderating role in affecting the effectiveness of CRM. Thus, the following hypotheses are proposed to investigate main effects of cause involvement and interaction effects.

H3: Cause involvement will be positively associated with attitudes toward brand (H3a), attitudes toward non-profit organization (H3b), attitudes toward CRM message (H3c), campaign participation intention (H3d) and engagement (like, share and comment) on social media (H3e).

That is, participants who are more involved with the cause are more likely to exhibit more positive attitudes toward brand (H3a), more positive attitudes toward non-profit organization (H3b), more positive attitudes toward CRM message (H3c), a higher campaign participation intention (H3d) and a higher engagement (like, share and comment) on social media (H3e) than those who are less involved with the cause.

H4: Two-way interactions: There will be two-way interactions between brand-cause fit and cause proximity on attitudes toward brand, attitudes toward non-profit organization, attitudes toward CRM message, campaign participation intention, and engagement on social media.

That is, a CRM message that contains a local cause with a high brand-cause fit will lead to more positive attitudes toward brand (H4a), more positive attitudes toward non-profit organization (H4b), more positive attitudes toward CRM message (H4c), a higher campaign participation intention (H4d) and a higher engagement on social media (H4e) than three other types of CRM messages (a local cause with a low brand-cause fit, an international cause with a low brand-cause fit, and an international cause with a high brand-cause fit).

Three-way interactions: The effects of the brand-cause fit and cause proximity on attitudes toward brand, attitudes toward non-profit organization, attitudes toward CRM message, campaign participation intention, and engagement on social media will be moderated by an individual's level of involvement with the cause.

For those who are less involved with the cause, a CRM message that contains a local cause with a high brand-cause fit will lead to more positive attitudes toward brand (H4a), more positive attitudes toward non-profit organization (H4b), more positive attitudes toward CRM message (H4c), a higher campaign participation intention (H4d) and a higher engagement on social media (H4e). For those who are more involved with the cause, however, no differences are expected.

In addition to marketing perspectives of CRM, this study investigates how CRM affects individuals' specific health perceptions and knowledge toward a cause. In particular, this study investigates how CRM, which supports skin cancer, affects millennials' health perceptions toward skin cancer, given that skin cancer is one of the most common cancers among millennials in the United States (American Cancer Society, 2017a). Thus, the next section provides background information about skin cancer and individuals' participation in skin cancer risk

behavior and describes research that has investigated which factors motivate college students to use tanning beds and sunscreen use.

### **Health issue: Skin cancer**

**Skin cancer.** In the United States, skin cancer is the most common form of cancer. Skin cancer accounts for about half of all cancers in the United States. More than 5 million new cases of non-melanoma skin cancer, such as basal cell or squamous cell cancers, were treated in the United States in 2012 (American Cancer Society, 2017a). The American Cancer Society estimated that 87,110 new cases of melanoma, one of the deadliest of cancers, would be diagnosed in 2017. Skin cancers will be expected to kill 9,730 people (6,380 men and 3,350 women) in 2017 (American Cancer Society, 2017a).

Even though U.S skin cancer incidence rates have been decreasing, melanoma incidence rates have been rising for the past 30 years. For Whites, the incidence rate is 26 times higher than for African Americans, and White women have a higher incidence rate than White men before the age 50. Incidence rates have been increasing more rapidly over the past 30 years, rising by 2% to 3% annually (American Cancer Society, 2017a). Moreover, melanoma is one of the most common cancers among young people ages 15 to 29, and the incidence rates of new melanoma cases increased rapidly in young White woman (MD Anderson Cancer Center, n.d.). Furthermore, people who first used a tanning bed before the age of 35 increase their risk for melanoma by 75% (Skin Cancer Foundation, 2017).

Many types of skin cancers have a high survival rate, and 98% of skin cancer patients live five or more years after being diagnosed (American Cancer Society, 2017a). However, due to the rapid growth of melanoma, the most dangerous form of skin cancer, survival rates decline

sharply for cancers detected at more advanced stages. For instance, when melanomas diagnosed at the earliest stage, the cancer is localized and cannot be detected in lymph nodes or other organs. The five-year survival rate for early diagnosis is 97% and the 10-year survival rate is about 95%. However, for Stage IV cancers – those that have metastasized to other organs and/or distant lymph nodes – the five-year survival rate is about 15% to 20% and only about 10% to 15% of patients survive 10 years or more (American Cancer Society, 2017b).

**Skin cancer risk behaviors: Sunbathing, tanning salon use, and sunscreen use.**

Ultraviolet (UV) radiation exposure is one of the most important factors in the development of skin cancer. About 86% of melanomas can occur from exposure to ultraviolet (UV) radiation from the sun (Skin Cancer Foundation, 2017). In particular, sunbathing and indoor tanning without protection have been linked to increased risk for all types of skin cancer and to the increasing skin cancer rates in the United States (American Cancer Society, 2017a). Furthermore, “individuals who have used tanning beds 10 or more times in their lives have a 34 percent increased risk of developing melanoma compared to those who have never used tanning beds” (Skin Cancer Foundation, 2017).

In the United States, the majority of UV exposure occurs through sunbathing or tanning bed use, both of which are prevalent particularly among young adults. According to the Center for Diseases Control and Prevention’s Morbidity and Mortality Weekly Report (MMWR), 5.6% of adults reported using indoor tanning beds in 2010 (CDC, 2012). The highest rates of indoor tanning were among White women, with 31.8% of those 18-21 years old and 29.6% of those 22-25 years old reporting that they used indoor tanning. For all White adults surveyed who reported using indoor tanning, 57% of the women and 40% of the men stated they had used indoor tanning more than 10 times within the preceding year. Moreover, more than 50% of men and

women aged 18-24 reported being sunburned in the past 12 months in 2010 (CDC, 2016).

However, Choi et al. (2010) found that only about 13% of women and about 4% of men knew that avoiding tanning bed use would reduce skin cancer risks.

In addition to exposing themselves to UV rays via sunbathing and tanning beds, college students tend not to use sunscreen. Basch, Hillyer, Basch, and Neugut (2012) found that about 88% of college students frequently spend more than three hours per day in the sun. However, even though they spent a great deal of time in the sun, only 17.3% of them used sunscreen habitually. Additionally, 60% of those surveyed reported having used indoor tanning in the recent past, and 41% also reported that they had had more than 10 sunburns in their lifetime. Forgetfulness was the greatest obstacle to sunblock usage, according to these college students.

Studies show that college students seem determined to get a tan. For example, Banerjee, Hay, and Greene (2015) revealed that 14% of college students are addicted to indoor tanning. Younger individuals have positive perceptions toward indoor tanning behaviors. For their tanning behaviors, nearly one-third of adults and adolescents report having sunbathed. In terms of tanning bed use, 20% of adolescents have used tanning beds at some point, and 15% of adolescents in the study reported current tanning bed use (Dennis, Kancherla, & Snetselaar, 2009). Another survey showed that 27% of people had used indoor tanning beds in the past year (Robinson, Kim, Rosenbaum, & Ortiz, 2008).

Because excessive indoor tanning or sunbathing for young individuals can lead to many negative consequences, including skin rashes, sunburns, and skin cancer (American Cancer Society, 2017a; Skin Cancer Foundation, 2017), understanding why people engage in tanning and what motivates them to engage in tanning can provide insight into how to design a persuasive health message to decrease their risky tanning behaviors. Furthermore, the review of

skin cancer literature regarding tanning motivation factors can give an insight into how to design skin cancer messages in CRM to increase consumers' awareness of the risk of skin cancer and their intentions to engage in sun protection behaviors.

**Motives for tanning.** Multiple factors influence tanning behaviors, including knowledge of tanning and skin cancer, interpersonal motives, appearance motives, and inappropriate sun protection behavior.

*Knowledge.* According to Robinson et al. (2008), knowledge of the association between tanning and melanoma and other skin cancers increased from 42% in 1988 to 87% in 2007. However, the percentage of survey respondents who knew that limiting tanning behavior helps prevent melanoma decreased from 77% in 1994 to 67% in 2007. A decline in knowledge about the benefits of limiting tanning paralleled an increase in agreement that having a tan is attractive (69% in 1994 and 81% in 2007). Another study revealed that 67% of survey participants answered correctly about the knowledge questions regarding skin cancer such as "Sun exposure causes most skin cancers," and "Most skin cancers can be prevented" (Nahar et al., 2013).

Several studies have shown that people tan even though they know the risks of tanning and have higher knowledge levels about skin cancer (Abroms, Jorgense, Southwell, Geller, & Emmons, 2003; Knight, Kirincich, Farmer, & Hood, 2002; Monfrecola, Fabbrocini, & Posteraro, 2000). According to Nahar et al. (2013), about 70% believed they were more likely to get skin cancer than the average person, and about 87% perceived skin cancer is a severe disease. Abroms et al. (2003) discovered that females sunbathe more than males, even though females have higher knowledge levels about skin cancer and are more likely than males to believe they are susceptible to skin cancer. Knight et al. (2002) found that university students frequently use

tanning lamps to achieve their desired appearance, despite having sufficient knowledge of the adverse effects of UV exposure. Monfrecola et al. (2000) also found that young people continue to risk their health and forego precautions despite being well aware of the danger. Thus, it is important to understand the motives for these risk behaviors.

*Interpersonal motives.* Previous studies have examined interpersonal motives for tanning and how these motives affect tanning and/or skin protection behaviors (Banerjee, Greene, Bagdasarov, & Campo, 2009; Cafri, Thompson, Jacobsen, & Hillhouse, 2009; Cafri et al., 2008; Cafri, et al., 2006). For example, Banerjee et al. (2009) found that intention to use tanning beds is positively associated with having friends or peers who use tanning beds. Thus, these studies showed that social norms are a powerful factor to affect individuals' tanning behavior and designing health message to change social norm about tanning would be valuable to consider. However, this study will not consider the interpersonal motives for designing CRM messages.

*Appearance motives.* Moreover, another powerful influence on tanning is appearance motives. Several studies have identified a significant relationship between appearance motives and intentions or behaviors related to UV exposure (Cafri et al., 2008; Cafri et al., 2006; Hillhouse, Turrisi, & Kastner, 2000). According to previous studies, the motive for most people who tan is that young people equate having a tan equates to beauty (Jones & Leary, 1994; Miller, Ashton, McHoskey, & Gimbel, 1990). One recent study by Neenan, Lea, and Lesesky (2012) surveyed college students to identify the most common reasons for tanning bed use. The results revealed that both male and female college students tan because they perceive themselves to be more attractive when they have a tan. Thus, these studies suggest interventions that increase perceived threats to attractiveness.

*Inappropriate sun protection behavior.* Furthermore, a majority of teens and young adults are not following recommendations for skin cancer prevention behaviors, including use of sunscreens, minimizing sunburns and avoidance of tanning beds (Basch, Hillyer, Basch, & Neugut, 2012; Geller et al., 2002). Spradlin, Bass, Hyman and Keathley (2010) found that among college students, even though most knew that sun exposure increased the risk for skin cancer, fewer than 30 percent of them correctly identified sun protection behaviors. Moreover, only about half of them believed that they themselves should practice sun safe behaviors.

The research about motives for tanning suggests that a persuasive health message designed to increase awareness of a skin cancer issue or to affect behavior change among college students would be valuable to better safeguard the health of these students. However, because people who know the risks and perceive themselves to be susceptible still engage in tanning (Abroms et al., 2003; Knight et al., 2002; Monfrecola et al., 2000), the persuasive health message must do more than increasing knowledge and perceived susceptibility to skin cancer. For example, two skin cancer campaigns targeted to young adults in Australia, Slip! Slop! Slap! and SunSmart, were designed to reduce young adults' sun exposure behavior, in particular, for young adults who were shown not to adopt the behavior, despite an increase of awareness of risk of tanning behavior (Montague, Borland, & Sinclair, 2001).

Thus, to encourage millennials to participate in healthy behaviors, this study considers using CRM messages to increase college students' awareness of risk of skin cancer as well as their participation in a CRM campaign regarding support of skin cancer patients. To examine the effects of CRM on millennials' health behaviors, the Theory of Planned Behavior (TPB), which has been frequently applied to skin cancer study, is adopted.

### The role of CRM toward Health perceptions in Theory of Planned Behavior

The Theory of Planned Behavior (TPB, Ajzen, 1991) explains the links between an individual's attitudes toward the behavior, norms related to a behavior, perceived behavioral control, intentions to engage in the behavior and actual behavior. According to the TPB, behavioral attitudes, subjective norms, and perceived behavioral control all influence the likelihood that an individual will take a recommended behavior (See Figure 1).

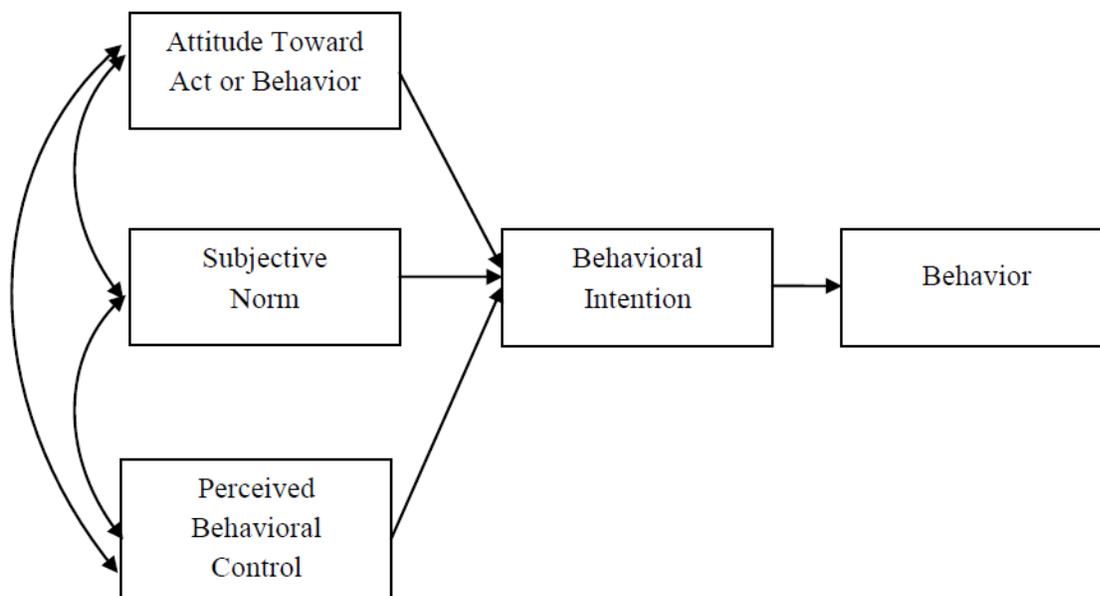


Figure 1: Theory of Planned Behavior

The TPB is an extension of the Theory of Reasoned Action (Ajzen, 1991; Armitage, & Conner, 2001). As in the original Theory of Reasoned Action, the main outcome variable in the TPB, which was proposed by Ajzen in 1985 and revised in 1991, is the individual's intention to perform a given behavior; intention is believed to be the best predictor of that behavior because it is indicative of how much effort people will expend to adopt a particular behavior (Ajzen, 1991). According to the TPB, the three components that influence behavioral intention are *attitudes*,

*subjective norms*, and *perceived behavioral control*. *Attitudes toward the behavior* relates to the individual's favorable or unfavorable evaluation or appraisal of the desired behavior. *Subjective norms* refer to the individual's perception of social pressure to act or not act upon the behavior. Finally, *perceived behavioral control* is a measure of the perceived ease or difficulty of the act and may, in part, reflect past personal experience as well as perceived barriers. For example, in the case of sunscreen use, intended sunscreen use is a predictor for actual sunscreen use.

*Attitudes toward the behavior* here refers to the perceived association of sunscreen use with short-term benefits of not using sunscreen (i.e., getting a tan) over the long-term benefits of its use and barriers to using it. *Subjective norms* pertain to approval or disapproval of others (e.g., parents, friends, partners/ spouse, boyfriend, or girlfriend) for sunscreen use. *Perceived behavioral control* refers to the individual's assessment of his or her ability to use sunscreen.

According to the theory, an individual's intention to perform the behavior will be higher when his or her attitude is more favorable, when he or she perceives greater social pressure in support of the behavior, and when the individual has greater perceived behavioral control. According to the TPB, then, intention to adopt recommended sun protection behaviors will be determined by attitudes toward the behaviors, perceived subjective norms in support of or opposing the behaviors and perceived behavioral control over the sun protection behaviors. Based on the TPB, intention to take recommended sun protection actions is the best predictor of actually engaging in the recommended sun protection behaviors.

Perceived behavioral control influences both intention and behavior. The inclusion of perceived behavioral control allows a prediction of a behavior that was not under complete volitional control. In other words, perceived behavioral control explains why intentions do not always predict behavior (Armitage & Conner, 2001). A meta-analysis by Armitage and Conner

(2001) found that the perceived behavioral control construct accounted for significant amounts of variance in intention and behavior.

Previous studies have examined individuals' behavioral intentions based on the TPB in the context of various health topics, such as healthy eating (Andrews, Silk, & Eneli, 2010), fruit and vegetable consumption (Kothe, Mullan, & Butow, 2012), sun-safety behavior (White, Hyde, O'Connor, Naumann, & Hawkes, 2010), human papillomavirus (HPV) vaccine (Askelson et al., 2010; Catalano et al., 2016) and condom use (Montanaro, & Bryan, 2014).

For example, Andrews, Silk and Eneli (2010) investigated parents' role as health promoters for children, based on the TPB components. This study revealed that in terms of providing health foods and limiting unhealthy foods for their children, parents' attitudes, social norms, and perceived behavioral control are factors to predict behavioral intentions and actual behavior. Similarly, Kothe, Mullan, & Butow (2012) showed that TPB-based intervention messages which were designed to increase fruit and vegetable consumption, attitude, subjective norm, and perceived behavioral control increased an individual's attitude, subjective norm, perceived control, and intention.

Similar predictions have been found in sun protection behaviors. One recent meta-analysis study has revealed that the TPB can explain a large amount of variance in sun protection behaviors across different populations (Starfelt Sutton, & White, 2016; White et al., 2010). For example, White et al. (2010) tested a TPB-based intervention to examine whether changing beliefs about sun-safety behaviors encouraged adolescents to adopt such behaviors. The results showed that increasing social norms in support of sun protection may encourage sun-safe cognition and actions among adolescents. However, even though previous studies argue that social norms are a helpful factor to support sun protection, this study does not include measuring

social norms as a dependent variable because CRM messages mainly target individuals, rather than peers. A longitudinal study by Janssen, van Kann, de Vries, Lechner, and van Osch (2015) investigated sun protection behavior during snow sports, and revealed that despite their high intention to use sunscreen, only about 60% of them used sunscreen during their sports activities.

Despite variation in findings of sun protection behaviors, the TPB provides a framework to explain individuals' attitudes toward health behavior, behavioral control and behavior intentions in the context of CRM. In CRM, for example, if the CRM supports the Breast Cancer Association, the health issue in the CRM is breast cancer and intended breast cancer examination is a predictor for actual breast cancer examination. *Attitudes toward the behavior* here refers to consumer's favorable or unfavorable evaluation or appraisal of breast cancer/breast cancer examination. *Subjective norms* refers to the consumer's perception of social pressure or approval of others to get an examination or not to get an examination. *Perceived behavioral control* refers to the individual's assessment of his or her ability to deal with breast cancer/ get a breast cancer examination. In particular, because this study focuses on how CRM messages affect health perceptions toward a particular health issue (attitudes toward the behavior, perceived behavioral control and behavioral intention), this study integrates the Elaboration Likelihood Model (ELM), which explains the message processing and the Theory of Planned Behavior, which explains how behavioral intention is evoked.

### **Proposed theoretical conceptual model: Integrating Elaboration Likelihood Model (ELM) and the Theory of Planned Behavior (TPB)**

For this study, this study integrates the concepts of ELM and TPB. This model, shown in Figure 2, provides a framework for explaining how the process of CRM messages affect health

perceptions toward a particular health issue (attitudes toward the behavior, perceived behavioral control and behavioral intention).

