

INTERPLAY OF SOCIAL DISTANCE, REGULATORY FOCUS AND INVOLVEMENT IN
ANTI-HIGH-RISK DRINKING ADVERTISING: THE ROLE OF CONSTRUAL LEVEL
THEORY

By

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To my beloved family
for all their love, care, and support

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The present study examines the interactive effects among social distance, regulatory focus and involvement on individuals' responses to anti-high-risk drinking advertising. The current research evaluates messages framed as social distance and regulatory orientations, and investigates whether the persuasive effect of the regulatory focus differs as a function of social distance frames based on conceptual rationale drawn from construal level theory. This research seeks to also investigate how the interplay between social distance and regulatory focus varies at individuals' involvement with the framed messages. A 2 (social distance: proximal vs. distant) X 2 (regulatory focus: promotion vs. prevention) X 2 (involvement: high vs. low) between-subjects randomized experimental design was implemented to explore the advertising message effects on attitudes toward advertising, attitudes toward moderate and responsible drinking, and intentions to drink moderately and responsibly. The results show that when asked to make judgments for the distant entities, people are more persuaded by a promotion focus frame, compared to when asked to make judgments for the proximal entities. On the other hand, the results do not show a differential effect of the regulatory

focus frame on judgments associated with the proximal entities. Additionally, this research reveals the construal level effects do not remain significant when people are more motivated to process information. In doing so, the findings from the experiment not only shed light on the potential effects of the framed messages, but also contribute to the relevant theories by testing its boundary condition and tapping into unanswered issues. The findings provide important theoretical implications for future research on construal level theory and practical implications for strategic use of individually tailored messages, particularly in anti-high-risk drinking advertising.

CHAPTER 1 INTRODUCTION

High-risk drinking among college students is one of the most challenging problems on college campuses (Wolburg, 2001; Lederman, Stewart, Goodhart, & Laitman, 2003). According to The National Survey on Drug Use and Health, binge (high-risk) drinking, defined as drinking five or more drinks in one setting within the past 30 days (Department of Health and Human Services, 2007), has actually increased over time. More than 90% of alcohol consumption among young adults between 18 and 25 involves high-risk drinking (Office of Juvenile Justice Delinquency Prevention, 2005). Nowhere is this more prevalent than on college campuses, with two out of five college students reporting having “binged” in the most recent two weeks (O’Malley & Johnston, 2002). At least 30-40% of college students are involved in dangerous drinking on most college campuses, and approximately 70% of them engage in drinking behavior during their college years on all college campuses (Perkins, 2002). Most colleges tolerate a certain amount of consumption by students, but the negative consequences of excessive drinking remain problematic. Every year, there are 600,000 assaults, 70,000 sexual assaults, and 1,400 deaths related to alcohol among college students (National Institute on Alcohol Abuse and Alcoholism, 2002). The high rate of high-risk drinking has a profound influence on learning, retention, and graduation and is linked to the use/abuse of other substances (e.g., cocaine and tobacco) and to mortality and morbidity from alcohol-related accidents and deaths (Beets et al., 2009; Naimi et al., 2003).

Social Norms Advertising Campaigns

Recognizing that high-risk drinking is a serious problem among college students, many attempts have been made to reduce high-risk drinking and encourage responsible drinking among college students (Lederman, 2010). A considerable body of research has revealed that college students tend to have misperceptions about peer drinking norms (e.g., Berkowitz & Perkins, 1986; Prentice & Miller, 1993), as most college students are likely to overestimate their peers' consumption of alcohol. Research related to social norms addresses pluralistic ignorance (Miller & McFarland, 1987; Toch & Klofas, 1984) that occurs when social group members' biased perceptions of their peers' and other community members' behaviors and beliefs influence healthy behavior. A similar concept is false consensus, which is a false belief that everyone else thinks the same (Ross, Greene, & House, 1977). When the frequency of problem or risk behaviors is overestimated or the frequency of healthy or protective behaviors is underestimated in the social environment, incorrect perceptions, which may cause individuals to change their own behaviors to the unhealthy misperceived norm, occur (e.g., "everybody's doing it") (Thombs & Hamilton, 2002; Thombs, Wolcott, & Farkash, 1997). Therefore, social norms-based approaches are designed to decrease college students' drinking by correcting their exaggerated perceptions about common drinking behavior (Broadwater, Curtin, Martz, & Zrull, 2005; Perkins & Wechsler, 1996).