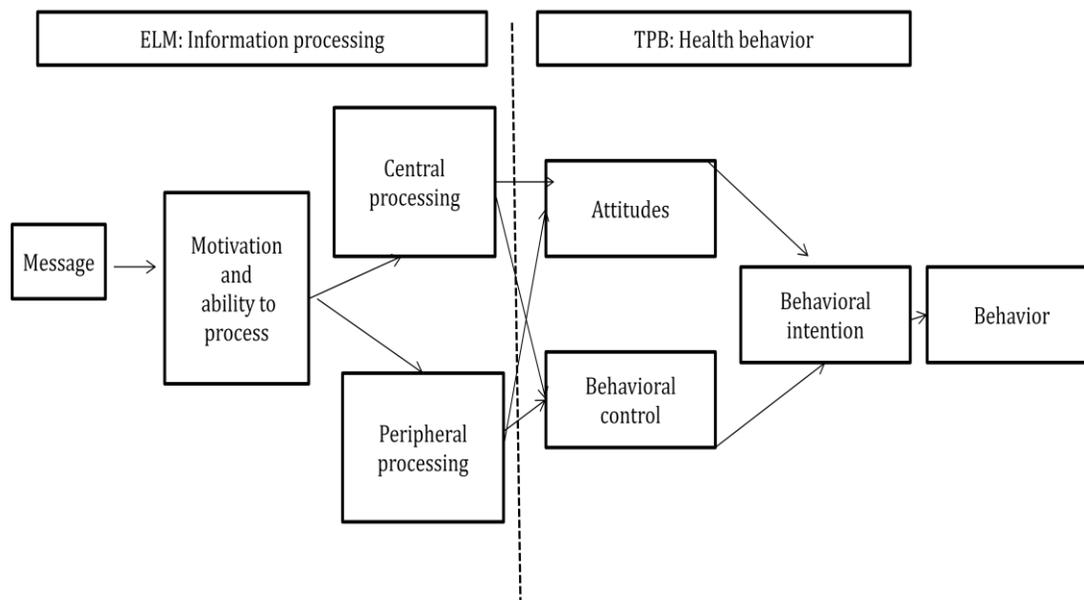


Figure 2: Proposed theoretical conceptual model

When the CRM message recipient is highly motivated to process the message with a high perceived ability to the message process, he or she scrutinizes the CRM message about the skin cancer issue through the central route and will generate favorable or unfavorable thoughts in response to the CRM message. On the other hand, the message recipient who is less motivated to process the message and has a low perceived ability to the message process will generate his/her thoughts by the peripheral cues. The generated thought will influence *attitudes toward the behavior (sunbathing, tanning bed use, and sunscreen use)*, which refers to the individual's favorable or unfavorable attitudes toward the desired behavior, and *perceived behavioral control (for sunbathing, tanning bed use, and sunscreen use)*, which refers to the individual's perceived ease or difficulty of the desired behavior.

Behavioral intentions to adopt recommended sun protection behaviors will be determined by attitudes toward the behaviors and perceived behavioral control over sun protection. Finally, this model assumes that behavioral intentions will be good predictors of actual behavior. Actual behavior, that is, engaging in the recommended sun protection behavior, will be determined by intentions to adopt recommended sun protection behaviors. However, this model did not include the subjective norms, which refers to approval or disapproval of others for behaviors, given that the CRM message does not apply the subjective norms for behaviors. Based on the integrated model, the following research questions are proposed.

RQ1: Are there any differences between a CRM message with a high brand-cause fit and a CRM message with a low brand-cause fit in terms of attitudes toward the behavior (RQ1a), behavioral control (RQ1b), behavioral intention (RQ1c) and attitudes toward skin cancer (RQ1d)?

RQ2: Are there any differences between a CRM message with a local cause and a CRM message with a national cause in terms of attitudes toward the behavior (RQ2a), behavioral control (RQ2b), behavioral intention (RQ2c) and attitudes toward skin cancer (RQ2d)?

RQ3: Are there any differences between individual's level of involvement in terms of attitudes toward the behavior (RQ3a), behavioral control (RQ3b), behavioral intention (RQ3c) and attitudes toward skin cancer (RQ3d)?

RQ4: Are there any interaction effects among brand-cause fit, cause proximity and individual's level of involvement with a cause in terms of attitudes toward the behavior (RQ4a), behavioral control (RQ4b), behavioral intention (RQ4c) and attitudes toward skin cancer (RQ4d)?

### Summary of hypotheses and research questions

The primary question guiding this research is how and to what extent cause-related marketing (CRM) would enhance consumers' awareness of a particular health issue or affect behavior change, as well as their responses in marketing perspectives. Based on the preceding review of the literature examining the use of Elaboration Likelihood Model (ELM) and the Theory of Planned Behavior, a series of hypotheses and research questions were proposed, in terms of consumers' responses to marketing perspectives and in health communication perspectives. Figure 3 and 4 is a summary of the hypotheses.

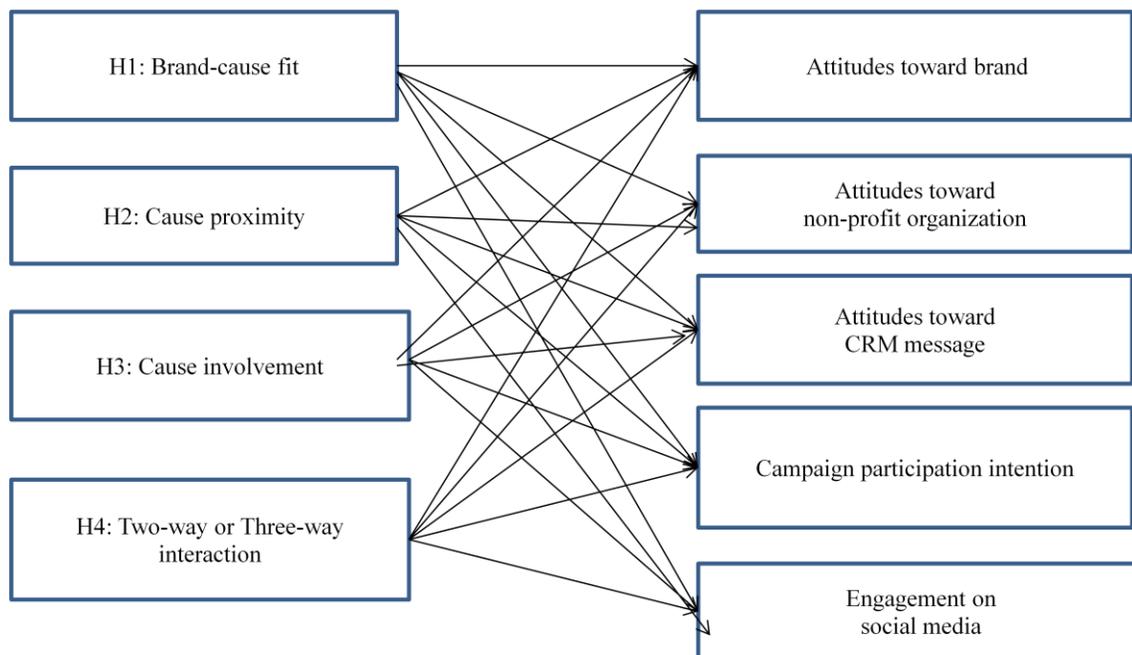


Figure 3: Hypotheses of consumers' responses to marketing perspectives

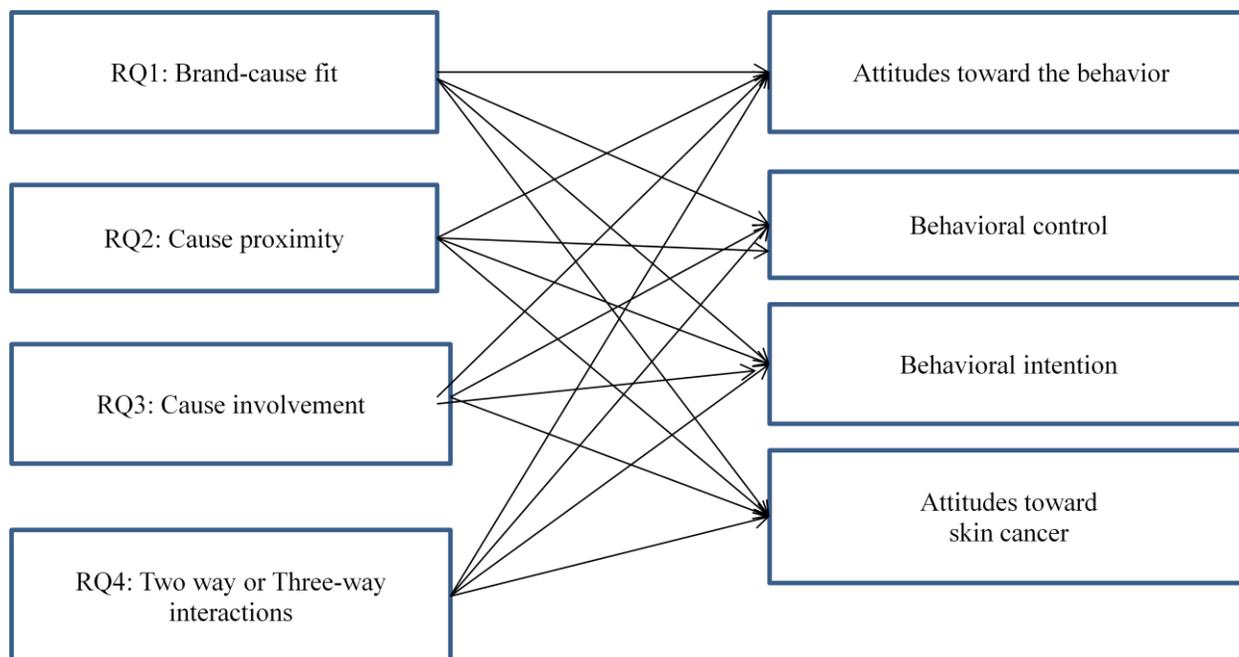


Figure 4: Hypotheses of consumers' responses to health communication perspectives

### Consumers' responses to marketing perspectives

H1 (brand-cause fit): Participants exposed to a CRM message with a high brand-cause fit are more likely to exhibit more positive attitudes toward brand (H1a), more positive attitudes toward non-profit organization (H1b), more positive attitudes toward CRM message (H1c), a higher campaign participation intention (H1d), and a higher engagement (like, share and/or comment) on social media (H1e) than a CRM message with a low brand-cause fit.

H2 (cause proximity): Participants exposed to a CRM message with a local cause are more likely to exhibit more positive attitudes toward brand (H2a), more positive attitudes toward non-profit organization (H2b), more positive attitudes toward CRM message (H2c), a higher campaign participation intention (H2d), and a higher engagement (like, share and/or comment) on social media (H2e) than a CRM message with an international cause.

H3 (level of involvement): Cause involvement will be positively associated with attitudes toward brand (H3a), attitudes toward non-profit organization (H3b), attitudes toward CRM message (H3c), campaign participation intention (H3d) and engagement (like, share and/or comment) on social media (H3e).

Participants who are more involved with the cause are more likely to exhibit more positive attitudes toward brand (H3a), more positive attitudes toward non-profit organization (H3b), more positive attitudes toward CRM message (H3c), a higher campaign participation intention (H3d) and a higher engagement (like, share and comment) on social media (H3e) than those who are less involved with the cause.

H4 (interaction): Two-way interactions: There will be two-way interactions between brand-cause fit and cause proximity on attitudes toward brand, attitudes toward non-profit organization, attitudes toward CRM message, campaign participation intention, and engagement on social media.

That is, a CRM message that contains a local cause with a high brand-cause fit will lead to more positive attitudes toward brand (H4a), more positive attitudes toward non-profit organization (H4b), more positive attitudes toward CRM message (H4c), a higher campaign participation intention (H4d) and a higher engagement on social media (H4e) than three other types of CRM messages (a local cause with a low brand-cause fit, an international cause with a low brand-cause fit, and an international cause with a high brand-cause fit).

Three-way interactions: The effects of the brand-cause fit and cause proximity on attitudes toward brand, attitudes toward non-profit organization, attitudes toward CRM message, campaign participation intention, and engagement on social media will be moderated by an individual's level of involvement with the cause.

For those who are less involved with the cause, a CRM message that contains a local cause with a high brand-cause fit will lead to more positive attitudes toward brand (H4a), more positive attitudes toward non-profit organization (H4b), more positive attitudes toward CRM message (H4c), a higher campaign participation intention (H4d) and a higher engagement on social media (H4e). For those who are more involved with the cause, however, no differences are expected.

### **Consumers' responses to health communication perspectives**

RQ1 (brand-cause fit): Are there any differences between a CRM message with a high brand-cause fit and a CRM message with a low brand-cause fit in terms of attitudes toward the behavior (RQ1a), behavioral control (RQ1b), behavioral intention (RQ1c) and attitudes toward skin cancer (RQ1d)?

RQ2 (cause proximity): Are there any differences between a CRM message with a local cause and a CRM message with a national cause in terms of attitudes toward the behavior (RQ2a), behavioral control (RQ2b), behavioral intention (RQ2c) and attitudes toward skin cancer (RQ2d)?

RQ3 (level of involvement): Are there any differences between individual's level of involvement in terms of attitudes toward the behavior (RQ3a), behavioral control (RQ3b), behavioral intention (RQ3c) and attitudes toward skin cancer (RQ3d)?

RQ4 (interaction): Are there any interaction effects among brand-cause fit, cause proximity and individual's level of involvement with a cause in terms of attitudes toward the behavior (RQ4a), behavioral control (RQ4b), behavioral intention (RQ4c) and attitudes toward skin cancer (RQ4d)?

## Chapter 3

### Method

The purpose of the study is to examine how brand-cause fit (low vs. high), cause proximity (local vs. international), and the individual's cause involvement (low vs. high) affect millennials' responses to both marketing and health information embedded in CRM. My dissertation also investigates how CRM on social media influences their attitudes toward CRM by examining their engagement behaviors on social media (e.g., like, comment, and share). An experiment was conducted to examine the effects of these manipulated message factors in CRM on millennials' responses to both marketing and health perspectives.

#### Experimental design

An experiment with a 2 (brand-cause fit: high vs. low) X 2 (cause proximity: local vs. international) between-subjects factorial design is conducted. The brand-cause fit and cause proximity are manipulated as independent variables. In addition, cause involvement is the third independent variable. See table 1 for the experimental design and number of participants in each condition.

Table 1: Experimental design (2 x 2)

	Low brand-cause fit	High brand-cause fit
<b>Local proximity</b>	<b>Advertisement 1</b> ( $N=75$ )	<b>Advertisement 3</b> ( $N=75$ )
	Male: $n=26$	Male: $n=25$
	Female: $n=49$	Female: $n=50$
<b>International proximity</b>	<b>Advertisement 2</b> ( $N=75$ )	<b>Advertisement 4</b> ( $N=75$ )

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Male:  $n=19$

Male:  $n=18$

Female:  $n=56$

Female:  $n=57$

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### **Data collection**

Undergraduate students from the University of Kansas were recruited to participate in an online experiment in return for extra credit. A power analysis showed that the range of total sample size is as follows: 52 (small effect size), 128 (median effect size) and 787 (large effect size). Thus, to meet the median effect size, recruitment continued until at least 128 undergraduate students completed the online survey. However, to better improve the effect size, recruitment continued when the final number of participants reached 300. See Appendix 1 for power analysis.

### **Recruitment**

Before recruiting participants, IRB approval was received (IRB ID: STUDY00140353). Participants were recruited by contacting professors or instructors in large classes such as introductory or other lower division courses. The author went to classes in Journalism and Mass Communications and explained the research opportunity or asked professors to announce the study in class. Then, participants were given a URL for the experiment website (Qualtrics) via email and asked to participate in the experiment within a week. On the first page of the website, participants were told that they would be evaluating a cause-related marketing (CRM) message that may be used on Facebook. After being informed of their rights as participants, participants were asked to go to the next page by clicking the “next” button.

On the experiment website, participants were randomly assigned to one of the four experimental conditions. Random assignment was accomplished by using the randomization function within the Qualtrics system.

Before exposure to the message, participants were asked some questions such as cause involvement. After being exposed to the message, participants were asked to complete a questionnaire containing measures for the dependent variables, manipulation checks, and demographic information. After completing a questionnaire, participants were asked to provide their identifiable information, such as names, student ID, and email address, which can help the author keep track of their participation. To ensure confidentiality, this information was used only to compensate students with extra credits. At the end of the experiment, students were reminded not to discuss the experiment with their friends.

### **Stimulus development**

Four different versions of the advertisement were developed: 2 (brand-cause fit: low vs. high) X 2 (cause proximity: local vs. international). These four advertisements contained messages reflecting the four possible combinations of brand-cause fit and cause proximity. Prior studies on brand-cause fit and donation proximity were referenced (Grau & Folse, 2007; Nan & Heo, 2007). See Appendix 2 for examples of stimuli used by previous studies.

The main message used skin cancer as a health cause and products with a fake brand name (e.g., a coffee mug X for low brand-cause fit, and sunscreen X for high brand-cause fit), and the text described the CRM messages by stating that the company would take responsibility for helping with the cause. For cause proximity, the message used Kansas Skin Cancer Foundation as the local cause, and South African Skin Cancer Association as the international

cause, given that South Africa has the second highest incidence rate of skin cancer in the world ([www.cansa.org.za/files/2012/05/SKIN\\_CANCER\\_Leaflet-2010.pdf](http://www.cansa.org.za/files/2012/05/SKIN_CANCER_Leaflet-2010.pdf)). Moreover, the four advertisements have identical CRM messages such as “we take responsibility to support...” and “for each purchased, we will donate 50% of every purchase...” See Appendix 3 and 4 for the stimuli and questionnaire.

### **Independent variables**

**Brand-cause fit.** The brand-cause fit was operationalized as the individual’s feeling about fitness of the brand and cause (Nan & Heo, 2007; Rifon et al., 2004). In this study, brand-cause fit was operationally defined as the two types of messages: high vs. low. High brand-cause fit was operationally defined as one that describes the sunscreen brand’s support to a health-related non-profit organization (Skin Cancer Association). On the other hand, low brand-cause fit was operationalized as a coffee mug brand’s support to a health-related non-profit organization (Skin Cancer Association).

**Cause proximity.** Cause proximity was operationalized as the two types of messages: local cause vs. international cause. A local cause was operationalized as one that describes the health issue (skin cancer), that takes place in Kansas. On the other hand, an international cause was operationalized as one that describes the health issue (skin cancer), that takes place in South Africa, that has the second highest incidence rate of skin cancer in the world.

**Cause involvement.** Cause involvement was operationally defined as respondents’ feeling about the cause (specific health issue) in the CSR advertising message (Grau & Folse, 2007; Lafferty & Edmonson, 2000). The measures for cause involvement was obtained from Grau and Folse (2007) (Cronbach’s  $\alpha = .94$ ) and was modified for the current study. Cause

involvement was measured with five items on a seven-point semantic differential scale anchored by: I think that skin cancer is unimportant (1)/is important (7) ( $M=6.34$ ,  $SD=1.05$ ), means nothing to me (1)/means a lot to me (7) ( $M=5.39$ ,  $SD=1.36$ ), is personally irrelevant (1)/relevant to me (7) ( $M=4.60$ ,  $SD=1.82$ ), doesn't matter a great deal to me (1)/does matter a great deal to me (7) ( $M=5.08$ ,  $SD=1.52$ ), and is of no concern to me (1)/is of great concern to me (7) ( $M=5.11$ ,  $SD=1.56$ ). Cause involvement score was determined by averaging the responses to the five items (Cronbach's  $\alpha = .85$ ). The procedures for creating a high and low level of cause involvement were described in the Results section.

### Dependent variables

Table 2 presents the summary of measures that previous studies used, including items and Cronbach's  $\alpha$ .

Table 2: Measures in previous studies

Measures	Authors	Items	Cronbach's $\alpha$
<b>Dependent variables</b>			
Cause involvement	Grau & Folse (2007)	1. is unimportant/is important 2. means nothing to me/means a lot to me 3. is irrelevant to me/ is personally relevant 4. doesn't matter a great deal to me/does matter a great deal to me 5. is of no concern to me/ is of great concern to me (7-point scale)	.94
Attitudes toward brand	Nan & Heo (2007)	1. dislike/like 2. unfavorable/favorable 3. negative/positive (7-point scale)	.93
	Tangari, Folse & Kees (2010)	1. negative/positive 2. unfavorable/favorable 3. bad/good (7-point scale)	.98
Campaign participation intention	Grau & Folse (2007)	1. I would consider purchasing this brand in order to provide help to the cause. 2. I would be willing to participate in this	.83

		campaign. 3. It is likely that I would contribute to this cause by getting involved in this campaign.	
Attitude toward the behavior	Hillhouse, Adler, Drinnon, and Turrisi (1997)	Attitudes toward the behaviors (sunbathing, tanning salon use, and sunscreen use) 1. disagreeable/ agreeable 2. dull/ interesting 3. boring/ stimulating 4. unpleasant/ pleasant 5. bad/ good 6. useless/ useful 7. disadvantageous/ advantageous 8. unhealthy/ healthy 9. not relaxing/ relaxing (7-point scales)	.88-.96
Perceived behavioral control	Hillhouse, Adler, Drinnon, and Turrisi (1997)	1. In the next week, how easy/difficult would it be for you to sunbathe? 2. In the next week, how easy/difficult would it be for you to use tanning salon? 3. In the next week, how easy/difficult would it be for you to use sunscreen?	Each item was analyzed individually.
Behavioral intention	Hillhouse, Adler, Drinnon, and Turrisi (1997)	1. I intend to sunbathe within the next week. 2. I intend to go to tanning salon within the next week. 3. I intend to use sunscreen when out in the sun.	Each item was analyzed individually.

### Consumers' responses to marketing perspectives

**Attitudes toward the brand.** The measure for attitudes toward the brand was modified from Nan and Heo (2007), and Tangari et al. (2010) for the current study (Nan & Heo, 2007,  $\alpha = .93$ ; Tangari et al., 2010,  $\alpha = .98$ ). The attitudes toward brand asked the following question: "My attitude toward the featured brand is..." The attitudes toward the brand was measured with four items on a seven-point semantic differential scale anchored by: dislike (1)/like (7), unfavorable (1)/favorable (7), negative (1)/positive (7), and bad (1)/good (7). Attitudes toward the brand score was determined by averaging the responses to the four items (Cronbach's  $\alpha = .94$ ).

**Attitudes toward non-profit organization.** Attitudes toward the non-profit organization were measured with the following question: “My attitude toward the featured non-profit organization is ...” and was measured similarly with four items on a seven-point semantic differential scale anchored by: dislike (1)/like (7), unfavorable (1)/favorable (7), negative (1)/positive (7), and bad (1)/good (7). The attitudes toward the non-profit organization score was determined by averaging the responses to the four items (Cronbach’s  $\alpha = .97$ ).

**Attitudes toward CRM message.** Attitudes toward the message were measured similarly with four items on a seven-point semantic differential scale anchored by: dislike (1)/like (7), unfavorable (1)/favorable (7), negative (1)/positive (7), and bad (1)/good (7) (Grau & Folse, 2007; Nan & Heo, 2007; Tangari et al., 2010). The attitudes toward the message score was determined by averaging the responses to the four items (Cronbach’s  $\alpha = .97$ ).

**Campaign participation intention.** Campaign participation intention was measured with three questions from Grau and Folse (2007) (Cronbach’s  $\alpha = .83$ ). The three questions were: I would consider purchasing this brand to help the cause; I would be willing to participate in this campaign; It is likely that I would contribute to this cause by getting involved in this campaign. The questions were anchored on a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). The campaign participation intention score was determined by averaging the responses to the three items (Cronbach’s  $\alpha = .86$ ).

**Likelihood to engage on social media.** The measure for likelihood to engagement on social media was measured by the three types of Facebook format: like, share, and comment. Each behavioral intention was measured using a seven-point scale from 1 (strongly disagree) to 7 (strongly agree) for the following three questions: How likely are you to press the ‘like’ button

for this message?; How likely are you to share this message?; How likely are you to comment on this message?" (Cronbach's  $\alpha = .87$ ).

### **Consumers' responses to health communication perspectives**

**Attitudes toward the behavior.** The measure for attitudes toward the behavior developed by Hillhouse, Adler, Drinnon, and Turrisi (1997) (Cronbach's  $\alpha = .88$  to  $.96$ ) was adapted for the current study. Attitudes toward the behaviors (sunbathing, tanning salon use, and sunscreen use) were measured with nine items on a seven-point, semantic differential scale anchored by: disagreeable (1)/agreeable (7), dull (1)/interesting (7), boring (1)/stimulating (7), unpleasant (1)/pleasant (7), bad (1)/good (7), useless (1)/useful (7), disadvantageous (1)/advantageous (7), unhealthy (1)/healthy (7), and not relaxing (1)/relaxing (7) (sunbathing (Cronbach's  $\alpha = .90$ ), tanning bed use (Cronbach's  $\alpha = .94$ ), and sunscreen use (Cronbach's  $\alpha = .83$ )).

**Perceived behavioral control.** The measure for perceived behavioral control developed by Hillhouse et al. (1997) was adapted for the current study. Perceived behavioral control (behavioral control for sunbathing, tanning bed use, and sunscreen use) was measured and with following questions on a seven-point scale from 1 (difficult) to 7 (easy): "In the next week, how difficult/easy would it be for you to sunbathe?" (behavioral control for sunbathing); "In the next week, how difficult/easy would it be for you to use tanning salon?" (behavioral control for tanning bed use); "In the next week, how difficult/easy would it be for you to use sunscreen?" (behavioral control for sunscreen use).

**Behavioral intention to sunbathe.** Behavioral intention to sunbathe was measured with a question on a seven-point scale from Hillhouse et al. (1997). Behavioral intention was

measured using a seven-point scale from 1 (strongly disagree) to 7 (strongly agree) for the following question: “I intend to sunbathe within the next week.”

**Behavioral intention to tanning bed use.** Behavioral intention to tanning bed use was measured with a question on a seven-point scale from Hillhouse et al. (1997). Behavioral intention was measured using a seven-point scale from 1 (strongly disagree) to 7 (strongly agree) for the following question: “I intend to go to tanning salon within the next week.”

**Behavioral intention to sunscreen use.** Behavioral intention to sunscreen use was measured with a question on a seven-point scale from Hillhouse et al. (1997). Behavioral intention was measured using a seven-point scale from 1 (strongly disagree) to 7 (strongly agree) for the following question: “I intend to use sunscreen when out in the sun.”

**Attitudes toward skin cancer.** Attitudes toward skin cancer were measured with five items on a seven-point semantic differential scale anchored by: I think that skin cancer is unimportant (1)/is important (7), means nothing to me (1)/means a lot to me (7), is personally irrelevant (1)/relevant to me (7), doesn't matter a great deal to me (1)/does matter a great deal to me (7), and is of no concern to me (1)/is of great concern to me (7). Attitudes toward skin cancer score was determined by averaging the responses to the five items (Cronbach's  $\alpha = .91$ ).

### **Control variables**

In addition, this study controls for other variables as a covariate. Five variables were considered as a covariate: general attitudes toward CRM, prior knowledge toward CSR or CRM, family history of skin cancer, gender, and number of years living in Kansas.

First, the general attitudes toward CSR or CRM was measured by the questions using a seven-point scale from 1 (strongly disagree) to 7 (strongly agree): I think positively toward a

brand that contains cause-related marketing messages; I prefer to purchase a product that includes a corporate social responsibility mission; When I buy a product, I always look for labels that say a company donates to a non-profit organization or charity when consumers purchase products or services; I prefer a company that supports social cause; I support a company with a corporate social responsibility mission. The general attitudes toward CSR or CRM score was calculated by averaging the responses to the five items (Cronbach's  $\alpha = .75$ ).

Second, prior knowledge of CSR and CRM was measured by asking participants' familiarity with CSR and CRM using two items on a seven-point semantic differential scale anchored by: I've never heard of corporate social responsibility (1)/ I know it well (7); I've never heard of cause-related marketing (1)/I know it well (7). The prior knowledge score was determined by averaging the responses to the two items ( $r = .67$ ).

Third, family history of skin cancer was measured by asking whether anyone had in their family ever had skin cancer or melanoma (0=Yes, 1=No). Fourth, gender was measured (0=male, 1=female). Finally, in terms of number of years living in Kansas, participants were asked the following question: "How many years have you been living in Kansas?"

### **Data analysis**

To test hypotheses and research questions, path analysis using AMOS 24, structural equation modeling (SEM) program was conducted. Two path models were analyzed: a path model of effects of CRM on marketing perspectives and a path model of effects of CRM on health communication perspectives.

**Consumers' responses to marketing perspectives.**

H1 examined the main effect of brand-cause fit on attitudes toward brand (H1a), attitudes toward non-profit organization (H1b), attitudes toward CRM message (H1c), a campaign participation intention (H1d), and engagement on social media (H1e). To test H1, brand-cause fit was dummy coded (0= low brand-cause fit, 1= high brand-cause fit) for path analysis.

H2 examined the main effect of cause proximity on attitudes toward brand (H2a), attitudes toward non-profit organization (H2b), attitudes toward CRM message (H2c), a campaign participation intention (H2d), and engagement on social media (H2e). To test H2, cause proximity was dummy coded (0= local, 1= international) for path analysis.

H3 examined the main effect of cause involvement on attitudes toward brand (H3a), attitudes toward non-profit organization (H3b), attitudes toward CRM message (H3c), a campaign participation intention (H3d), and engagement on social media (H3e). To test H3, cause involvement was mean-centered for path analysis.

H4 examined whether there are two-way or three-way interactions among brand-cause fit, cause proximity and level of involvement with cause on attitudes toward brand (H4a), attitudes toward non-profit organization (H4b), attitudes toward CRM message (H4c), a campaign participation intention (H4d), and engagement on social media (H4e). Path analysis was used to test H4.

**Consumers' responses to health communication perspectives.**

RQ1 examined whether there is a main effect of brand-cause fit on attitudes toward the behavior (RQ1a), behavioral control (RQ1b), behavioral intention (RQ1c) and attitudes toward

skin cancer (RQ1d). To test RQ1, brand-cause fit was dummy coded (0= low brand-cause fit, 1= high brand-cause fit) for path analysis.

RQ2 examined whether there is a main effect of cause proximity on attitudes toward the behavior (RQ2a), behavioral control (RQ2b), behavioral intention (RQ2c) and attitudes toward skin cancer (RQ2d). To test RQ2, cause proximity was dummy coded (0= local, 1= international) for path analysis.

RQ3 examined whether there is a main effect of level of cause involvement on attitudes toward the behavior (RQ3a), behavioral control (RQ3b), behavioral intention (RQ3c) and attitudes toward skin cancer (RQ2d). To test RQ3, cause involvement was mean-centered for path analysis.

RQ4 examined whether there are any interaction effects among brand-cause fit, cause proximity and individual's level of involvement with a cause, in terms of attitudes toward the behavior (RQ4a), behavioral control (RQ4b), behavioral intention (RQ4c) and attitudes toward skin cancer (RQ4d). Path analysis was used to test RQ4.

## Chapter 4

### Results

#### Participants

A total of 300 undergraduate students at the University of Kansas participated in this experiment. Participant's ages ranged from 18 to 31, with an average age of 19.66 years old ( $SD = 1.26$ ). Female respondents (70.7%,  $n = 212$ ) outnumbered male participants (29.3%,  $n = 88$ ). The majority were sophomores (41.3%,  $n=124$ ), followed by freshman (31%,  $n=93$ ), juniors (23.7 %,  $n=71$ ) and seniors (4%,  $n=12$ ). The majority self-identified as Caucasian (82%,  $n=246$ ), followed by Asian (5%,  $n=15$ ), Latino or Hispanic (4.7%,  $n=14$ ) and African American (2%,  $n=6$ ). Table 3 shows the participants' characteristics: gender, age, college year, and race.

Table 3: Sample characteristics

Variable		N	%
Gender	Female	212	70.7%
	Male	88	29.3%
Age	18	43	14.3%
	19	98	32.7%
	20	102	34.0%
	21	47	15.7%
	22	7	2.3%
	23	1	.3%
	26	1	.3%
	31	1	.3%
College year	Freshman	93	31.0%
	Sophomore	124	41.3%
	Junior	71	23.7%
	Senior	12	4.0%
Race	Caucasian	246	82.0%
	Asian	15	5.0%
	Latino or Hispanic	14	4.7%
	African American	6	2.0%
	American Indian or Alaska native	3	1.0%
	Native Hawaiian or Other Pacific Islander	1	.3%
	Other	15	5.0%

## Manipulation check

**Brand-cause fit.** To ensure that brand-cause fit was successfully manipulated, participants were asked to indicate their opinion of the following statements on a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree): 1) “I think that the [product name depending on the experimental condition] donating to [the name of the non-profit organization depending on the experimental condition] represents a good match between the product and the cause; 2) “I think that donations to [the name of the non-profit organization depending on the experimental condition] are appropriate for [product name]” (Nan & Heo, 2007).

An Independent Samples *t*-test indicated a significant effect for brand-cause fit. For the first question: “I think that the [product name depending on the experimental condition] donating to [the name of the non-profit organization depending on the experimental condition] represents a good match between the product and the cause,” participants who were exposed to the high brand-cause fit message responded that the product donating to the non-profit organization represents a good match between the product and the cause ( $M=5.57$ ,  $SD= 1.20$ ) and participants who were exposed to the low brand-cause fit message responded that the product donating to the non-profit organization represents a good match between the product and the cause ( $M=3.41$ ,  $SD=1.68$ ),  $t(298) = -12.86$ ,  $p < .001$ .

For the second question: “I think that donations to [the name of the non-profit organization depending on the experimental condition] are appropriate for [product name],” participants who were exposed to the high brand-cause fit message responded that donations to the non-profit organization are appropriate for the product ( $M=5.59$ ,  $SD= 1.36$ ) and participants who were exposed to the low brand-cause fit message responded that donations to the non-profit

organization are appropriate for the product ( $M=3.62$ ,  $SD=1.58$ ),  $t(298) = -11.55$ ,  $p < .001$ . Thus, the manipulation for the brand-cause fit message was successful.

**Cause proximity.** To check whether cause proximity was successfully manipulated, participants were asked to indicate their opinion of the two following statements on a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree): “The skin cancer message discussed what happened in Kansas” and “The skin cancer message discussed what happened in South Africa.”

An Independent Samples  $t$ -test indicated a significant effect for cause proximity. For the first question: “The skin cancer message discussed what happened in Kansas,” participants who were exposed to the local proximity message responded that the message they were exposed to discussed what happened in Kansas ( $M = 4.44$ ,  $SD = 1.65$ ) and participants who were exposed to the international proximity message responded that the message they were exposed to discussed what happened in Kansas ( $M = 2.28$ ,  $SD = 1.44$ ),  $t(298) = 12.09$ ,  $p < .001$ .

For the second question: “The skin cancer message discussed what happened in South Africa,” participants who were exposed to the local proximity message responded that the message they were exposed to discussed what happened in South Africa ( $M = 2.72$ ,  $SD = 1.68$ ) and participants who were exposed to the international proximity message responded that the message they were exposed to discussed what happened in South Africa ( $M = 5.73$ ,  $SD = 1.37$ ),  $t(298) = -17.06$ ,  $p < .001$ . Thus, the manipulation for the cause proximity message was successful.

## Descriptive statistics

**Dependent variables.** In terms of five dependent variables in the marketing perspectives, average of attitudes toward brand, determined by averaging the four items, was 4.92 on a 7-point scale ( $SD=1.22$ ) (Cronbach's  $\alpha= .94$ ). Average of attitudes toward non-profit organization, calculated as average of the four items, was 5.92 on a 7-point scale ( $SD=1.09$ ) (Cronbach's  $\alpha= .97$ ). Average of attitudes toward CRM message, determined by the four items, was 5.16 on a 7-point scale ( $SD=1.36$ ) (Cronbach's  $\alpha= .97$ ). Average of campaign participation intention, calculated as average of the three items, was 4.44 on a 7-point scale ( $SD=1.34$ ) (Cronbach's  $\alpha= .86$ ). Average of engagement on social media, determined by three items, was 3.01 on a 7-point scale ( $SD=1.59$ ) (Cronbach's  $\alpha= .87$ ).

In terms of dependent variables in health perspectives, the average of attitudes toward behavior, determined by averaging the nine items on a 7-point scale, was as follows: attitudes toward sunbathing ( $M=4.36$ ,  $SD=1.21$ ) (Cronbach's  $\alpha= .90$ ), attitudes toward tanning bed use ( $M=2.79$ ,  $SD=1.44$ ) (Cronbach's  $\alpha= .94$ ), attitudes toward sunscreen use ( $M=5.52$ ,  $SD=.94$ ) (Cronbach's  $\alpha= .83$ ). When retaining only female data, there were no changes in the average responses of attitudes toward sunbathing ( $M=4.46$ ,  $SD=1.16$ ), attitudes toward tanning bed use ( $M=2.85$ ,  $SD=1.47$ ), attitudes toward sunscreen use ( $M=5.57$ ,  $SD=.92$ ).

Average score of perceived behavioral control for sunbathing was 3.70 ( $SD=2.04$ ) on a 7-point scale (1= difficult to 7 = easy). Average score of perceived behavioral control for tanning bed use was 4.55 ( $SD=2.38$ ) on 7-point scale (1= difficult to 7 = easy). Average score of behavioral control for sunscreen use was 5.07 ( $SD=1.92$ ) on 7-point scale (1= difficult to 7 = easy).

Average score of behavioral intention to sunbathe was 2.66 ( $SD=1.79$ ) on a 7-point scale (1 = strongly disagree to 7 = strongly agree). Average score of behavioral intention to tanning bed use was 2.38 ( $SD=1.99$ ) on a 7-point scale (1 = strongly disagree to 7 = strongly agree). Average score of behavioral intention to sunscreen use was 3.64 ( $SD=1.97$ ) on a 7-point scale (1 = strongly disagree to 7 = strongly agree).

Average of attitudes toward skin cancer, calculated as average of five items, was 5.49 on a 7-point scale ( $SD=1.21$ ) on a 7-point semantic differential scale anchored by 1 (e.g., unimportant, no concern, etc.) to 7 (e.g., important, a great deal of concern, etc.) (Cronbach's  $\alpha=.91$ ) (See Table 4).

### **Control variables**

This study controls five variables as a covariate: 1) general attitudes toward CRM, 2) prior knowledge toward CSR or CRM, 3) family history of skin cancer, 4) gender, and 5) number of years living in Kansas. First, the general attitudes toward CSR or CRM was measured by five questions using a seven-point scale from 1 (strongly disagree) to 7 (strongly agree): I think positively toward a brand that contains cause-related marketing messages ( $M=5.48$ ,  $SD=1.23$ ); I prefer to purchase a product that includes a corporate social responsibility mission ( $M=5.05$ ,  $SD=1.26$ ); When I buy a product, I always look for labels that say a company donates to a non-profit organization or charity when consumers purchase products or services ( $M=3.27$ ,  $SD=1.53$ ); I prefer a company that supports social cause ( $M=5.13$ ,  $SD=1.28$ ); I support a company with a corporate social responsibility mission ( $M=5.33$ ,  $SD=1.22$ ). The general attitudes toward CSR or CRM score was determined by averaging the responses to the five items.

As shown in Table 4, the average of general attitudes toward CRM, calculated as an average of the five items, was 4.85 on a 7-point scale ( $SD = .93$ ) (Cronbach's  $\alpha = .75$ ).

Second, prior knowledge of CSR and CRM was measured by asking participants' familiarity with CSR and CRM using two items on a seven-point semantic differential scale anchored by: I've never heard of corporate social responsibility (1)/ I know it well (7) ( $M = 4.12$ ,  $SD = 1.93$ ); I've never heard of cause-related marketing (1)/I know it well (7) ( $M = 4.55$ ,  $SD = 1.89$ ). The prior knowledge score was determined by averaging the responses to the two items. As shown in Table 4, average of prior knowledge toward CSR or CRM, determined by averaging the two items, was 4.33 on a 5-point scale ( $SD = 1.74$ ) ( $r = .67$ ).

Third, family history of skin cancer was measured by asking whether anyone in their family ever had skin cancer or melanoma (0=Yes, 1=No). About half of them responded yes (50.3%,  $n = 151$ ) and half of them responded no (49.7%,  $n = 149$ ). Finally, in terms of number of years living in Kansas, participants were asked the following question: "How many years have you been living in Kansas?" The number of years the participants have lived in Kansas ranged from 0 to 31, with an average year of 11.91 ( $SD = 8.61$ ). Table 4 presents the summary of descriptive statistics. Table 5 presents the summary of correlations among all variables.