Notably, the social norms approach to message development has been employed to correct misperceptions by presenting accurate norms to reduce high-risk drinking in the college population (Haines & Spear, 1996; Lewis & Neighbors, 2006). Traditionally, the social norms messages have focused on education about alcohol-refusal skills, enhancement of students' self-esteem, increasing students' awareness of

negative alcohol-related consequences, and discouraging heavy drinking among students (Haines & Spear, 1996; Wechsler, Seibring, Lui, & Ahl, 2004). Moreover, the communication messages attempt to provide students with objective facts and statistics about drinking norms on college campus. They have often been successful in reducing alcohol use in college populations (Berkowitz, 2000). For instance, main message themes used in colleges to discourage high-risk drinking emphasize social norms and statistics that show most students do not over-consume alcohol (Perkins, 2003).

Of particular interest is that traditional public service announcements (PSAs) and social networking sites (SNSs), such as MySpace, Facebook, and Twitter, are major tools used in social norms advertising campaigns to discourage high-risk drinking on college campuses. Anti-binge drinking campaigns commonly use PSAs that discourage excessive drinking of college students in particular (Treise, Wolburg, & Otnes, 1999). Using various media outlets (e.g., newspaper ads, radio, posters, and fliers), the PSAs provide college students with accurate information regarding the alcohol use of their peers, such as objective facts and statistics about drinking norms on campus (Pilling & Brannon, 2007). Additionally, social norms interventions which use SNSs have been successful in reducing alcohol use in college populations. For instance, based on a Facebook fan page and Twitter presence with more than 700 fans, Michigan State University executed a two-year ad campaign to encourage students to make good choices about drinking alcohol (Jacobson, 2010). High-risk drinking has also declined two years after the University of Massachusetts at Amherst launched a social-norms campaign utilizing SNSs (Schworm, 2008).

Limitations of Social Norms Advertising Campaigns

Although a number of colleges and universities have adopted generalized social norms advertising campaigns, several scholars (e.g., Campo & Cameron, 2006; Polonec, Major, & Atwood, 2006; Wechsler, Lee, Kuo, & Lee, 2000b) assert that the social norms campaigns are unsubstantiated; thus, the widespread use of the campaigns should be scrutinized. Previous studies found no evidence that the social norms approach actually reduces national high-risk drinking levels (Wechsler et al., 2002). Social norms messages were found to be ineffective in changing either perceptions or actual drinking behavior, or in targeting heavy drinkers who are less concerned about others' thoughts and behaviors (Polonec et al., 2006). More importantly, some boomerang effects were indicated in the recent literature. The effects of social norms messages on college students who drink the most led to more unhealthy alcohol-related attitudes following message exposure (Campo & Cameron, 2006). This outcome was particularly true for statistical normative messages. Similarly, psychological reactance — that is, the perceived threat to freedom — was found to result in framed messages that failed to dissuade excessive alcohol consumption among college students (Quick & Bates, 2010).

Notably, recent research on social norms approach has highlighted the complex social nature of human interaction, placing greater emphasis on messages developed to target individual students' specific orientations toward alcohol use. According to Cameron and Campo (2006), simply using a message based on social norms approach does not consistently lead to behavior change among college students. Pilling and Brannon (2007) suggested that tailoring the social norms message to individual

students' behaviors rather than using a generic message effectively reduces high-risk drinking. Considering these contradictory findings about social norms advertising campaigns, there is a need to develop multiple anti-high-risk drinking intervention approaches that would consider the dynamic process of the issues related to alcohol consumption on campus.

Need for Current Research

Given the complex social nature of human interaction with regard to drinking behaviors, there is a need to reexamine the effects of social norms from the perspective of social distance. College students tend to perceive that the average students (outgroup members) drink more than their friends (ingroup members). The magnitude of misperceptions about alcohol use by outgroup members is greater due to the outgroup bias, but is weaker in terms of their effect on personal drinking behaviors. Conversely, the size of misperceptions is smaller due to the ingroup bias, but is stronger in terms of their effect on personal drinking behaviors (Yanovitzky, Stewart, & Lederman, 2006). Existing research (Baer, 2002; Oetting & Donnermeyer, 1998; Real & Rimal, 2007; Yanovitzky et al., 2006) suggests that proximal entities, compared to distant entities, are more persuasive in terms of reducing college students' alcohol use. It is also important to note that the effect of misperceptions about alcohol use on personal behavior depends on how important or noticeable their membership is in a group related to the alcohol use (Yanovitzky et al., 2006). Admittedly, the findings about the important role of social distance in influencing personal drinking behavior invite a closer scrutiny of the typical message strategy used in social norms interventions. They suggest that there may be a need to develop messages that modify college students' alcohol-related behaviors by their friends rather than average students on campus.