Table 4: Descriptive statistics (1= lowest, 7=highest)

<b>Variables</b>	<b>Mean (SD)</b>
<i>Dependent variables (marketing perspectives)</i>	
Attitudes toward brand	4.92 (1.22)
Attitudes toward non-profit organization	5.92 (1.09)
Attitudes toward CRM message	5.16 (1.36)
Campaign participation intention	4.44 (1.34)
Engagement on social media	3.01 (1.59)
<i>Dependent variables (health communication perspectives)</i>	
Attitudes toward the behavior (sunbathing)	4.36 (1.21)
Attitudes toward the behavior (tanning bed use)	2.79 (1.44)
Attitudes toward the behavior (sunscreen use)	5.52 (.94)
Behavioral control (sunbathing)	3.70 (2.04)
Behavioral control (tanning bed use)	4.55 (2.38)
Behavioral control (sunscreen use)	5.07 (1.92)
Behavioral intention (sunbathing)	2.66 (1.79)
Behavioral intention (tanning bed use)	2.38 (1.99)
Behavioral intention (sunscreen use)	3.64 (1.97)
Attitudes toward skin cancer	5.49 (1.21)
<i>Control variables</i>	
General attitudes toward CRM	4.85 (.93)
Prior knowledge toward CSR or CRM	4.33 (1.74)

Table 5: Correlations among all variables

	BF	CP	CI	GA	PK	G	FH	LK	A1	A2	A3	BC 1	BC 2	BC 3	IN 1	IN 2	IN 3	AS C
<b>BF</b>	1																	
<b>CP</b>	0	1																
<b>CI</b>	.04	.03	1															
<b>GA</b>	-.04	-.09	.26**	1														
<b>PK</b>	0	-.06	.15**	.30**	1													
<b>G</b>	.02	.10	-.14*	.10	.02	1												
<b>FH</b>	.09	.06	.38**	-.08	-.08	-.15**	1											
<b>LK</b>	.05	-.01	.01	-.04	-.05	-.01	.01	1										
<b>A1</b>	-.04	-.08	.08	.10	.07	.13*	-.08	-.04	1									
<b>A2</b>	.05	.07	.07	0	.03	.06	.07	.05	.49**	1								
<b>A3</b>	-.02	.04	.26**	.19**	.07	.09	.01	-.01	.05	-.22**	1							
<b>BC 1</b>	-.03	.05	.02	-.08	.01	.04	.04	.01	.15**	.11	-.07	1						
<b>BC 2</b>	-.01	.08	.03	-.02	.07	.25**	-.12*	.11	.18**	.26**	-.09	.22**	1					
<b>BC 3</b>	-.01	.05	.02	.03	-.02	.04	.03	.10	-.11	-.10	.19*	.25**	.18**	1				
<b>IN 1</b>	-.03	.07	.03	.06	.02	.14*	-.03	-.08	.35**	.24**	-.04	.38**	.09	-.08	1			
<b>IN 2</b>	.02	.06	0	.01	.04	.22**	.01	-.08	.35**	.51**	0	.10	.27**	-.14*	.48**	1		
<b>IN 3</b>	.05	-.02	.17**	.11	.14**	.16**	.06	.04	-.04	-.12*	.28**	-.03	-.12*	.11	.20**	.11	1	
<b>AS C</b>	-.03	.03	.79**	.25**	.11	.15*	-.39**	.07	.15*	-.08	.28**	-.04	.07	.04	.09	.04	.22**	1

BF=brand-cause fit, CP=cause proximity, CI=cause involvement, GA=general attitudes toward CRM, PK=prior knowledge toward CRM, G=gender, FH=family history, LK=number of years living in Kansas, A1=attitudes toward sunbathing, A2=attitudes toward tanning bed use, A3=attitudes toward sunscreen use, BC1=behavioral control (sunbathing), BC2=behavioral control (tanning bed use), BC3=behavioral control (sunscreen use), IN1=intention (sunbathing), IN2=intention (tanning bed use), IN3=intention (sunscreen use), ASC=attitudes toward skin cancer

### **Testing of hypotheses and research questions**

To test hypotheses and research questions, path analysis using AMOS 24, structural equation modeling (SEM) program was conducted. Two path models were analyzed: a path model of effects of CRM on marketing perspectives and a path model of effects of CRM on health communication perspectives. The path models included independent variables (brand-cause fit, cause proximity, and cause involvement), interaction variables, control variables (general attitudes toward CRM, prior knowledge toward CSR or CRM, family history of skin cancer, gender, and number of years living in Kansas), and dependent variables.

Continuous variables such as cause involvement, general attitudes toward CRM, prior knowledge of CSR or CRM, and number of years living in Kansas were mean-centered in order to minimize the multicollinearity problem (Aiken and West, 1991).

**Consumer responses in marketing perspectives.** Table 6 shows the results of path analysis of a model for marketing perspectives.

Table 6: Path analysis of a model for marketing perspectives

	<b>Attitudes toward Brand</b>	<b>Attitudes toward Non-profit organization</b>	<b>Attitudes toward CRM</b>	<b>Campaign participation intention</b>	<b>Engagement on social media</b>
	$\beta$	$\beta$	$\beta$	$\beta$	B
<b><i>Independent variables</i></b>					
Brand-cause fit	.27 ***	-.01	.34***	.26***	-.09
Cause proximity	.02	-.09	.11	.02	-.17*
Cause involvement	-.30**	-.27**	-.18	-.40***	-.29**
Brand-cause fit X Cause proximity	-.02	.08	-.11	-.05	.03
Brand-cause fit X Cause involvement	.11	.02	.02	-.00	-.12
Cause proximity X Cause involvement	.06	.10	.00	.14	.11
Fit X Proximity X Cause Involvement	-.11	-.05	-.04	-.06	-.05
<b><i>Control variables</i></b>					
General attitudes toward CRM	.24***	.21***	.27***	.23***	.03
Prior knowledge toward CSR or CRM	-.06	.10	.00	-.03	.01
Gender	-.05	.00	-.03	.01	.01
Family history	.05	.02	.02	.09	.10
Number of years living in Kansas	.05	.12*	-.01	-.03	-.05
R <sup>2</sup>	.19	.17	.20	.24	.14

N=300

 $\beta$  values are standardized regression coefficients, \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

## **H1: Brand-cause fit**

H1 examined the main effect of brand-cause fit on attitudes toward brand (H1a), attitudes toward non-profit organization (H1b), attitudes toward CRM message (H1c), campaign participation intention (H1d), and engagement on social media (H1e).

H1 predicted that participants exposed to a CRM message with high brand-cause fit are more likely to exhibit a more positive attitude toward brand (H1a), a more positive attitude toward non-profit organization (H1b), a more positive attitude toward CRM message (H1c), a higher campaign participation intention (H1d), and a higher engagement (like, share and comment) on social media (H1e) than a CRM message with low brand-cause fit. Path analysis was used to test these hypotheses and revealed significant main effects of brand-cause fit on attitudes toward brand (H1a) ( $\beta=.27, p<.001$ ), attitudes toward CRM message (H1c) ( $\beta=.34, p<.001$ ), and campaign participation intention (H1d) ( $\beta=.26, p<.001$ ). That is, the brand-cause fit coefficients were positive and statistically significant, indicating that attitudes toward brand (H1a), attitudes toward CRM message (H1c), and campaign participation intention (H1d) were more favorable and positive when participants were exposed to a CRM message with high brand-cause fit than when exposed to a CRM message with low brand-cause fit. Thus, H1a, H1c and H1d were supported. However, main effects of brand-cause fit on attitudes toward non-profit organization (H1b), and engagement on social media (H1e) were not significant. Thus, H1b, and H1e were not supported (See Figure 5).

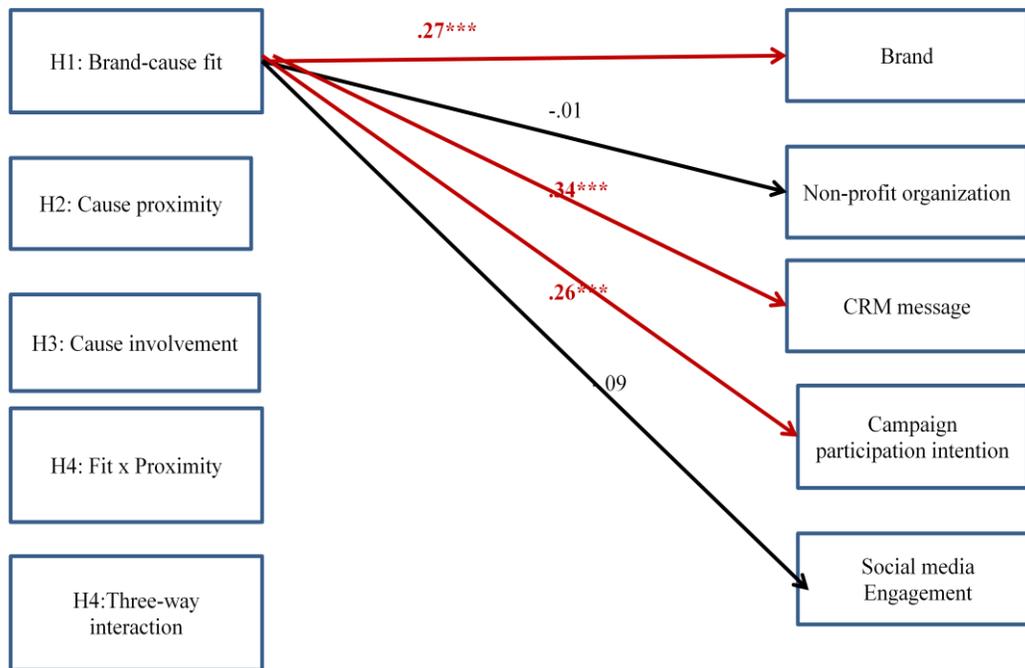


Figure 5: Main effects of brand-cause fit

## H2: Cause proximity

H2 examined the main effect of cause proximity on attitudes toward brand (H2a), attitudes toward non-profit organization (H2b), attitudes toward CRM message (H2c), campaign participation intention (H2d), and engagement on social media (H2e).

H2 predicted that participants exposed to a CRM message with a local proximity are more likely to exhibit a more positive attitude toward brand (H2a), a more positive attitude toward non-profit organization (H2b), a more positive attitude toward CRM message (H2c), a higher campaign participation intention (H2d), and a higher engagement (like, share and comment) on social media (H2e) than a CRM message with an international cause. Path analysis was used to test these hypotheses and revealed a significant main effect of cause proximity on engagement on social media (H2e) ( $\beta = -.17, p < .05$ ). That is, the cause proximity coefficient was negative and statistically significant, indicating that engagement on social media (H2e) was

higher when participants were exposed to a CRM message with a local cause than when exposed to a CRM message with an international cause. Thus, H2e was supported. However, main effects of cause proximity on attitudes toward brand (H2a), attitudes toward non-profit organization (H2b), attitudes toward CRM message (H2c), and campaign participation intention (H2d), were not significant. Thus, H2a, H2b, H2c, and H2d were not supported (See Figure 6).

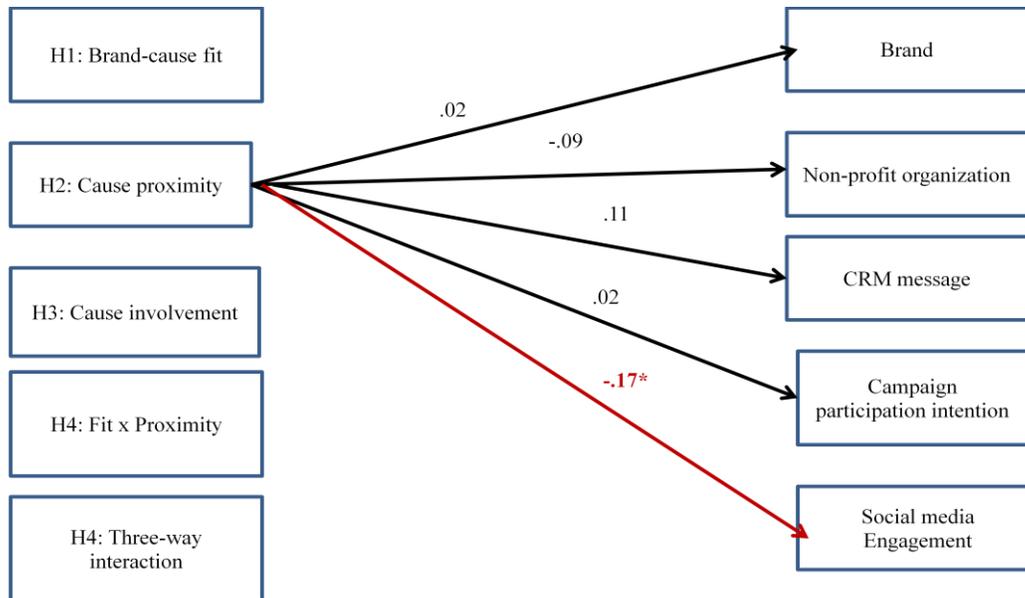


Figure 6: Main effects of cause proximity

### H3: Cause involvement

H3 examined the main effect of cause involvement on attitudes toward brand (H3a), attitudes toward non-profit organization (H3b), attitudes toward CRM message (H3c), campaign participation intention (H3d), and engagement on social media (H3e).

H3 predicted that cause involvement will be positively associated with attitudes toward brand (H3a), attitudes toward non-profit organization (H3b), attitudes toward CRM message (H3c), campaign participation intention (H3d) and engagement (like, share and comment) on social media (H3e). That is, participants more involved with the cause are more likely to exhibit

a more positive attitude toward brand (H3a), a more positive attitude toward non-profit organization (H3b), a more positive attitude toward CRM message (H3c), a higher campaign participation intention (H3d), and a higher engagement (like, share and comment) on social media (H3e) than those less involved with the cause.

Path analysis was used to test these hypotheses and revealed significant main effects of cause involvement on attitudes toward brand (H3a) ( $\beta = -.30, p < .01$ ), attitudes toward non-profit organization (H3b) ( $\beta = -.27, p < .01$ ), campaign participation intention (H3d) ( $\beta = -.40, p < .001$ ), and engagement on social media (H3e) ( $\beta = -.29, p < .01$ ). That is, the cause involvement coefficients were negative and statistically significant, indicating that attitudes toward brand (H3a), attitudes toward non-profit organization (H3b), campaign participation intention (H3d), and engagement on social media (H3e) were negatively associated with the level of cause involvement. These results contradict the direction of the hypotheses. Moreover, a main effect of cause involvement on attitudes toward CRM message (H3c) was not significant. Thus, H3a, H3b, H3c, H3d, and H3e were not supported (See Figure 7).

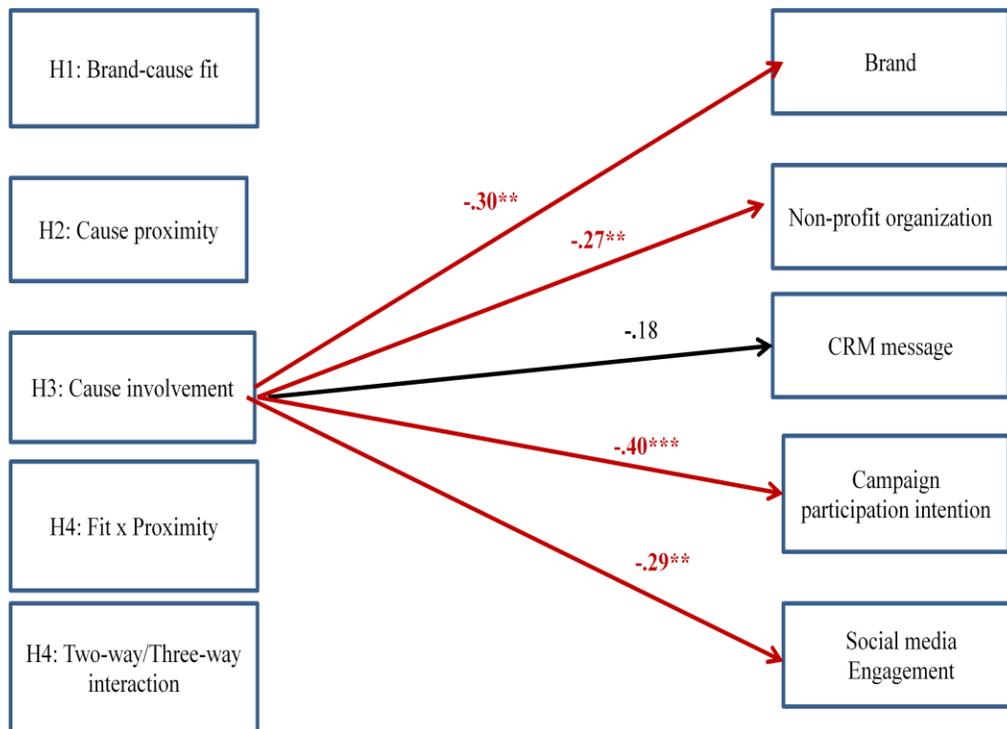


Figure 7: Main effects of cause involvement

#### H4: Interaction effects among brand-cause fit, cause proximity and cause involvement

H4 examined whether there are two-way interactions between brand-cause fit and cause proximity on attitudes toward brand, attitudes toward non-profit organization, attitudes toward CRM message, campaign participation intention, and engagement on social media. H4 also examined whether there are three-way interactions among brand-cause fit, cause proximity and level of involvement with cause on attitudes toward brand, attitudes toward non-profit organization, attitudes toward CRM message, campaign participation intention, and engagement on social media. Path analyses were used to test these hypotheses and revealed no significant interaction effects among them: attitudes toward brand (H4a) attitudes toward non-profit organization (H4b), attitudes toward CRM message (H4c), campaign participation intention (H4d), and engagement on social media (H4e). Thus, H4a, H4b, H4c, H4d, and H4e were not supported (See Figure 8 and 9).

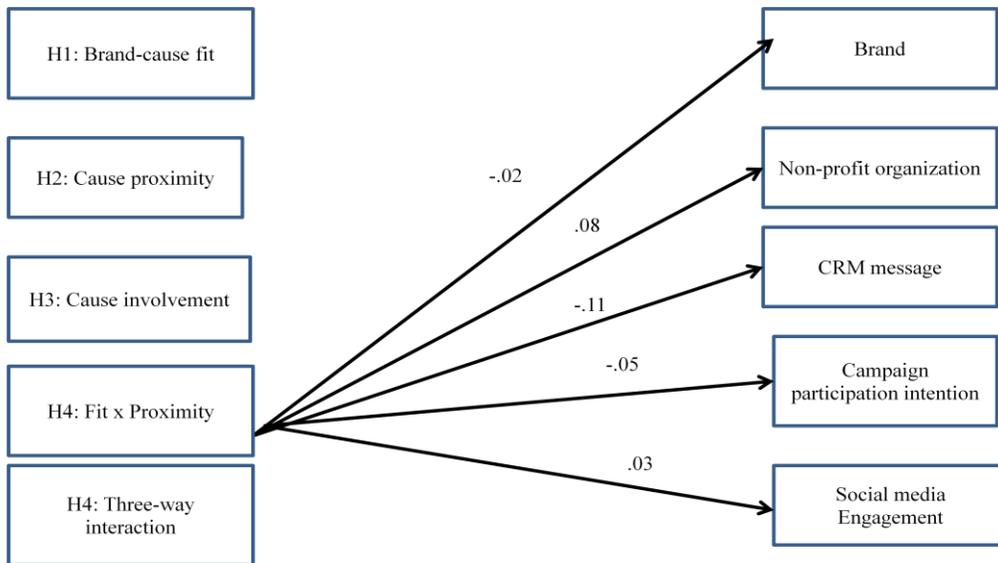


Figure 8: Two-way interaction effects between brand-cause fit and cause proximity

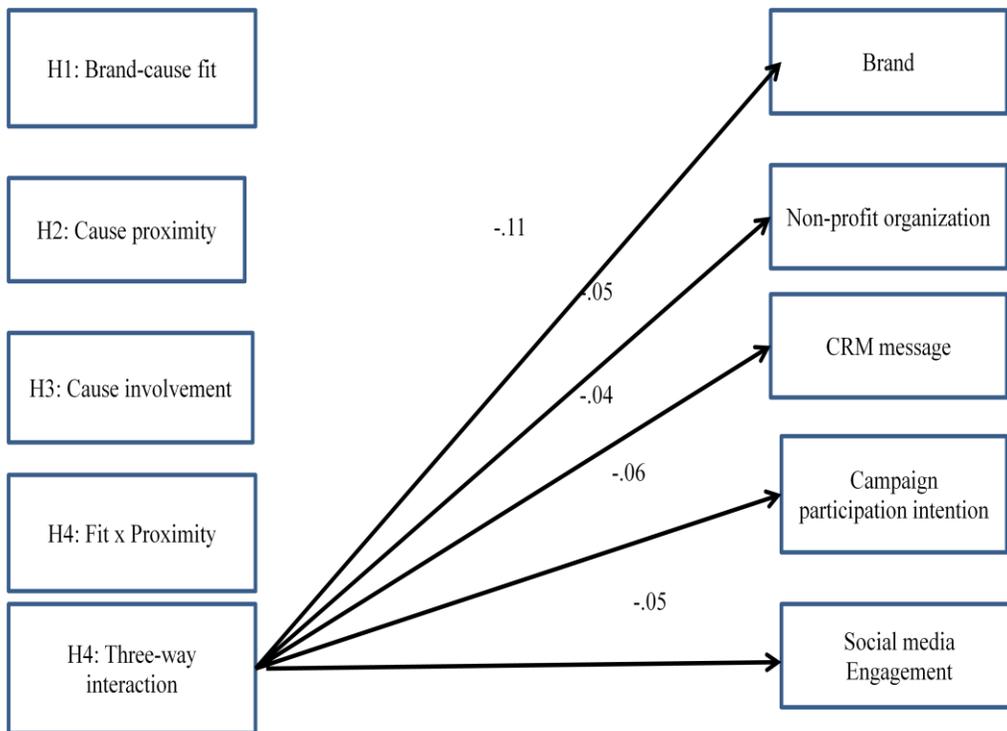


Figure 9: Three-way interaction effects among brand-cause fit, cause proximity and cause involvement

**Consumers' responses to health communication perspectives.** Table 7 shows the results of path analysis of a model for health communication perspectives.

Table 7: Path analysis of a model for health communication perspectives

	ATT 1	ATT2	ATT3	CONT 1	CONT 2	CONT 3	INT1	INT2	INT3	ATT SC
	$\beta$	$\beta$	$\beta$	B	$\beta$	$\beta$	B	$\beta$	B	B
<b><i>Independent variables</i></b>										
Brand-cause fit	-.06	.06	-.08	-.01	.00	-.01	-.05	.04	.04	-.05
Cause proximity	-.11	.08	-.10	-.05	.09	.04	-.11	.05	-.03	-.08
Cause involvement	-.13	.04	-.32**	-.02	.02	.15	-.06	-.02	-.16	-.75***
Brand-cause fit X Cause proximity	.06	-.03	.12	-.02	-.04	.00	.05	-.04	-.00	.12*
Brand-cause fit X Cause involvement	.11	-.13	.06	-.07	-.01	-.27 *	.01	-.07	-.10	-.07
Cause proximity X Cause involvement	.13	.09	.10	-.03	-.04	-.18	.08	.07	.01	.05
Fit X Proximity X Involvement	-.11	.01	-.13	.12	.09	.26 *	-.01	.06	.06	.06
<b><i>Control variables</i></b>										
General attitudes toward CRM	.05	.00	.11	-.09	-.06	.06	.03	-.02	.02	.05
Prior knowledge toward CSR or CRM	.05	.06	.01	.02	.09	-.03	.01	.05	.12 *	-.01
Gender	.14 *	.06	.07	-.04	.24***	.02	.15*	.22***	.15**	.03
Family history	-.03	.04	.15 *	-.04	-.11	.04	.01	.03	.16 *	-.09 *
Number of years living in Kansas	-.03	.06	-.02	.02	.13 *	.10	-.08	-.07	.05	.07

R <sup>2</sup>	.05	.04	.11	.02	.10	.04	.04	.06	.09	.66
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ATT1= Attitudes toward sunbathing, ATT2= Attitudes toward tanning bed use, ATT3= Attitudes toward sunscreen use, CONT1=behavioral control (sunbathing), CONT2=behavioral control (tanning bed use), CONT3=behavioral control (sunscreen use), INT1=behavioral intention to sunbathing, INT2= behavioral intention to tanning bed use, INT3=behavioral intention to sunscreen use, ATTSC=Attitudes toward skin cancer

N=300

$\beta$  values are standardized regression coefficients, \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

### **RQ1: Brand-cause fit**

Research question 1 examined whether there is a main effect of brand-cause fit on attitudes toward the behavior (attitudes toward sunbathing, attitudes toward tanning bed use, and attitudes toward sunscreen use) (RQ1a), behavioral control (behavioral control for sunbathing, tanning bed use and sunscreen use) (RQ1b), behavioral intention (sunbathing, tanning bed use, and sunscreen use) (RQ1c) and attitudes toward skin cancer (RQ1d). The path analysis found no significant main effects of brand-cause fit on attitudes toward the behavior (attitudes toward sunbathing, attitudes toward tanning bed use, attitude toward sunscreen use) (RQ1a), perceived behavioral control (behavioral control for sunbathing, tanning bed use, and sunscreen use) (RQ1b), behavioral intention (sunbathing, tanning bed use, and sunscreen use) (RQ1c) and attitudes toward skin cancer (RQ1d). That is, the result did not reveal differences between a CRM message with high brand-cause fit and a CRM message with low brand-cause fit in terms of attitudes toward the behavior (RQ1a), perceived behavioral control (RQ1b), behavioral intention (RQ1c) and attitudes toward skin cancer (RQ1d) (See Figure 10).

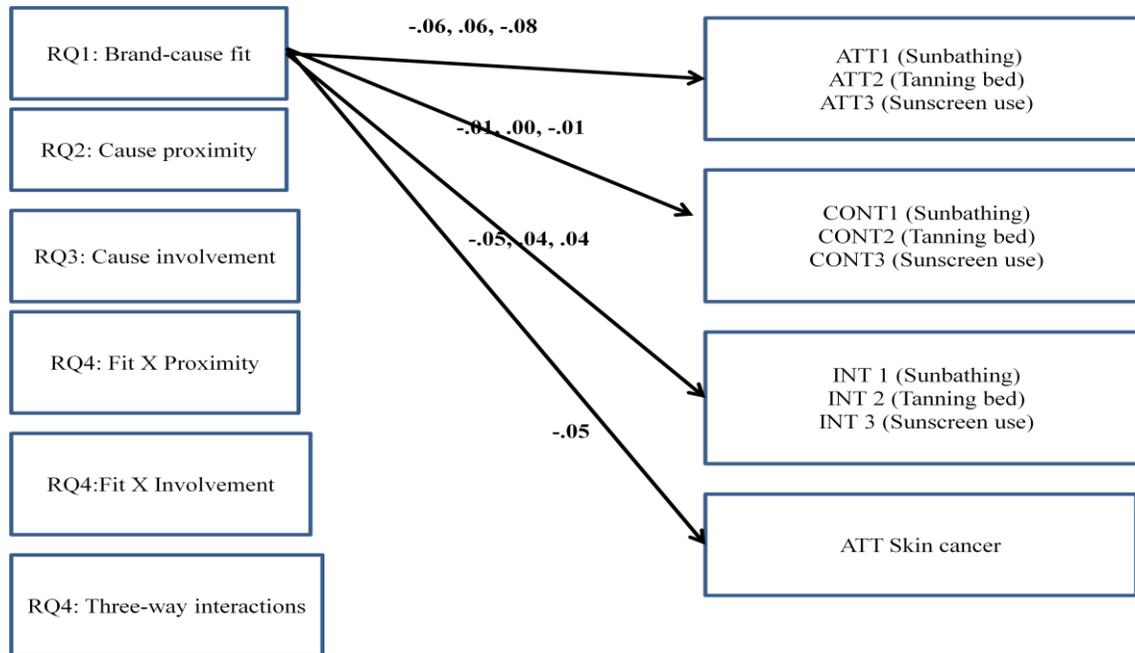


Figure 10: Main effects of brand-cause fit

### RQ2: Cause proximity

Research question 2 examined whether there is a main effect of cause proximity on attitudes toward the behavior (attitudes toward sunbathing, attitudes toward tanning bed use, and attitudes toward sunscreen use) (RQ2a), perceived behavioral control (behavioral control for sunbathing, tanning bed use, and sunscreen use) (RQ2b), behavioral intention (sunbathing, tanning bed use, and sunscreen use) (RQ2c) and attitudes toward skin cancer (RQ2d). The path analysis found no significant main effects of cause proximity on attitudes toward the behavior (attitudes toward sunbathing, attitudes toward tanning bed use, and attitude toward sunscreen use) (RQ2a), perceived behavioral control (behavioral control for sunbathing, tanning bed use, and sunscreen use) (RQ2b), behavioral intention (sunbathing, tanning bed use, and sunscreen use) (RQ2c), and attitudes toward skin cancer (RQ2d). That is, the result did not reveal differences between a CRM message with a local cause and a CRM message with an international cause in

terms of attitudes toward the behavior (RQ2a), behavioral control (RQ2b), behavioral intention (RQ2c) and attitudes toward skin cancer (RQ2d) (See Figure 11).

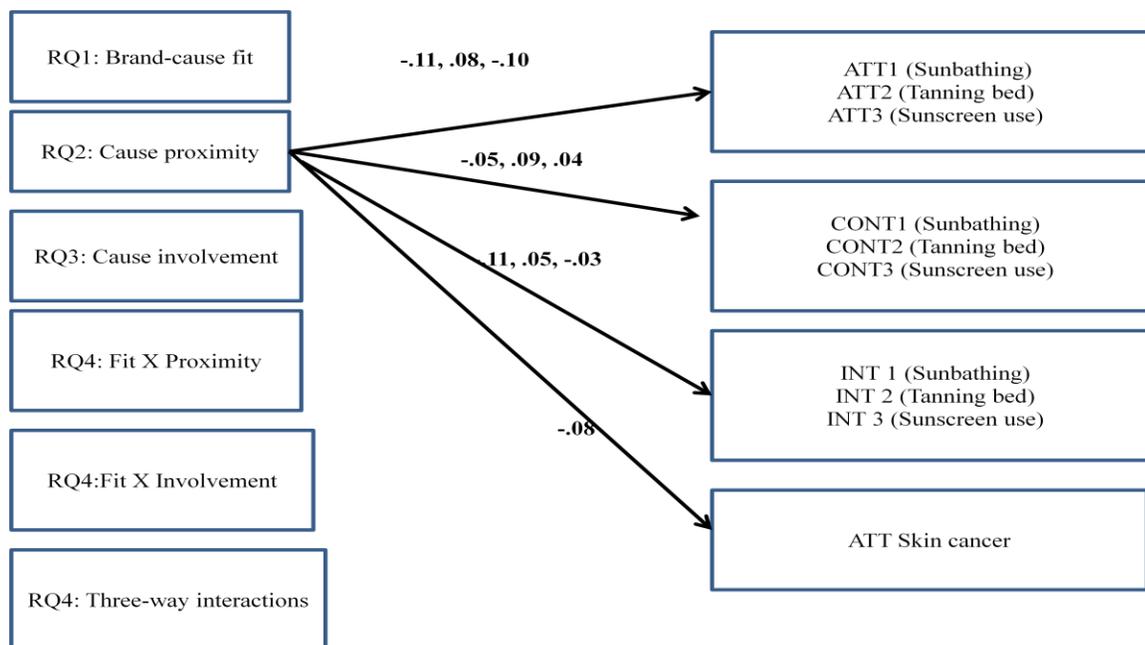


Figure 11: Main effects of cause proximity

### RQ3: Cause involvement

Research question 3 examined whether there is a main effect of level of cause involvement on attitudes toward the behavior (attitudes toward sunbathing, attitudes toward tanning bed use, and attitudes toward sunscreen use) (RQ3a), perceived behavioral control (behavioral control for sunbathing, tanning bed use, and sunscreen use) (RQ3b), behavioral intention (sunbathing, tanning bed use, and sunscreen use) (RQ3c) and attitudes toward skin cancer (RQ3d). Path analysis was used to test these hypotheses and revealed significant main effects of cause involvement on attitudes toward sunscreen use (RQ3a) ( $\beta = -.32, p < .01$ ), and attitudes toward skin cancer (RQ3d) ( $\beta = -.75, p < .001$ ). That is, the cause involvement coefficients were negative and statistically significant, indicating that attitudes toward sunscreen

use (RQ3a), and attitudes toward skin cancer (RQ3d) decrease, when participants' level of cause involvement increases.

However, no main effects of cause involvement on attitudes toward sunbathing, attitudes toward tanning bed use, perceived behavioral control (behavioral control for sunbathing, tanning bed use, and sunscreen use), and behavioral intention (sunbathing, tanning bed use, sunscreen use) were found (See Figure 12).

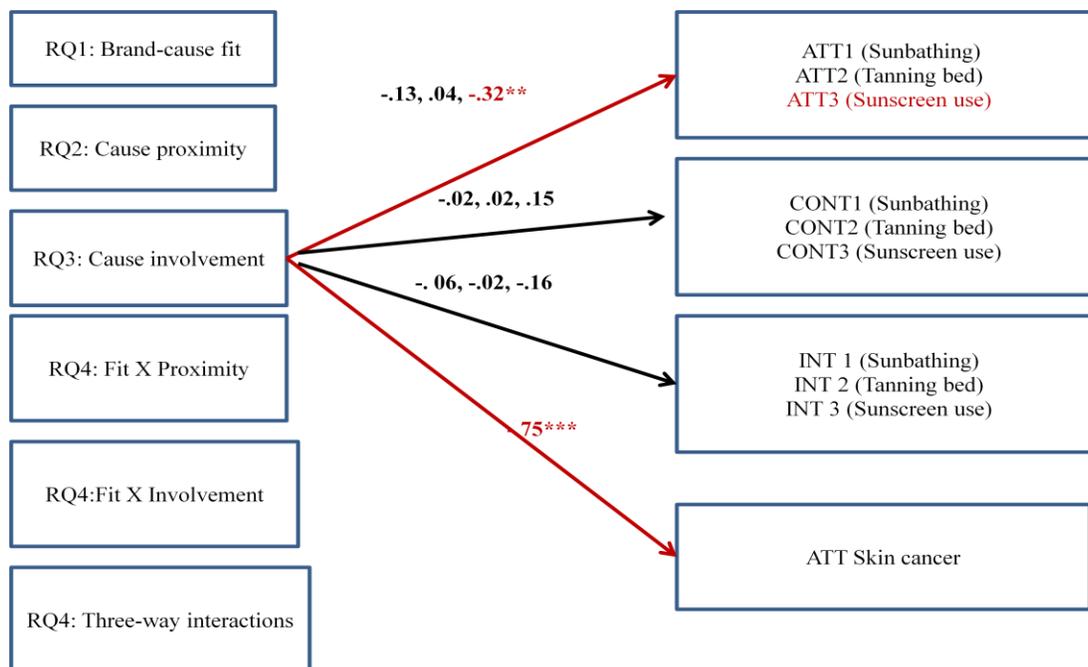


Figure 12: Main effects of cause involvement

#### RQ4: Interaction effects

Research question 4 examined whether there are any interaction effects among brand-cause fit, cause proximity and individual's level of involvement with a cause, in terms of attitudes toward the behavior (attitudes toward sunbathing, attitudes toward tanning bed use, and attitudes toward sunscreen use) (RQ4a), perceived behavioral control (behavioral control for

sunbathing, tanning bed use, and sunscreen use) (RQ4b), behavioral intention (sunbathing, tanning bed use, and sunscreen use) (RQ4c) and attitudes toward skin cancer (RQ4d).

### A three-way interaction among brand-cause fit, cause proximity and cause involvement on perceived behavioral control for sunscreen use

First, this study found a three-way interaction among brand-cause fit, cause proximity and cause involvement on perceived behavioral control for sunscreen use based on a 7-point scale ( $\beta = .26, p < .05$ ) (See Figure 13).

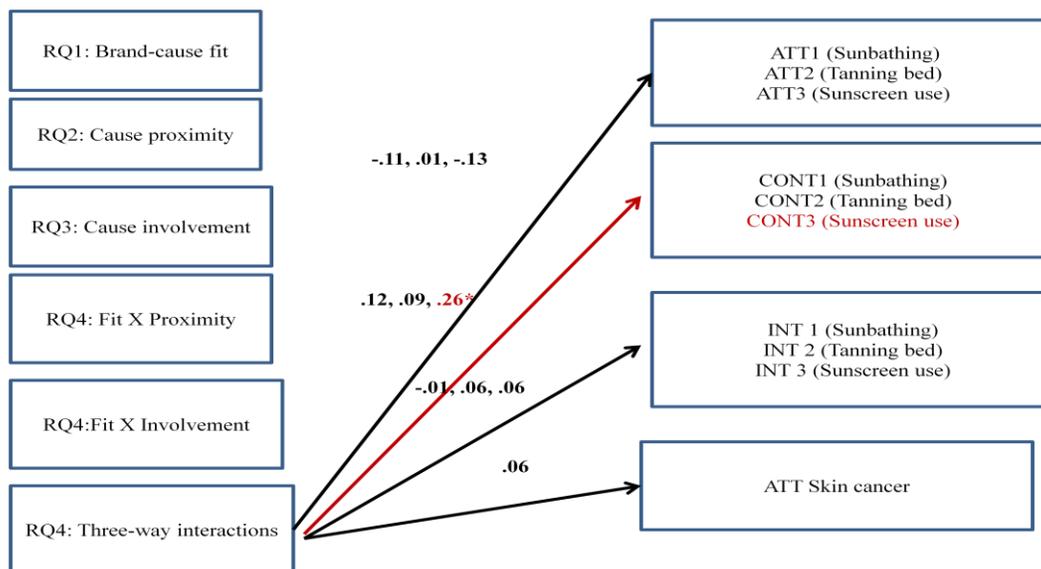


Figure 13: Three-way interaction among brand-cause fit, cause proximity and cause involvement on perceived behavioral control for sunscreen use

To investigate the interaction effect, the cause involvement was computed for cause involvement-low (one standard deviation below the mean), cause involvement-median (mean) and cause involvement-high (one standard deviation above the mean). For the purpose of the study, three different regression equations were used to break down the three-way interaction to

a two-way interaction within the cause involvement-high (one standard deviation above the mean), cause involvement-median and cause involvement-low (one standard deviation below the mean) group. The estimated means were calculated based on the regression equations.

**Low involvement:** A two-way interaction between brand-cause fit and cause proximity on perceived behavioral control for sunscreen use was significant ( $\beta = -.34, p < .05$ ). Figure 14 showed that within low brand-cause fit, a CRM message with a local cause ( $M = 4.99$ ) resulted in a higher level of behavioral control for sunscreen use than a CRM message with an international cause ( $M = 4.65$ ). On the other hand, within high brand-cause fit, a CRM message with an international cause ( $M = 4.86$ ) resulted in a higher level of behavioral control for sunscreen use than a CRM message with a local cause ( $M = 4.21$ ).

Based on the descriptive statistics, it can be concluded that a CRM message with low brand-cause fit and a local cause resulted in the highest level of behavioral control for sunscreen use ( $M = 4.99$ ). On the other hand, a CRM message with high brand-cause fit and a local cause resulted in the lowest level of behavioral control for sunscreen use ( $M = 4.21$ ). Thus, for those who are less involved with the cause, a CRM message with low brand-cause fit and a local cause may be the most effective message to produce a higher level of behavioral control for sunscreen use, and a CRM message with high brand-cause fit and a local cause is the least effective message to produce a higher level of behavioral control for sunscreen use.

**Median involvement:** A two-way interaction between brand-cause fit and cause proximity on perceived behavioral control for sunscreen use was significant ( $\beta = -.26, p < .05$ ). Figure 15 showed that within low brand-cause fit, a CRM message with an international cause ( $M = 4.86$ ) resulted in a higher level of behavioral control for sunscreen use than a CRM message with a local cause ( $M = 4.69$ ). Moreover, within high brand-cause fit, a CRM message with an

international cause ( $M=4.81$ ) resulted in a higher level of behavioral control for sunscreen use than a CRM message with a local cause ( $M=4.64$ ). Thus, regardless of brand-cause fit, a CRM message with an international cause resulted in a higher level of behavioral control for sunscreen use than a CRM message with a local cause. Thus, for those who have median level of involvement with the cause, a CRM message with an international cause is more effective to produce a higher level of behavioral control for sunscreen use.

**High involvement:** A two-way interaction between brand-cause fit and cause proximity on perceived behavioral control for sunscreen use was significant ( $\beta = -.34, p < .05$ ). Figure 16 showed that within low brand-cause fit, a CRM message with an international cause resulted in a higher level of behavioral control for sunscreen use ( $M = 5.06$ ) than a CRM message with a local cause ( $M = 4.40$ ). On the other hand, within high brand-cause fit, a CRM message with a local cause resulted in a higher level of behavioral control for sunscreen use ( $M = 5.07$ ) than a CRM message with an international cause ( $M = 4.75$ ).

Moreover, a CRM message with high brand-cause fit and a local cause resulted in the highest level of behavioral control for sunscreen use ( $M = 5.07$ ). On the other hand, a CRM message with low brand-cause fit and a local cause resulted in the lowest level of behavioral control for sunscreen use ( $M = 4.40$ ). Therefore, for those who are highly involved with the cause, a CRM message with high brand-cause fit and a local cause is a more effective message to produce a higher level of behavioral control for sunscreen use, and a CRM message with low brand-cause fit and a local cause is the least effective way to produce a higher level of behavioral control for sunscreen use.