In addition, another drinking reduction strategy is to develop messages framed in positive or negative terms. In terms of message approach, one of the widely implemented themes that might affect drinking behavior involves positive and negative reinforcements, or the portrayals of positive and negative consequences related to excessive alcohol consumption in health-related messages (Robberson & Roger, 1988). In particular, goal framing research has found that messages that emphasize the benefits of undertaking the behavior (gain-framed messages) are more effective compared to messages that emphasize the costs of not undertaking the behavior (loss-framed messages) in promoting healthy activity (e.g., Rothman & Salovey, 1997). Rothman, Martino, Bedell, Detweiler, and Salovey (1999) suggested that gain-framed appeals are more likely to influence prevention behaviors, including using sunscreen and exercising while loss-framed appeals tend to influence detection behaviors, including cancer screening and breast-cancer examinations.

Recently, scholars have considered the effectiveness of framed messages at the individual level instead of the behavior type (prevention vs. detection behaviors) level (Leshner & Cheng, 2009; Shen & Dillard, 2009; Quick & Bates, 2010). Dispositional factors, which refer to one's tendency to orient his behaviors toward favorable or unfavorable outcomes, influence an individual's reactions to framed messages (Latimer, Salovey, & Rothman, 2007). Of special interest is the tendency to think about one's daily experiences in terms of the presence and absence of positive or negative outcomes of behavior in line with a regulatory focus (Higgins, 1998). Regulatory focus theory (Higgins, 1997) suggests that there are two categories of people who can be distinguished according to their motivational orientations: promotion-focused people and

prevention-focused people. People who direct their behavior toward advancement and achievement self-regulate in such a way that approaches their desired end state (promotion focused). On the other hand, people who orient their behavior toward protection and safety self-regulate behavior in a manner that avoids mismatches with their desired end states (prevention focused) (Higgins, Shah, & Friedman, 1997). In other words, people regulate their responses to positively- and negatively-framed appeals by using different strategic paths (i.e., an approach strategy or an avoidance strategy) to goal attainment (Cesario, Grant, & Higgins, 2004; Higgins, 2002; Kim, 2006; Lee & Aaker, 2004).

Despite the pervasiveness of the research on regulatory focus in diverse disciplines, few studies have empirically examined the effects of framed messages associated with self-regulatory strategies in the context of anti-high-risk drinking intervention. The persuasiveness of messages has been extensively studied in health-related behaviors in terms of differential effects of positively or negatively framed messages on decision-making process (e.g., Block & Keller, 1995; Rothman & Salovey, 1997). Nevertheless, research on the effectiveness of anti-high-risk drinking messages based on individuals' regulatory orientations is scarce. Whether to drink depends on a decision made by individual self-regulatory goals as well as an individual situated in a social relationship. Considering that little research has been conducted on the effects of messages framed as peer norms in college students' risk taking on self-regulatory strategies, it is timely to investigate the interaction effects between social distance and regulatory focus on discouraging high-risk drinking systematically. Moreover, individuals' level of involvement with alcohol use can be an important predictor affecting

attitudinal and behavioral responses to anti-high-risk drinking messages. Indeed, the construct of issue involvement has received attention in the health communication literature while studies have demonstrated that issue involvement is a variable that moderates the effects of message framing (Maheswaran & Meyers-Levy, 1990; Rothman, Salovey, Antone, Keough & Martin, 1993). Nevertheless, there is a lack of empirical research on people's responses to the framed messages dependent on the extent of their involvement with the alcohol uses. Thus, there is a need to examine the interplay among social distance, regulatory focus and involvement in the current research arena. In doing so, effective social norms-based intervention strategies that guide the individual-environmental dynamics in the health-enhancing direction can be developed in the context of anti-high-risk drinking interventions.