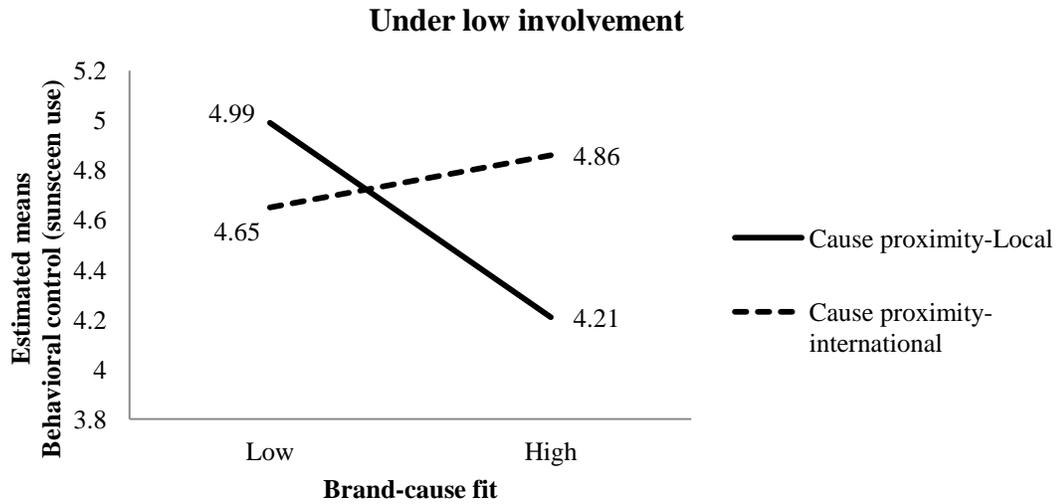


Figure 14: A three-way interaction among brand-cause fit, cause proximity and cause involvement on perceived behavioral control for sunscreen use (for people with a low level of involvement)

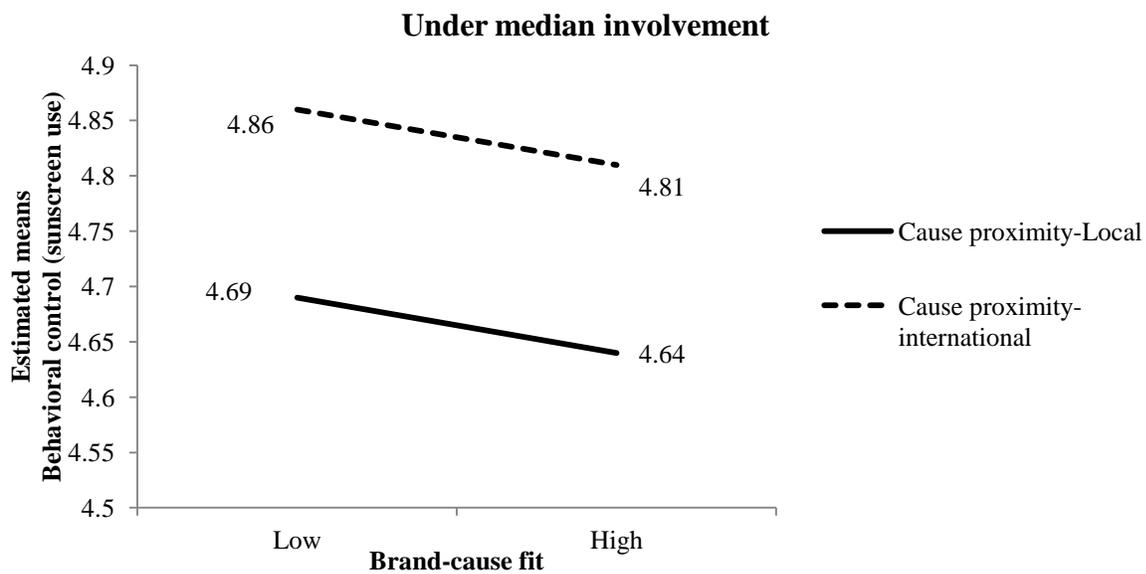


Figure 15: A three-way interaction among brand-cause fit, cause proximity and cause involvement on perceived behavioral control for sunscreen use (for people with a median level of involvement)

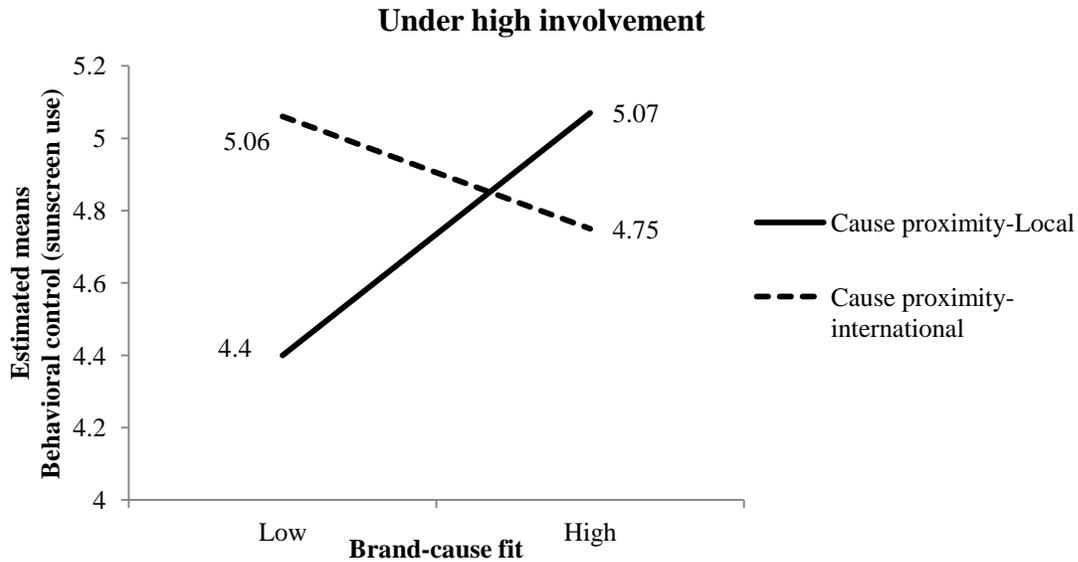


Figure 16: A three-way interaction among brand-cause fit, cause proximity and cause involvement on perceived behavioral control for sunscreen use (for people with a high level of involvement)

**A two-way interaction between brand-cause fit and cause proximity on attitudes toward skin cancer:** This study found a two-way interaction between brand-cause fit and cause proximity on attitudes toward skin cancer ( $\beta = .12, p = .05$ ) (See Figure 17).

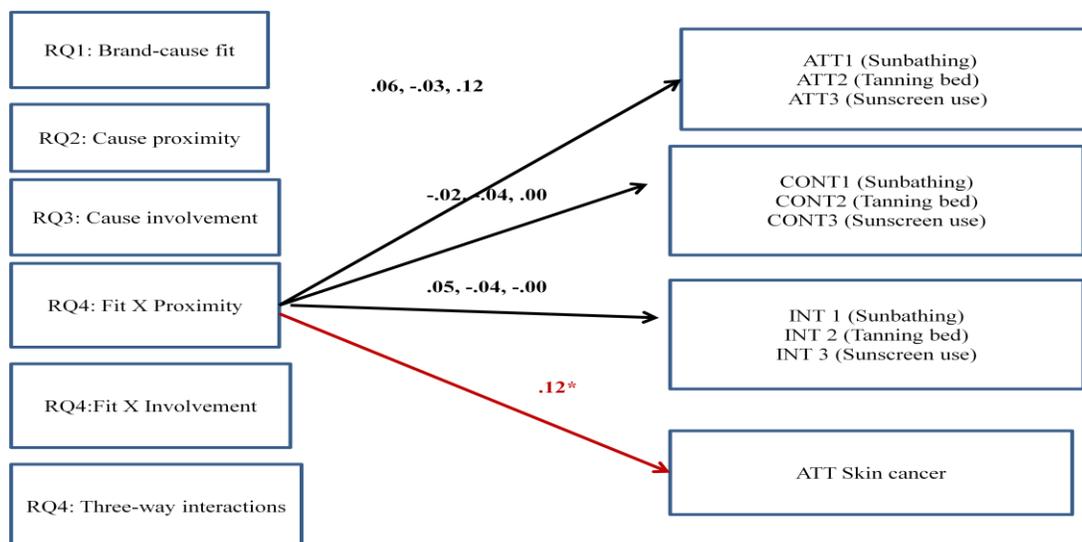


Figure 17: A Two-way interaction between brand-cause fit and cause proximity

**Low involvement:** Under low involvement, a two-way interaction between brand-cause fit and cause proximity on attitude toward skin cancer was significant ( $\beta = .17, p < .05$ ). Figure 18 showed that a CRM message with low-brand cause fit and a local cause resulted in more positive attitudes toward skin cancer ( $M = 4.87$ ) than a CRM message with low-brand cause fit and an international cause ( $M = 4.77$ ). On the other hand, a CRM message with high brand-cause fit and an international cause resulted in more positive attitudes toward skin cancer ( $M = 4.99$ ) than a CRM message with high brand-cause fit and a local cause ( $M = 4.62$ ). Thus, for those who are less involved with the cause, a CRM message with high brand-cause fit and an international cause is more effective to produce more positive attitudes toward cancer, and a CRM message with high brand-cause fit and a local cause is less effective to produce more positive attitudes toward skin cancer.

**Median involvement:** Under median involvement, a two-way interaction between brand-cause fit and cause proximity on attitude toward skin cancer was significant ( $\beta = .17, p < .05$ ). Figure 19 showed that a CRM message with low-brand cause fit and a local cause resulted in more positive attitudes toward skin cancer ( $M = 5.78$ ) than a CRM message with low-brand cause fit and an international cause ( $M = 5.60$ ). On the other hand, a CRM message with high brand-cause fit and an international cause resulted in more positive attitudes toward skin ( $M = 5.80$ ) than a CRM message with high brand-cause fit and a local cause ( $M = 5.66$ ). Thus, for those who are median-involved with the cause, a CRM message with high brand-cause fit and an international cause and a CRM message with low brand-cause fit and a local cause are more effective to produce more positive attitudes toward skin cancer.

**Under high involvement:** Under high involvement, a two way interaction between brand-cause fit and cause proximity on attitude toward skin cancer was not significant.

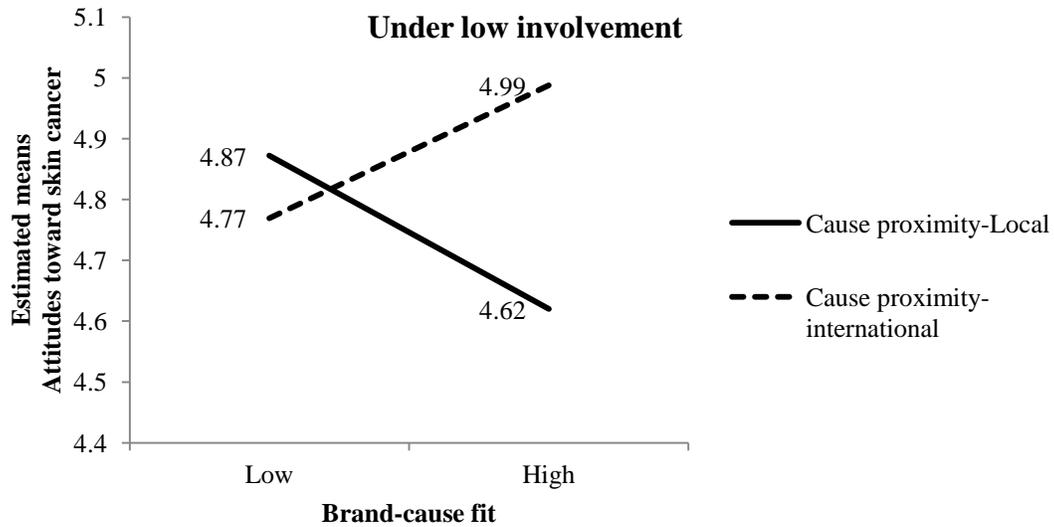


Figure 18: A significant two-way interaction between brand-cause fit and cause proximity on attitudes toward skin cancer for people with a low level of involvement

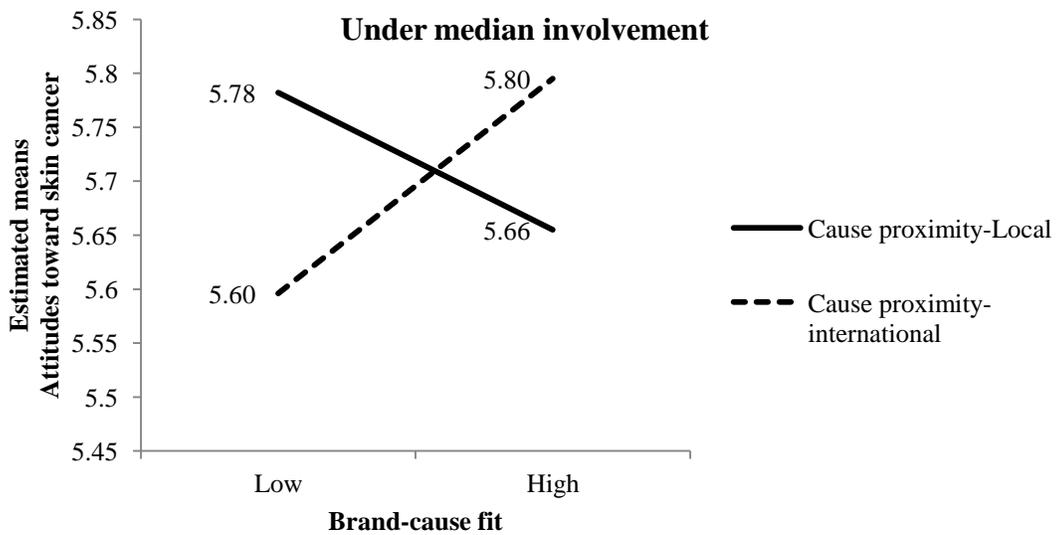


Figure 19: A Significant two-way interaction between brand-cause fit and cause proximity on attitudes toward skin cancer for people with a median level of involvement

## Chapter 5

### Discussion and conclusion

#### Discussion

This dissertation extended CRM to the contexts of consumer and health communication research by examining whether marketing responses as well as health perceptions toward skin cancer differ by brand-cause fit (low versus high), cause proximity (local versus international), and the individual's involvement with skin cancer in terms of perceptions.

#### **Consumers' responses to marketing perspectives.**

This study did not find three-way interactions on attitudes toward brand, attitudes toward non-profit organization, attitudes toward CRM message, campaign participation intention and likelihood to engage on social media. One possible reason for the null finding is that participants showed a slightly higher average of involvement in this study (from 4.60 to 6.34 on a 7-point scale) and therefore are more likely to show positive attitudes toward brand, non-profit organization, campaign participation and engagement intention, regardless of brand-cause fit and cause proximity.

Despite non-significant effects for a three-way interaction, main effects of brand-cause fit, cause proximity, and cause involvement on some dependent variables were found.

**Brand-cause fit:** This study found main effects of brand-cause fit on some dependent variables. For example, a CRM message with a high brand-cause fit produced more positive attitudes toward the brand, attitudes toward CRM message, and a higher campaign participation intention than a CRM message with a low brand-cause fit. These results are in line with the previous studies that have revealed that a high fit between a product and the cause produced more positive attitudes toward the sponsor (Rifon et al., 2004), brand image (Gwinner & Eaton,

1999; Pracejus & Olsen, 2004), and a CRM program (Bigné et al., 2012; Chéron et al., 2012) than a low fit between a product and the cause. Yet, attitudes toward the non-profit organization were not affected by brand-cause fit. This may be the result of relatively high average of attitudes toward non-profit organization ( $M=5.92$ ,  $SD=1.09$ ), regardless of brand-cause fit. This study provides the initial evidence of CRM and non-profit organizations by extending the previous CRM studies that only for on causes, rather than the non-profit organization behind the scene.

Cause proximity: A CRM message with a local cause produced higher intention of engagement (e.g., like, share, and comment) on social media than a CRM message with an international cause. This study extends prior work by Jeong et al. (2013) who studied the effects of CRM message on SNSs on individuals' intentions to join the SNS brand page. By examining how the location of the cause or the non-profit organization affects consumers' social media engagement, marketers can learn to effectively engage with consumers. This study suggests that supporting a local cause could more effectively elicit consumers' social media engagement.

Despite effects on social media engagement, the results on cause proximity are still mixed. This study found no significant main effects of cause proximity on attitudes toward brand, attitudes toward non-profit organization, attitudes toward CRM message, and campaign participation intention. Yet, these results are consistent with La Ferle et al. (2013), demonstrating that there are no differences between a national cause and an international cause on attitude toward the offer, attitude toward the advertisement and attitude toward company image. These findings suggest a myriad of factors that still impact the effects of cause proximity. One possible explanation is a lack of consistent distinction of types of causes, such as type of cause (natural disaster relief versus cause research) in previous studies (Grau & Folse, 2007; La Ferle et al.,

2013) and skin cancer in this study. Moreover, even though Grau and Folse (2007) and this study used skin cancer as a cause, this study specifically mentioned skin cancer foundation as a non-profit organization. Future research is warranted to differentiate the types of causes to examine the effects of cause proximity in CRM on consumers' responses as well as compare local versus national versus international to investigate consumers' responses.

Another possible explanation of inconsistent results of cause proximity is the differences of participant characteristics of this study, compared to Grau and Folse (2007) and La Ferle et al. (2013). Grau and Folse (2007) and La Ferle et al. (2013) used participants with a similar age range (ages 18-40 versus 18-30, respectively) and gender (about 55% of female in both studies). However, Grau and Folse (2007) used U.S. population and La Ferle et al. (2013) used Indian population. Compared to the two studies, even though this study used participants with a similar age range (ages 18-31) and U.S. population, female participants (70%) outnumbered male. Thus, gender may explain the discrepancy in cause proximity.

Cause involvement: Furthermore, this study revealed that a lower level of cause involvement produced more positive attitudes toward the brand, attitudes toward non-profit organization, a higher campaign participation intention and a higher intention to engage on social media than a higher level of cause involvement. Even though these findings were inconsistent with prior research (e.g., Grau & Folse, 2007), given some previous research revealed that there is no effect of level of involvement on attitudes toward brand in digital context (Karson & Korgaonkar, 2001; Lafferty & Goldsmith, 2005), future research needs to examine how CRM context in other health context affects consumers' responses on digital platform. One possible explanation of inconsistent results of cause involvement is a lack of a consistent measurement method for the level of involvement. For example, Grau and Folse (2007) used a tercile split on

the cause-involvement measure to identify the top and bottom terciles representing high-involved consumers ( $M=6.48$ ) and low-involved consumers ( $M=4.23$ ) on a seven-point scale. They measured the cause-involvement by measuring the perceptions toward the cause, such as unimportant/important to me, and means nothing to me/means a lot to me. Lafferty and Goldsmith (2005) manipulated the level of involvement with brand products and target causes (American Red Cross, high familiar cause, versus, Famine Relief Fund, low familiar cause). Given the inconsistent measurement method of cause involvement and lack of clear distinction of cause involvement, this study modified the measures for cause involvement from Grau and Folse (2007) and treated cause involvement as a continuous variable, instead of using a split on cause involvement. However, despite the method, because participants showed slightly higher average of cause involvement in this study, this could be another possibility for having inconsistent results for cause involvement.

The negative relationships, although unexpected and inconsistent with prior ELM studies, between involvement and attitudes toward brand, attitudes toward non-profit organization, campaign participation intention and intention to engage on social media can be explained by participants' skepticism based on the Persuasion Knowledge Model (Friestad & Wright 1994). It is likely that awareness of the persuasive intents leads to negative attitudes. In particular, consumers would be less trustful, less favorable and more skeptical toward the CRM message. Thus, consumers who are highly involved with a cause could be more skeptical toward CRM messages. Thus, our findings suggest that CRM may work better for those who are less involved with a cause, further suggesting need to investigate how different causes effects differ across various cause involvement.

Moreover, given the inconsistent results of cause involvement, future research should continue to investigate how the interaction between cause involvement and other CRM message factors affects consumers' responses to attitudes toward the campaign and participation intention, such as message framing (e.g., positive vs. negative) (Grau & Folse, 2007), temporal framing (e.g., immediate response vs. delayed response) (Tangari et al., 2010), and types of hope (e.g., an altruistic CSR activity vs. a strategic CSR activity) (Kim, Kang & Mattila, 2012). Thus, future research is needed to examine how cause involvement interacts with message framing in CRM with skin cancer health issues.

#### **Consumers' responses to health communication perspectives.**

Three-way interaction: This study found a three-way interaction among brand-cause fit, cause proximity and cause involvement on behavioral control for sunscreen use. The cause involvement plays a role as a moderator. The findings indicated that for those who are less involved with the cause, a CRM message with low brand-cause fit and a local cause is more effective to produce a higher level of behavioral control for sunscreen use than a CRM message with low brand-cause fit and an international cause. Moreover, for those who are less involved with the cause, a CRM message with high brand-cause fit and an international cause is more effective to produce a higher level of behavioral control than a CRM message with high brand-cause fit and a local cause.

In contrast, for those who are highly involved with the cause, a CRM message with low brand-cause fit and an international cause is more effective to produce a higher level of behavioral control for sunscreen use than a CRM message with low brand-cause fit and a local cause. Furthermore, for those who are highly involved with the cause, a CRM message with high

brand-cause fit and a local cause is more effective to produce a higher level of behavioral control for sunscreen use than a CRM message with high brand-cause fit and an international cause.

This study also found a two-way interaction between brand-cause fit and cause proximity on attitudes toward skin cancer. The findings indicated that for those who are less involved with the cause (low involved and median involved), a CRM message with low-brand cause fit and a local cause resulted in more positive attitudes toward skin cancer than a CRM message with low-brand cause fit and an international cause. On the other hand, for those who are less involved with the cause, a CRM message with high brand-cause fit and an international cause resulted in more positive attitudes toward skin cancer than a CRM message with high brand-cause fit and a local cause. However, for those who are more involved with the cause, there was a no significant interaction effect between brand-cause fit and cause proximity on attitudes toward skin cancer.

These significant interaction effects indicate a great potential of using CRM to target those who are less involved with the cause in health communications. The findings imply that a CRM message with low brand-cause fit and a local cause, and a CRM message with high brand-cause fit and an international cause can motivate them to have a higher level of behavioral control for sunscreen use and more positive attitudes toward skin cancer.

In terms of main effects of brand-cause fit and cause proximity on dependent variables in health communication perspectives, this study did not find main effects of brand-cause fit and cause proximity on attitudes toward behavior (sunbathing, tanning bed use, and sunscreen use), perceived behavioral control (sunbathing, tanning bed use, and sunscreen use), behavioral intention (sunbathing, tanning bed use, and sunscreen use) and attitudes toward skin cancer.

Cause involvement: This study found main effects of cause involvement on attitudes toward sunscreen use, and attitudes toward skin cancer, revealing that a lower level of cause

involvement produced more positive attitudes toward sunscreen use and attitudes toward skin cancer. The directionality of cause involvement is consistent with findings on marketing variables in this study. There are possible explanations of the result of cause involvement on attitudes toward sunscreen use and attitudes toward skin cancer. Previous studies revealed the reason why less familiarity with a cause is associated with positive attitudes toward the less familiar cause (Lafferty & Edmondson, 2000; Lafferty & Goldsmith, 2005; Lafferty, Goldsmith, & Hunt, 2004). Moreover, as Berger, Cunningham, and Kozinets (1999) said, because individuals who are less involved with a product in an advertisement tend to use causes in CRM as peripheral cues or heuristic cues, they might use a health issue (skin cancer) as peripheral cues to investigate the CRM messages and show more positive attitudes toward sunscreen use and attitudes toward skin cancer.

Regarding health communication perspectives, the results showed that CRM can be a persuasive health promotion tool for skin cancer education. It is noted that a lower level of cause involvement produced a higher level of health perception toward skin cancer than a higher level of cause involvement. These findings indicate that individuals who are less involved with the cause are more likely to have more positive attitudes toward sunscreen use and more positive attitudes toward skin cancer than those who are more involved with the cause. Future work is needed to examine how CRM is applicable to other health context to change consumers' health behaviors, as a health educational tool.

However, many questions remain: "Why did the brand-cause fit, cause proximity and cause involvement affect on behavioral control for sunscreen use?" "Why were these interaction effects shown in only sunscreen related variables (e.g., attitudes toward sunscreen use, behavioral control for sunscreen use)?" and "Is the finding applicable to other contexts?" There

is a plausible way to explain the reason why interaction effects were shown in only sunscreen related variables. While this study used sunscreen as a product and a visual image for high brand-cause fit, the CRM messages did not address the skin cancer prevention behaviors such as avoiding sunbathing, and tanning bed use. Thus, future research is needed to understand its full effects and underlying mechanisms.

### **Contributions/Implications**

This study is one of the first attempts to examine the effects of CRM in terms of health promotion. The findings of this study have theoretical implications for future study as well as practical implications for marketers and health practitioners. The theoretical and practical contributions of this study are summarized as follows.

From a theoretical point of view, first, this study contributes to expanding our understanding of the effects of CRM in terms of skin cancer as well as marketing perspectives based on Elaboration Likelihood Model (ELM) and Theory of Planned Behavior (TPB). For the research of CRM in marketing perspectives, the inconsistent findings that contradicted ELM cast doubts whether ELM is an applicable framework in the context of digital media as well as in CRM (Karson & Korgaonkar, 2001). In terms of conceptualization of involvement in ELM, previous CRM studies as well as this study have considered an involvement with a cause, while many other advertising studies have considered an involvement with a product. Because of the different conceptualization of involvement in CRM, further study should examine whether ELM is an applicable framework in the context of CRM. Moreover, Karson and Korgaonkar (2001) argued that the ELM is not adaptable to the Internet advertisements because information

processing might be different from other media. Further study is needed to examine whether ELM is an applicable framework in the digital era.

For the research of CRM in health promotion, this study integrated the concepts of two theoretical frameworks: ELM and TPB, which provided the explanation for how information processing in ELM influences health behavior in TPB. By integrating the concepts of two frameworks, this study contributes to understanding processing of different messages affects health attitudes and behavioral control, both of which are linked to behavior intention.

The proposed model explains that individuals who are highly involved with the cause scrutinize the CRM message about the skin cancer under the central route and they are more skeptical toward CRM messages. Because they are more likely to aware of the persuasive intent of a CRM message, their skepticism toward a CRM message might not affect their health behavior changes. On the other hand, the model explains that individuals who are less involved with the cause are affected by peripheral cues such as message factors (e.g., brand-cause fit and cause proximity) and health information (e.g., skin cancer and non-profit skin cancer foundation). Thus, they might use either message factors or health information as peripheral cues to investigate the CRM messages and show more positive attitudes toward health behaviors and behavior changes.

Third, the findings of this study can contribute to understanding of how and to what extent the use of social media plays a role in promoting the participation in CRM campaigns. This study is the first-step to examine the mechanisms about why people are willing to or are motivated to participate in CRM on social media (e.g., like, share, and comments). The findings of this study warrant the further examination of a role of social media and the mechanisms for consumers' engagement behaviors which have not been identified in this study.

From a practical standpoint, there are important implications and contributions of this study for marketers. First, this study suggests how the marketers can create and design the effective CRM messages based on brand-cause fit, cause proximity, and cause involvement to increase a positive brand image, their sales and campaign participation. Moreover, it suggests that the findings of this study provided insights regarding whom a company could partner with and which cause the company supports that allows them to maximize the effects of CRM for not only the company but also the non-profit organization. For example, as this study showed, when companies consider a partner to support in a CRM campaign, choosing a non-profit organization with a local cause that fits with their products can maximize their benefits such as increasing consumers' attitudes toward brand, CRM message and campaign participation intention. However, it does not mean that companies only support local cause and ignore a national or an international cause. It suggests that when companies partner with a non-profit organization with a national or an international cause, they need to consider how they design the campaign at a local level to support a national or an international cause.

Second, this study contributes by suggesting insights regarding how a non-profit organization chooses a for-profit organization as a partner. Our findings revealed that message factors in CRM do not affect consumers' attitudes toward non-profit organizations. Because CRM is a collaboration between a for-profit organization and a non-profit organization, it provides an insight for a non-profit organization regarding choosing its partners.

Third, given that CRM marketers have used social media platforms for their campaigns, the findings of this study contribute to our understanding of how the use of social media may provide benefits to companies participating in CRM campaigns. However, even though this study created the CRM-based social media messages, actual CRM messages on social media are

likely to be shorter than the message used in this study. Thus, although this study provides marketers and health practitioners with insights regarding how to choose a CRM message for social media platforms, future study should continue to examine the effects of social media in CRM.

Fourth, this study contributes to expanding suggestions for how health practitioners can use CRM campaigns to increase millennials' awareness of a particular health issue. Minton and Cornwell (2015) said that cause cue information can alter consumers' health perceptions. In addition, our findings revealed that the CRM message affected consumers' attitudes toward health issues and their behavioral control. Thus, health practitioners should be concerned with how to use a CRM campaign to increase consumers' health. For example, even though much of the previous CRM research has focused on the effects of marketing components, such as brand-cause fit (Rifon et al., 2004; Nan & Heo, 2007), cause proximity (Grau & Folse, 2007), and format of quantifiers of donation (Pracejus, Olsen, & Brown, 2003), the findings of this study suggests the importance of how to develop health messages in CRM to change consumers' health perceptions and attitudes.

Fifth, as extended insights of a CRM campaign in health communication perspectives, it also shows a potential for how practitioners dealing with risk/crisis communication can use CRM campaign to increase consumers' risk perceptions of a particular risk/crisis issue, because another CRM aligned issue is risk or crisis issues such as a water crisis and natural disaster. However, given a lack of studies that investigate the effects of CRM in risk/crisis communication, further research is still needed to investigate whether CSR or CRM can play a role in increasing awareness of the risk beyond the marketing tool.

## **Limitations**

The limitations of this study should be acknowledged. First, despite a large sample size, this study used college student samples to investigate the millennials' responses toward CRM messages on social media. Even though college students only represent certain segment of the millennials population, social media users are heavy college students (Pew Research Center, 2014a), making them an ideal population for examining responses to marketing and health information embedded in CRM.

Second, this study used a fictitious brand name and non-profit organizations in the experiment to prevent participants' existing knowledge and perceptions toward a real brand and non-profit organization from affecting the results. However, in actual circumstances, consumers' existing knowledge and perceptions regarding the company or brand may impact how they respond to CRM for a real company aligning with a specific cause.

Third, the stimulus message was exposed once for a short period in online experiment, consistent with prior studies. We should indicate that the effects of an advertisement between a single exposure of an advertisement in the experiment and exposure of an advertisement in actual circumstances could be different as there is a possibility of different media effects between repeated exposure to the media and a singular exposure.

Fourth, the significant results in a path model for health communication were shown in dependent variables which are related to sunscreen use (e.g., attitudes toward sunscreen, and behavioral control for sunscreen use). There are possible explanations why this study did not find significant results in dependent variables which are related to sunbathing, and tanning bed use. First, data was collected from students attending a university in Midwest in February, in a location and a time period, during which students are not likely to have sunbathing or tanning

bed use. Second, the stimuli used a sunscreen product as a visual image for high brand-cause fit. Thus, viewing a CRM message with a skin cancer issue may not have motivated participants to think about engaging in tanning behaviors (sunbathing, and tanning bed use).

Fifth, the participants in this study showed a gender disparity (70.7% women). Even though when this study evaluated just the female data, it does not change the average of attitudes toward sunbathing, tanning bed use, and sunscreen use. Further study is warranted to investigate whether there are any gender differences between male and female in terms of dependent variables in health perspectives by separating the path models for male and female.

Lastly, this study should acknowledge the limitations of measurement. First, this study used one single item to measure behavioral control and behavioral intention for each behavior (sunbathing, tanning bed use, and sunscreen use), adopted from Hillhouse et al. (1997), which used the single items in each behavior. Therefore, further study warrants using multiple items to measure behavioral control and behavioral intention for each behavior. Second, this study did not measure participants' existing perceptions toward local issues and global issues. Because individuals' levels of concern toward local or global issues affect the effects of cause proximity on CRM, further study needs to measure participants' levels of concern about local and global issues. Third, this study did not measure participants' actual behaviors about sunbathing, tanning bed use and sunscreen use. Thus, this study could not measure a mediation effect of behavioral intention on the TPB. Last, because this study did not have variables to measure effects of information processing (e.g., elaboration likelihood) in ELM, this study could not investigate how CRM messages affect message processing in ELM.

## Conclusion

As CRM frequently features health issues in marketing, and more companies have used social media as a platform, the results of this study found that a CRM message with a high brand-cause fit produced more positive attitudes toward the brand, attitudes toward CRM message, and a higher campaign participation intention than a CRM message with a low brand-cause fit. This study also found that a CRM message with a local cause produced higher intention of engagement on social media than a CRM message with an international cause.

Moreover, this study revealed that the effects of the level of involvement were contrary to the ELM and the findings on marketing variables and health communication variables showed the same directionality of cause involvement. That is, individuals who are less involved with the cause are more likely to have more positive attitudes toward marketing variables and health communication variables than those who are more involved with the cause. The results that the effects of the level of involvement were contrary to the ELM warrants further study to examine whether ELM is an applicable framework in CRM and digital context and whether cause involvement plays a role as a moderator in ELM from the both marketing and health communication standpoints.

From the health promotion standpoint, this study found a three-way interaction on behavioral control for sunscreen use as well as two-way interactions: a two-way interaction between fit and cause involvement on behavioral control for sunscreen use, and a two-way interaction between brand-cause fit and cause proximity on attitudes toward skin cancer. The significant interaction effects indicate CRM is a great potential tool for health education to those who are less involved with the cause. The findings imply that a CRM message with low brand-cause fit and a local cause, and a CRM message with high brand-cause fit and an international

cause can motivate them to have a higher level of behavioral control for sunscreen use and more positive attitudes toward skin cancer.

From the theoretical contribution, this study integrated concepts of two theoretical frameworks: ELM and TPB to explain how information processing in ELM influences health behavior in TPB. Based on this model, this study examined how CRM messages affect health perceptions toward skin cancer such as attitudes toward the behavior, perceived behavioral control, and behavioral intention. Thus, future work is needed to expand how CRM is applicable to other health context to change consumers' health behaviors, as a health educational tool.

Given that this study took the first step to examine the effects of CRM in health communication perspectives as well as marketing perspectives, these results warrant more systematic research to understand its full effects and underlying mechanism(s) to find the answers about why the brand-cause fit, cause proximity and cause involvement affect health perceptions such as behavioral control.

Moreover, given that the findings provide health practitioners and campaign designers much needed insights into potential impacts of CRM messages in their health promotions, it is critical that we continue to investigate the impacts of CRM on consumers' health perceptions and behaviors. This contributes to not only improve individual health, but also increases the likelihood of a successful pairing between a profit-organization and a non-profit organization.

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## Appendix 1. Power analysis

### F tests – ANCOVA: Fixed effects, main effects and interactions

<b>Analysis:</b>	A priori: Compute required sample size	
<b>Input:</b>	Effect size f	= 0.25
	$\alpha$ err prob	= 0.05
	Power (1- $\beta$ err prob)	= 0.8
	Numerator df	= 1
	Number of groups	= 8
	Number of covariates	= 5
<b>Output:</b>	Noncentrality parameter $\lambda$	= 8.0000000
	Critical F	= 3.9235985
	Denominator df	= 115
	Total sample size	= 128
	Actual power	= 0.8008809

### F tests – ANCOVA: Fixed effects, main effects and interactions

<b>Analysis:</b>	A priori: Compute required sample size	
<b>Input:</b>	Effect size f	= 0.10
	$\alpha$ err prob	= 0.05
	Power (1- $\beta$ err prob)	= 0.8
	Numerator df	= 1
	Number of groups	= 8
	Number of covariates	= 5
<b>Output:</b>	Noncentrality parameter $\lambda$	= 7.8700000
	Critical F	= 3.8535011
	Denominator df	= 774
	Total sample size	= 787
	Actual power	= 0.8000806

### F tests – ANCOVA: Fixed effects, main effects and interactions

<b>Analysis:</b>	A priori: Compute required sample size	
<b>Input:</b>	Effect size f	= 0.4
	$\alpha$ err prob	= 0.05
	Power (1- $\beta$ err prob)	= 0.8
	Numerator df	= 1
	Number of groups	= 8
	Number of covariates	= 5
<b>Output:</b>	Noncentrality parameter $\lambda$	= 8.3200000
	Critical F	= 4.0912786
	Denominator df	= 39
	Total sample size	= 52
	Actual power	= 0.8031142

## Appendix 2. Examples of stimuli which previous studies have used

Nan & Heo (2007)

- The High-fit condition:  
Sunshine Orange Juice  
Naturally rich in vitamin C  
Sunshine Orange Juice is naturally rich in the antioxidant vitamin C, an ingredient known for preventing some heart diseases.  
Sunshine Orange Juice is a sponsor of the Healthy Diet Research Association.  
For every bottle of juice sold, we donate 5 cents to this worthy cause.
- The Low-fit condition:  
Sunshine Orange Juice  
Naturally rich in vitamin C  
Sunshine Orange Juice is naturally rich in the antioxidant vitamin C, an ingredient known for preventing some heart diseases.  
Sunshine Orange Juice is a sponsor of the Traffic Safety Research Association.  
For every bottle of juice sold, we donate 5 cents to this worthy cause.
- The regular ad condition:  
Sunshine Orange Juice  
Naturally rich in vitamin C  
Sunshine Orange Juice is naturally rich in the antioxidant vitamin C, an ingredient known for preventing some heart diseases.

Grau & Folse (2007)

- Message framing: positive  
BioCalth Calcium Supplement  
Now only \$4.99  
Doctors recommend 1000-1200 mg/day for men & women  
BioCalth supports strong bones and teeth and helps you get what you can't get from diet alone.  
Chewable tablets and easily digestible.  
  
BioCalth will donate 50 cents from the sale of each bottle to The National Cancer Institute's Center for Cancer Research.  
Approximately 75% of bone cancer patients survive.  
Help us increase that survival rate.

Tangari, Folse, Burton, & Kees (2010)

- Proximal corporate response condition:  
Benefit your health and the American Health Association

Over 70 million people suffer from heart disease.

Over 900,000 die each year.

As many as 300,000 people with heart disease go undiagnosed each year, leading to higher risk of death or disability from strokes or heart attacks.

We can make a difference in just ONE MONTH.

In ONE MONTH, we can raise enough money for the American Heart Association to begin a heart disease prevention program that will drastically reduce the number of people who go undiagnosed and get heart disease. Vitabase will donate 50% of every purchase of Cardio Support to the American Heart Association.

Buy now, and 50% will go to hearth disease prevention.

## Appendix 3

## Stimuli

## 1. Low brand-cause fit and local cause



The image shows a screenshot of a Facebook post. At the top, there is a search bar with the text "Search Facebook" and a magnifying glass icon. Below the search bar, the post is from "Coffee Mug X" and is dated "February 9 at 9:16am". The post title is "Support the Kansas Skin Cancer Foundation in Kansas" in orange text. The main text of the post reads: "Exposing your skin to UV rays through using tanning beds or sunbathing can ruin your health and your good looks. Of the 40,000 Americans diagnosed with malignant melanoma this year, one in four of them will die. For more than a decade, Coffee Mug X has supported the 'Kansas Skin Cancer Foundation' in Kansas. We take responsibility to reduce the number of people who go undiagnosed and get skin cancer in Kansas. For each 'Coffee Mug X' purchased, we will donate 50% of every purchase of a Coffee Mug X. We will donate up to \$1 million toward the Kansas Skin Cancer Association in Kansas. Together, we can help. Please join us." To the right of the text is a white ceramic mug. At the bottom of the post, there are three icons: a thumbs-up for "Like", a speech bubble for "Comment", and a share icon for "Share".

Search Facebook

**Coffee Mug X**  
February 9 at 9:16am

**Support the Kansas Skin Cancer Foundation in Kansas**

Exposing your skin to UV rays through using tanning beds or sunbathing can ruin your health and your good looks. Of the 40,000 Americans diagnosed with malignant melanoma this year, one in four of them will die.

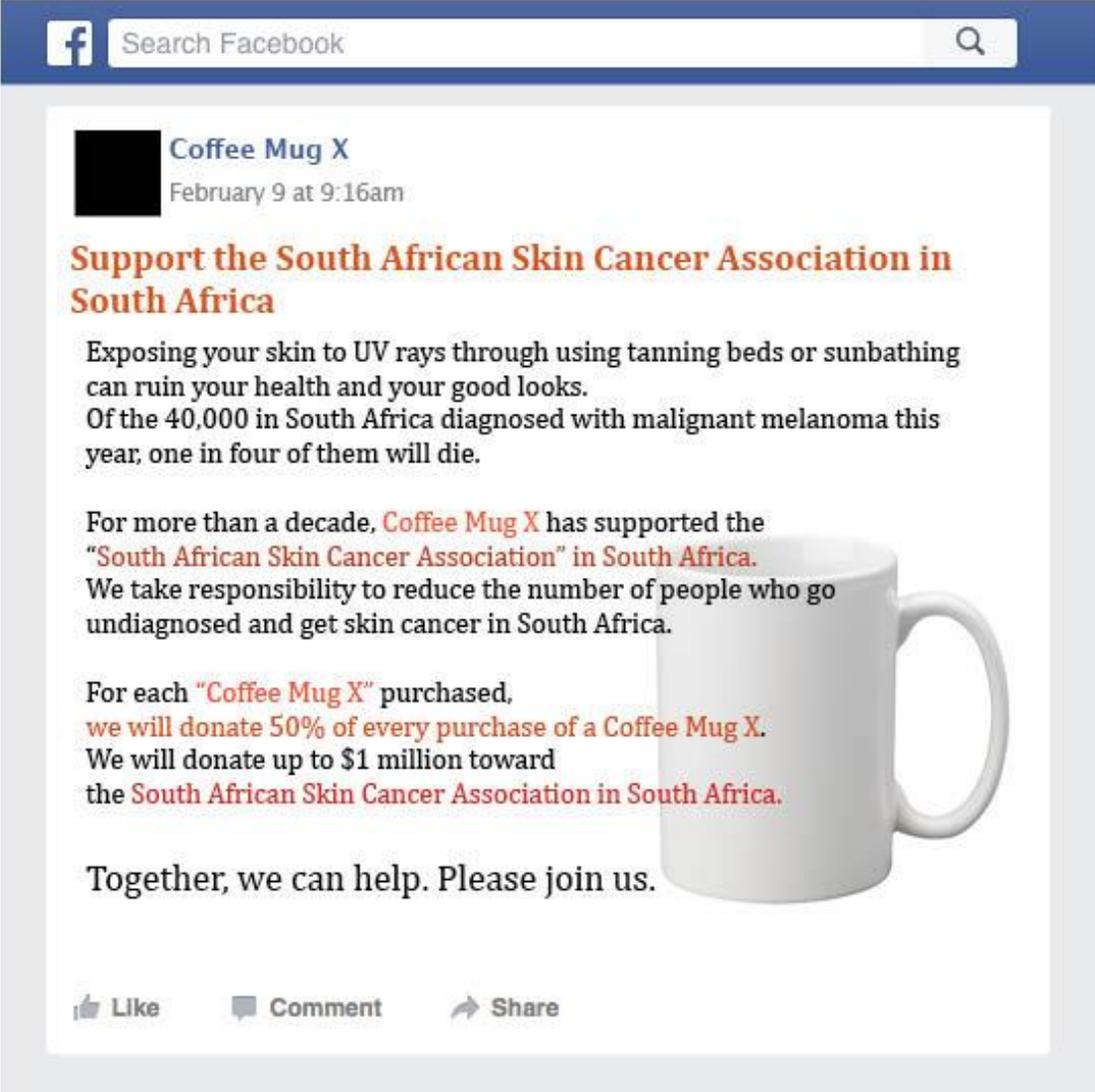
For more than a decade, **Coffee Mug X** has supported the "Kansas Skin Cancer Foundation" in Kansas. We take responsibility to reduce the number of people who go undiagnosed and get skin cancer in Kansas.