Theoretical Framework

Social distance and regulatory focus are theoretical accounts of how framed messages influence individuals' attitudinal and behavioral responses to anti-high-risk drinking advertising campaigns. Construal level theory (Trope & Liberman, 2003) will be employed to explain the interaction effects between perceptions of social distance and individuals' self-regulation strategies. The original theory postulates that people construct different mental representations for similar information based on whether the information pertains to psychologically proximal or distant entities. Additionally, in order to investigate a potential boundary condition for the construal level theory, the concept of involvement will be invited. The effects of construal level theory may represent a misattribution effect, which suggests that people could be confused about the source of their feeling-right about the traits of the target evaluated (Aaker & Lee, 2006). For example, people who make judgments for the average students are more likely to think

about abstract consequences of the anti-high-risk drinking, whereas people who make judgments for their best friends are more likely to think about concrete consequences of the anti-high-risk drinking. And this experience of feeling right occurs because of transfer from source misattribution (Cesario et al., 2004). This tendency suggests that people who experience the feeling right depend on heuristic (i.e., less involved) rather than systematic (i.e., more involved) processing of information. Thus, the robustness of the construal level effect under high- and low-involvement conditions can be examined in the present study.

Purpose and Overview of Research

The purpose of this investigation is to evaluate messages framed as social distance and regulatory orientations and examine the effects of individuals' involvement with the alcohol issue on the interplay of framed messages in the context of anti-high-risk drinking advertising. First, the social norms will be tested with the perceived social distance dimension: proximal and distant distance based on social identity theory. Also, the current research will examine the persuasive effect of the regulatory focus frames drawing on regulatory focus theory, and whether the regulatory focus effect differs as a function of social distance frames. Thus, this exploration presents a study that offers an in-depth look at the role of social distance and regulatory focus and their interaction effects based on construal level theory. Finally, this research will investigate how the interplay between social distance and regulatory focus varies at individuals' different information processing to the framed messages, acknowledging that the involvement might influence the role of the construal level theory. Therefore, to enhance the effectiveness of anti-high-risk drinking advertising, the present study lays the theoretical framework for the role of construal level theory and the role of individuals' involvement

as a boundary condition for the construal level theory. The study will explore the message effects on college students' attitudinal and behavioral responses to moderate responsible drinking. In doing so, the current research will not only shed light on the potential effects of the framed messages, but also contribute to the relevant theories by testing its boundary conditions and tapping into unanswered issues. The findings from the experiment will provide important theoretical implications for future research on public health interventions and practical implications for advertisers' strategic use of individually tailored messages, particularly in anti-high-risk drinking advertising. It is this researcher's contention that social contextual and individual factors in public health could moderate the message effects on health outcomes.

Chapter 2 proceeds with an expanded review of the existing literature on key theories, such as social distance, regulatory focus, construal level theory, and involvement, and provides hypotheses and research questions based on the theoretical underpinnings. Chapter 3 elaborates on the research design, recruitment, experimental procedure, stimulus development, measurement instrument, and pretest. Chapter 4 presents results of the study, including reliability checks, manipulation checks for independent variables, hypotheses testing, and testing for research questions and covariates. Chapter 5 provides a discussion of the research conclusions, in addition to theoretical and practical implications, limitations, and suggestions for future research.

CHAPTER 2 LITERATURE REVIEW

Message Strategies in Health Communication Campaigns

A campaign is defined as “a preplanned set of communication activities designed by change agents to achieve certain changes in receiver behavior in a specific time period” (Rogers, 1973, p. 277). A health communication campaign aims to enhance overall public health through persuasive communication activities. First, health communication campaigns are intended to generate desirable outcomes ranging from individual to societal changes. Rogers and Storey (1987) suggested that “a campaign is purposive” (p. 818) and has three levels of objectives: to inform, to persuade, and to mobilize behavior change. Mediated communication efforts are designed to increase individual levels of knowledge, reveal or change attitudes, or facilitate or prevent behaviors, which are accepted as the common good generating overall social improvement. Similarly, Flora, Maibach, and Maccoby (1989) proposed that mass media play the roles of educator, supporter, promoter, or supplement for health intervention. Second, when health communication campaigns are implemented, assessment of individual audiences is crucial. Parrot, Egbert, Anderton, and Sefcovic (2001) proposed that specific and consistent message strategies aimed at target audiences are key to generating successful outcomes for health campaigns. In that sense, Flora et al. (1989) suggested the necessity of tailored communication, asserting that “narrowcasting entails selecting media channels and designing media content to meet the demands of specific target groups” (p. 182).