For each "Coffee Mug X" purchased, we will donate 50% of every purchase of a Coffee Mug X. We will donate up to \$1 million toward the Kansas Skin Cancer Association in Kansas.

Together, we can help. Please join us.

Like Comment Share

## 2. Low brand-cause fit and international cause



The image shows a screenshot of a Facebook post. At the top, there is a search bar with the text "Search Facebook" and a magnifying glass icon. Below the search bar, the post is from "Coffee Mug X" and is dated "February 9 at 9:16am". The main text of the post is in orange and black, and includes a photograph of a white coffee mug. At the bottom of the post, there are three icons: a thumbs-up for "Like", a speech bubble for "Comment", and a share icon for "Share".

**Support the South African Skin Cancer Association in South Africa**

Exposing your skin to UV rays through using tanning beds or sunbathing can ruin your health and your good looks. Of the 40,000 in South Africa diagnosed with malignant melanoma this year, one in four of them will die.

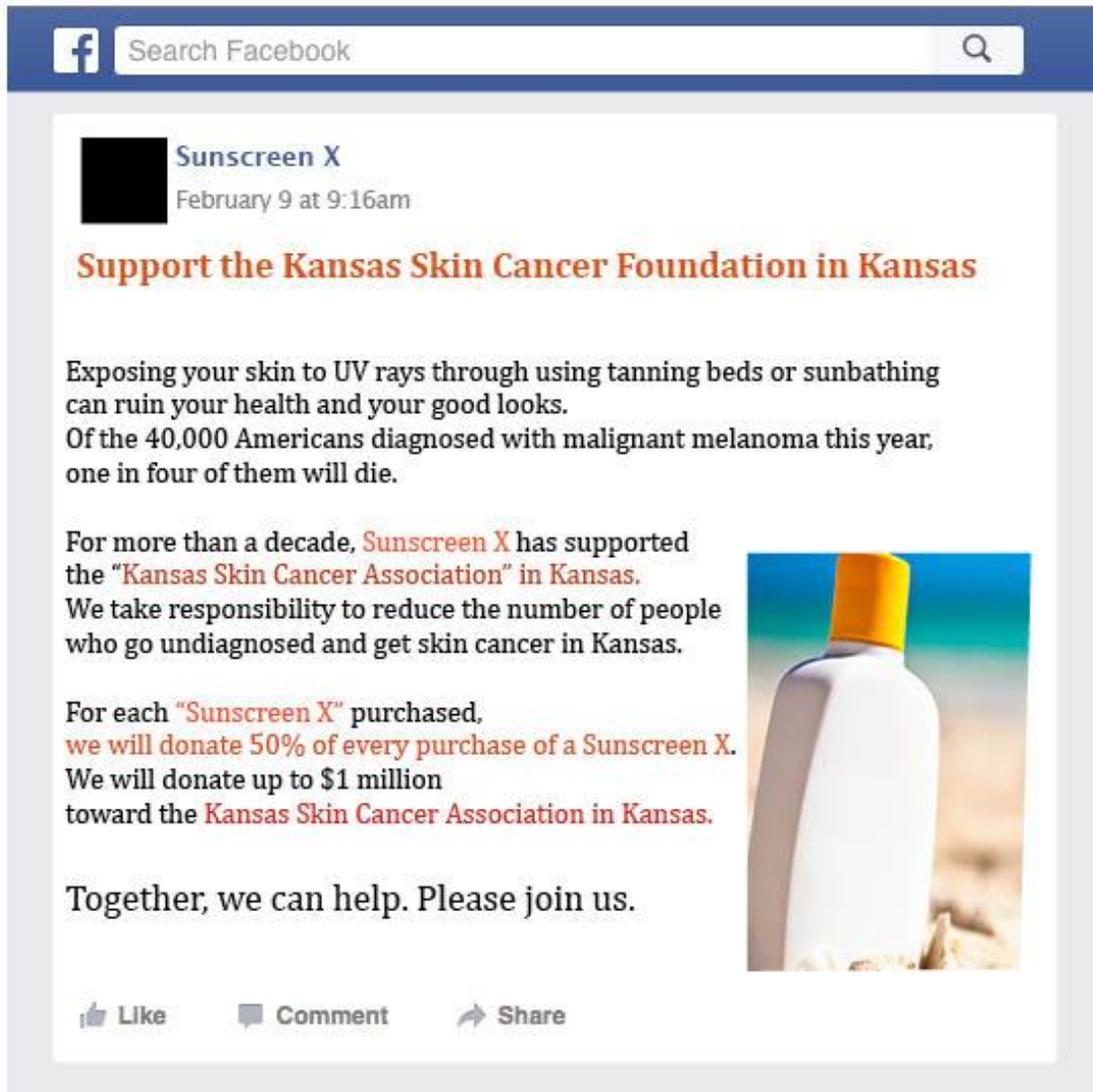
For more than a decade, **Coffee Mug X** has supported the **"South African Skin Cancer Association" in South Africa.** We take responsibility to reduce the number of people who go undiagnosed and get skin cancer in South Africa.

For each **"Coffee Mug X"** purchased, **we will donate 50% of every purchase of a Coffee Mug X.** We will donate up to \$1 million toward the **South African Skin Cancer Association in South Africa.**

Together, we can help. Please join us.

Like Comment Share

### 3. High brand-cause fit and local cause



The image shows a screenshot of a Facebook post. At the top, there is a search bar with the text "Search Facebook" and a magnifying glass icon. Below the search bar, the post is from "Sunscreen X" and is dated "February 9 at 9:16am". The main heading of the post is "Support the Kansas Skin Cancer Foundation in Kansas". The text of the post reads: "Exposing your skin to UV rays through using tanning beds or sunbathing can ruin your health and your good looks. Of the 40,000 Americans diagnosed with malignant melanoma this year, one in four of them will die. For more than a decade, Sunscreen X has supported the 'Kansas Skin Cancer Association' in Kansas. We take responsibility to reduce the number of people who go undiagnosed and get skin cancer in Kansas. For each 'Sunscreen X' purchased, we will donate 50% of every purchase of a Sunscreen X. We will donate up to \$1 million toward the Kansas Skin Cancer Association in Kansas. Together, we can help. Please join us." To the right of the text is a photograph of a white sunscreen bottle with a yellow cap, set against a background of a beach and ocean. At the bottom of the post, there are three interaction buttons: "Like", "Comment", and "Share".

Search Facebook

**Sunscreen X**  
February 9 at 9:16am

### Support the Kansas Skin Cancer Foundation in Kansas

Exposing your skin to UV rays through using tanning beds or sunbathing can ruin your health and your good looks. Of the 40,000 Americans diagnosed with malignant melanoma this year, one in four of them will die.

For more than a decade, **Sunscreen X** has supported the "**Kansas Skin Cancer Association**" in Kansas. We take responsibility to reduce the number of people who go undiagnosed and get skin cancer in Kansas.

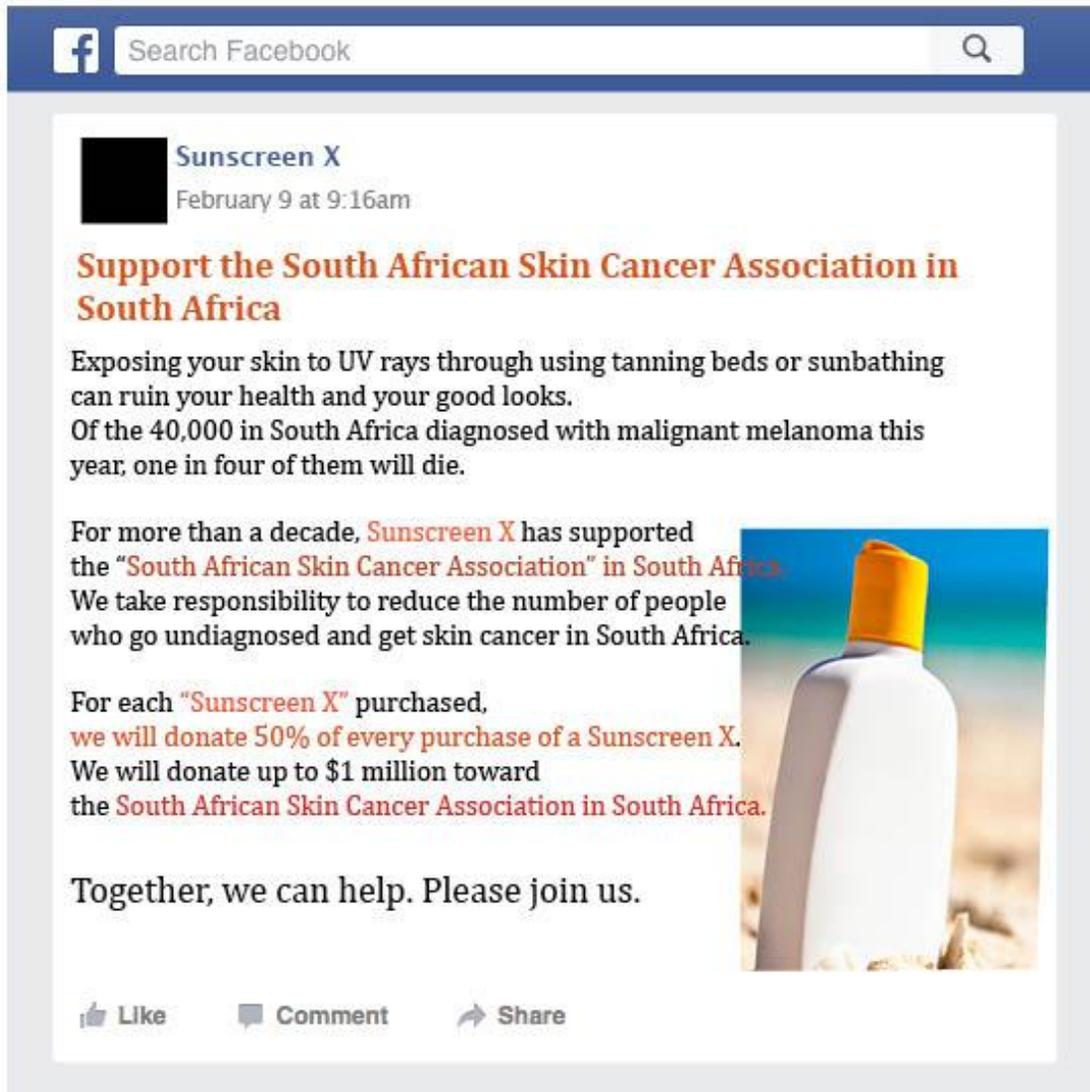
For each "**Sunscreen X**" purchased, we will donate 50% of every purchase of a Sunscreen X. We will donate up to \$1 million toward the **Kansas Skin Cancer Association in Kansas**.

Together, we can help. Please join us.

Like Comment Share



#### 4. High brand-cause fit and international cause



 Search Facebook 

 **Sunscreen X**  
 February 9 at 9:16am

**Support the South African Skin Cancer Association in South Africa**

Exposing your skin to UV rays through using tanning beds or sunbathing can ruin your health and your good looks. Of the 40,000 in South Africa diagnosed with malignant melanoma this year, one in four of them will die.

For more than a decade, **Sunscreen X** has supported the “**South African Skin Cancer Association**” in South Africa. We take responsibility to reduce the number of people who go undiagnosed and get skin cancer in South Africa.

For each “**Sunscreen X**” purchased, **we will donate 50% of every purchase of a Sunscreen X.** We will donate up to \$1 million toward the **South African Skin Cancer Association in South Africa.**

Together, we can help. Please join us.



 Like  Comment  Share

## Appendix 4 Questionnaire

1. Please indicate your opinion with the following statements by clicking the number that best represents your opinion. **(Prior knowledge of CSR and CRM)**

	1	2	3	4	5	6	7	
1. I've never heard of corporate social responsibility.								I know corporate social responsibility well.
2. I've never heard of cause-related marketing.								I know cause-related marketing well.

2. Please indicate your opinion with the following statements by clicking the number that best represents your opinion. **(General attitudes toward CRM)**

Cause-related marketing is a form of a company's corporate social responsibility. Cause-related marketing involves a company's donation to non-profit organizations or a social cause for contribution, when consumers purchase its products or services.

This is an example of cause-related marketing: "We will donate 50 cents to women against Breast Cancer foundation for each purchase you make."

We would like to know how you feel about cause-related marketing.

		Strongly Disagree						Strongly Agree					
(1) I think positively toward a brand that contains cause-related marketing messages.	1		2		3		4		5		6		7
(2) I prefer to purchase a product that includes a corporate social responsibility mission.	1		2		3		4		5		6		7
(3) When I buy a product, I always look for labels that say a company donates to a non-profit organization or charity, when consumers purchase	1		2		3		4		5		6		7

products or services.

(4) I prefer a company that supports social cause.      1      2      3      4      5      6      7

(5) I support a company with a corporate social responsibility mission.      1      2      3      4      5      6      7

3. Please indicate your opinion with the following statements by clicking the number that best represents your opinion. (cause involvement)

We would like to know how you feel about the about the skin cancer.

I think that the skin cancer \_\_\_\_\_.

	1	2	3	4	5	6	7	
1. is unimportant								is important
2. means nothing to me								means a lot to me
3. is personally irrelevant to me								is personally relevant to me
4. doesn't matter a great deal to me								does matter a great deal to me
5. is of no concern to me								is of great concern to me

4. Please indicate your opinion with the following statements by clicking the number that best represents your opinion. (cause familiarity)

We would like to know how you feel about the skin cancer.

Skin cancer \_\_\_\_\_.

	1	2	3	4	5	6	7	
1. is very unfamiliar								Is very familiar
2. definitely do not recognize								Definitely recognize
3. definitely have not heard of								Definitely have heard of

**In the following section, you will be asked to read a message. Please read the message carefully and completely, and answer the questions.**

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**Message Page**

**Please note: You will need to read the message carefully and thoroughly to answer the evaluation questions in the next section.**

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***Manipulation check***

5. We would like to know your perception about the message **itself**. (brand-cause fit)

	Strongly Disagree							Strongly Agree
(1) I think that the [product name depending on the experimental condition] donating to [the name of the non-profit organization depending on the experimental condition] represents a good match between the product and the cause.	1	2	3	4	5	6	7	

(2) I think that donations to [the name of the non-profit organization depending on the experimental condition] are appropriate for [product name].	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

6. We would like to know your perception about the message **itself**. (donation proximity)

The message \_\_\_\_\_

Strongly

Strongly

	Disagree							Agree
(1) discusses what happen in the U.S.	1	2	3	4	5	6	7	
(2) discusses what happen in South Africa.	1	2	3	4	5	6	7	

7. Please indicate your opinion with the following statements by clicking the number that best represents your opinion. (attitudes toward the brand)

My attitude toward the featured brand is \_\_\_\_\_.

	1	2	3	4	5	6	7	
1. dislike								like
2. unfavorable								favorable
3. negative								positive
4. bad								good

8. Please indicate your opinion with the following statements by clicking the number that best represents your opinion. (attitudes toward the non-profit organization)

My attitude toward the company is \_\_\_\_\_.

	1	2	3	4	5	6	7	
1. dislike								like
2. unfavorable								favorable
3. negative								positive
4. bad								good

9. Please indicate your opinion with the following statements by clicking the number that best represents your opinion. (attitudes toward the CRM message)

My attitude toward the CRM message is \_\_\_\_\_.

	1	2	3	4	5	6	7	
1. dislike								like
2. unfavorable								favorable
3. negative								positive
4. bad								good

10. Please indicate your opinion with the following statements by clicking the number that best represents your opinion. (campaign participation intention)

	Strongly Disagree					Strongly Agree	
(1) I would consider purchasing this brand in order to provide help to the cause	1	2	3	4	5	6	7
(2) I would be willing to participate in this campaign.	1	2	3	4	5	6	7
(3) It is likely that I would contribute to this cause by getting involved in this campaign.	1	2	3	4	5	6	7

11. Please indicate your opinion with the following statements by clicking the number that best represents your opinion. (engagement on social media)

If you see this advertisement in your social media (e.g., Facebook, Twitter), How likely are you to do any of the following?

	Very unlikely					Very likely	
(1) How likely do you think you would press the 'like' button for this message?	1	2	3	4	5	6	7
(2) How likely do you think you would share this message?	1	2	3	4	5	6	7
(3) How likely do you think you would comment on this message?	1	2	3	4	5	6	7

12. We would like to know your attitude toward the health behavior.

Sunbathing is\_\_\_\_\_.

1)Disagreeable	1	2	3	4	5	6	7	Agreeable
2)Dull	1	2	3	4	5	6	7	Interesting
3)Boring	1	2	3	4	5	6	7	Stimulating
4)Unpleasant	1	2	3	4	5	6	7	Pleasant
5)Bad	1	2	3	4	5	6	7	Good
6)Useless	1	2	3	4	5	6	7	Useful
7)Disadvantageous	1	2	3	4	5	6	7	Advantageous
8) Unhealthy	1	2	3	4	5	6	7	Healthy
9)Not relaxing	1	2	3	4	5	6	7	Relaxing

Tanning bed use is\_\_\_\_\_.

1)Disagreeable	1	2	3	4	5	6	7	Agreeable
2)Dull	1	2	3	4	5	6	7	Interesting
3)Boring	1	2	3	4	5	6	7	Stimulating
4)Unpleasant	1	2	3	4	5	6	7	Pleasant
5)Bad	1	2	3	4	5	6	7	Good
6)Useless	1	2	3	4	5	6	7	Useful
7)Disadvantageous	1	2	3	4	5	6	7	Advantageous
8) Unhealthy	1	2	3	4	5	6	7	Healthy

9)Not relaxing	1	2	3	4	5	6	7	Relaxing
Sunscreen use is _____.								
1)Disagreeable	1	2	3	4	5	6	7	Agreeable
2)Dull	1	2	3	4	5	6	7	Interesting
3)Boring	1	2	3	4	5	6	7	Stimulating
4)Unpleasant	1	2	3	4	5	6	7	Pleasant
5)Bad	1	2	3	4	5	6	7	Good
6)Useless	1	2	3	4	5	6	7	Useful
7)Disadvantageous	1	2	3	4	5	6	7	Advantageous
8) Unhealthy	1	2	3	4	5	6	7	Healthy
9)Not relaxing	1	2	3	4	5	6	7	Relaxing

13. Please indicate your opinion with the following statements by clicking the number that best represents your opinion. (Behavioral control) (Reverse coded)

	Easy						difficult
1. In the next week, how easy/difficult would it be for you to sunbathe?	1		2	3	4	5	6 7
2. In the next week, how easy/difficult would it be for you to use tanning salon?	1		2	3	4	5	6 7
3. In the next week, how easy/difficult would it be for you to use sunscreen?	1		2	3	4	5	6 7

14. Please indicate your opinion with the following statements by clicking the number that best represents your opinion. (behavioral intention)

	Strongly disagree						strongly agree
(1) I intend to sunbathe within the next week.	1	2	3	4	5	6	7
(2) I intend to go to tanning salon within the next week.	1	2	3	4	5	6	7
(3) I intend to use sunscreen when out in the sun.	1	2	3	4	5	6	7

15. Please indicate your opinion with the following statements by clicking the number that best represents your opinion. (Attitudes toward skin cancer)

We would like to know how you feel about the about the skin cancer.

I think that the skin cancer \_\_\_\_\_.

	1	2	3	4	5	6	7	
1. is unimportant								is important
2. means nothing to me								means a lot to me
3. is personally irrelevant to me								is personally relevant to me
4. doesn't matter a great deal to me								does matter a great deal to me
5. is of no concern to me								is of great concern to me

**Demographic information**

16. Please indicate your sex.

Male ( )

Female ( )

17. How old are you?

(     ) years old

18. How do you describe yourself?

- 1) American Indian or Alaska native
- 2) African American
- 3) Asian
- 4) Caucasian
- 5) Hispanic or Latino
- 6) Native Hawaiian or Other Pacific Islander
- 7) Other

19. How many years have you been living in Kansas?

20. Are you an international student?

Yes (   )

No (   )

21. Family history: Has anyone in your family ever had skin cancer or melanoma?

Yes (   )

No (   )

22. What is your year in college?

- (1) Freshman
- (2) Sophomore
- (3) Junior
- (4) Senior
- (5) Graduate
- (6) Other