Audience segmentation strategies targeting concrete messages to particular audiences are important in improving campaign effectiveness (Rogers & Storey, 1987).

The most common approach to segmenting audiences is demographic; this approach distinguishes audience members by age, gender, race, ethnicity, or income. A more sophisticated approach is to segment audiences using psychographic characteristics of the target because it influences enactment of the health behavior. Indeed, individual health behaviors, such as obtaining knowledge, coping with constraints, and self-motivation, are found to be the antecedents of sequential individual behavioral outcomes (Slater, 1995). Many theories of behavioral prediction and behavior change, including the health belief model (Becker, 1974), social cognitive theory (Bandura, 1986), theory of reasoned action (Ajzen & Fishbein, 1975), theory of planned behavior (Ajzen, 1985; 1991), and the transtheoretical model of behavior change (Prochaska, DiClemente, & Norcross, 1992), have been applied to explain a wide variety of health behaviors. These theories posit that health behaviors result from the interplay between behavior-specific cognitions and forces in the social environment (Slater, 1995). Specifically, the combination of behavior and relevant behavior-specific cognitions, which may play a role as an effective basis for audience segmentation strategies, includes “beliefs about self (e.g., self-efficacy), beliefs about the behavior (e.g., outcome expectancies), and beliefs about support for the behavior among relevant members in the social environment (e.g., perceived social support and norms) (Maibach, Maxfield, Ladin, & Slater, 1996).

In conjunction with audience segmentation based on behavior-specific cognitions and social environmental factors, health campaign practitioners have stressed the importance of developing the right messages to influence the right audiences (Hornick, 2002; Viswanath & Emmons, 2006). The optimal approach to tailoring includes

personalizing messages by considering complex individual differences in the cognitive and behavioral factors that affect health-related decision making and actions (Latimer, Katulak, Mowad, & Salovey, 2005). Several studies have systematically investigated the effectiveness of matching messages to specific psychological characteristics and demonstrated that psychologically tailored messages may be more persuasive than generic health messages. This has been illustrated by studies on messages tailored to an individual's behavioral self-efficacy (Campbell et al., 2004), level of social support (Brug, Steenhuis, Van Assema, & De Vries, 1996), and attributional style (Strecher et al., 1994); tailored messages are more likely to change cognitive and behavioral outcomes as opposed to non-tailored messages. Furthermore, Latimer et al. (2005) tailored messages to psychological constructs that differentiate people based on how they process health information using a variety of variables such as need for cognition (Cacioppo & Petty, 1982), coping style (Miller, Summerton, & Brody, 1988), health locus of control (Wallston, Wallston, & Devellis, 1978), and regulatory focus (Higgins, 1998).

Social Norms Approach

Given the importance of audience segmentation and message tailoring in health communication campaigns, multiple strategies can be used to design messages in the context of anti-high-risk drinking advertising campaigns. One message strategy that may enhance the effectiveness of the advertising campaigns is a social norms approach. There are two types of norms: injunctive norms and descriptive norms (Cialdini, Kallgren, & Reno, 1991; Kallgren, Reno, & Cialdini, 2000). Descriptive norms refer to what most people do in a given situation without implications of right or wrong. These norms, which define what behaviors are typically performed, refer to people's perceptions about what is commonly done in a particular situation regardless of the acceptability of the action. In

contrast, injunctive norms are social expectations about what people should do in a particular situation. These norms, defined in terms of what behaviors are typically approved or disapproved of, are related to perceived attitudes, beliefs, or moral rules about what is commonly approved or disapproved in a society or culture. Social norms, which refer to rules or expectations for appropriate social behaviors, particularly related to drinking behaviors, incorporate both injunctive and descriptive norms (Berkowitz, 2001; Borsari & Carey, 2003). Through a meta-analysis of 23 studies of norm misperceptions about alcohol use, Borsari and Carey (2003) found that many college students misperceive their peer group's drinking behavior, including the quantity and frequency (i.e., descriptive norm) and the approval or acceptance of drinking among their peers (i.e., injunctive norm). The extent of misperception of this descriptive norm has been suggested as an effective predictor of one's future drinking behavior, and most successful social norms interventions have used descriptive norms (Berkowitz, 2001).

Similar to perceived social norm, subjective norm has been found to be an important construct in predicting behavioral intention in the health campaign arena. Reasoning-based theories such as the theory of reasoned action (TRA; Fishbein & Ajzen, 1975) and the theory of planned behavior (TPB; Ajzen, 1985) address the role of subjective norms in predicting the intention to limit alcohol consumption. It is believed that the TRA and TPB provide an organizing framework for empirical findings related to the effectiveness of health interventions (Montano & Kasprzyk, 2002). More specifically, the TRA consists of beliefs, attitudes, intentions, and behaviors and deals with the relationships among those components, while the TPB, as an extended version of the

TRA, includes the influence of beliefs and perceptions regarding control—beliefs about our ability to actually perform the behavior, which is similar to the construct of self-efficacy. The TRA and TPB suggest that subjective norms can be operationalized and measured via beliefs about whether most people approve or disapprove of the behavior. Also, subjective norms can be indirectly measured by normative belief, which refers to belief about whether each referent approves or disapproves of the behavior, and motivation to comply, which refers to motivation to do what each referent thinks (Ajzen, 1985; Fishbein & Ajzen, 1975; Fishbein & Cappella, 2006; Montano & Kasprzyk, 2002). In light of this, based on TPB and the social norms approach, Park, Klein, and Smith (2009) examined whether perception of subjective norms, descriptive and injunctive university-level norms, and descriptive and injunctive U.S.-level norms represent separate dimensions of the behavioral intention to limit drinking to zero drinks and confirmed that the five types of norms are all unique constructs.

The social norms approach concerns peer influences that are based on what people think others believe and do (the perceived norm) rather than on others' real beliefs and actions (the actual norm). Moreover, it addresses the influences of incorrect perceptions of how other members in social groups think and act on human behaviors (Berkowitz, 2001). Notably, people may overestimate the permissiveness of peer attitudes and/or behaviors regarding alcohol or underestimate the extent to which peers engage in healthy behavior. The phenomenon in which people in a group misperceive the beliefs of others because everyone behaves inconsistently with their beliefs refers to pluralistic ignorance (Miller & McFarland, 1987; Toch & Klofas, 1984). Pluralistic ignorance occurs when a majority of people falsely assumes that most of their peers

think or behave differently from them, when in fact their attitudes and/or behaviors are similar. For instance, most college students who drink moderately or not at all incorrectly assume that other college students drink more than they do; these students also think that others drink more than they actually do (Prentice & Miller, 1996). In a similar vein, false consensus, as a self-serving bias, indicates the incorrect belief that others are like one's self, when in fact they are not (Ross, Greene, & House, 1977). For example, heavy drinkers may incorrectly think that most other students are heavy drinkers, or prejudiced individuals may incorrectly believe that they speak for their group (Borsari & Carey, 2001). In sum, the majority of people with healthy behavior may incorrectly believe that they are in the minority (i.e., pluralistic ignorance), while the minority who engage in unhealthy behavior may incorrectly think that they are in the majority (i.e., false consensus).

Indeed, a considerable body of research has revealed that college students tend to have misperceptions about peer drinking norms (e.g., Berkowitz & Perkins, 1986; Prentice & Miller, 1993); most college students are likely to overestimate their peers' consumption of alcohol. The misperceived drinking norms have been regarded as causal factors that affect heavy drinking and elicit alcohol misuse. Prentice and Miller's (1993) study showed significant errors in college students' estimates of social norms related to comfort with alcohol use in that students tend to believe that they are more uncomfortable with campus alcohol practices than the average student (the social norm). Similarly, Berkowitz and Perkins' (1986) research revealed that college students' perceptions of the campus drinking norm and drinking behavior, attitudes toward drinking, and the degree of consistency/discrepancy between their own attitudes toward

drinking and those of others are significantly associated with drinking behavior. The study showed that the more students believe that the perceived campus norm is similar to their own attitude, the more they drink. Also, research has consistently reported that students tend to overestimate the number of drinks that defines high-risk drinking while underestimating the seriousness of problems caused by heavy drinking (Wechsler & Nelson, 2001). Miley and Frank (2006) noted that high-risk drinkers overestimate drinking norms more consistently than non-high-risk drinkers. These misperceptions of alcohol consumption-related norms make students feel justified or even pressured to drink as much as they do (Gomberg, Kessel-Schneider, & DeJong, 2001).

A significant number of social norm-related interventions have been implemented as well, giving focus to the degree to which college students misperceive the level of peer drinking and the resulting tendency toward heavy drinking. Interventions based on social norms have been designed and implemented to correct misperceptions of peer drinking norms to reduce high-risk drinking in the college population (Haines & Spear, 1996; Lewis & Neighbors, 2006). These interventions have often been successful in reducing alcohol use in college populations. Haines and Spear (1996) found that a 5-year media campaign aimed at changing perceptions of drinking norms among Northern Illinois University (NIU) undergraduates resulted in an 18.5% drop in the number of students who perceived high-risk drinking as the norm. Haines and Spear also found that this intervention lowered the proportion of high-risk drinkers among the population by almost 9%. The NIU intervention was followed by successful marketing campaigns based on social norms at many colleges and universities (Berkowitz, 2001).

The social norms approach to message development was employed to correct these misperceptions by presenting accurate norms through traditional public service announcements (PSAs) and social networking sites (SNSs) such as MySpace, Facebook, and Twitter. As an integral part of public health campaigns (Wallack, 1989), PSAs are meant to raise public awareness of an issue to change the attitudes and behaviors of the public for its own good, vocalize health beliefs, and advocate healthy practices. PSAs seek to effect changes in knowledge, attitudes, and behavior related to alcohol consumption, changing the ways in which alcohol-related problems are considered as public health issues (DeJong & Atkin, 1995; Ringold, 2008). In particular, PSA-based social norms advertising is the most commonly implemented intervention used to disseminate messages about the dangers and consequences of high-risk drinking and convince students to drink moderately and responsibly (Pilling & Brannon, 2007).

SNSs also have been incorporated into the recent social norms campaign plans. Health communication practitioners have used social media, and specifically SNSs, for a number of health education, intervention, and social marketing efforts (Hawn, 2009). The Centers for Disease Control and Prevention (CDC) uses the SNS as an important platform for health communication and information exchange to engage individuals in health topics and empower them to lead healthier, safer lives (CDC, 2011). Given the importance of segmenting primary users of Web 2.0 social media (Thackeray, Neiger, Hanson, & McKenzie, 2008), recent research (e.g., Kontos, Emmons, Puleo, & Viswanath, 2010) has revealed that young adults, the so-called “online generation,” are more likely to use SNSs for health queries, comments, and updates, suggesting that

age is the primary predictor of SNS use. Based on this premise, social norms campaigns using SNSs have been successful in reducing alcohol consumption on college campuses (Jacobson, 2010; Schworm, 2008).

Message Strategy 1: Social Distance

Despite the prevalence of the social norms approach, past research (e.g., Campo & Cameron, 2006; Polonec et al., 2006; Wechsler, Lee, Kuo, & Lee, 2000b) has indicated that this approach can be ineffective in decreasing the levels of high-risk drinking. The social norms approach is based on the assumption that if students believe heavy drinking is the norm and an expected part of college life, they are more likely to become involved in alcohol abuse regardless of the accuracy of their belief. Social norms campaigns depend on the rationale that college students will tend to reduce alcohol use if they think that most students on campus are moderate drinkers. However, in Polonec et al.'s (2006) study, the results of the "Party Smart" social norms campaign revealed that only 27.4% of the students believed the norms message that most students drank only "0 to 4" drinks during their party time. In addition, Polonec et al. found that accuracy in estimating the social norms on college campus did not necessarily increase or decrease alcohol consumption. In that sense, the social norms campaign, based on the social comparisons approach, revealed its ineffectiveness in decreasing the levels of dangerous drinking among hard-core drinkers. This study found that students' drinking behaviors are less likely to be influenced by the reported campus drinking norm than their group norm. With regard to the ineffectiveness of the campaign, recent research (Cameron & Campo, 2006; Campo & Cameron, 2006; Pilling & Brannon, 2007; Polonec et al., 2006) asserted that there is a need to develop multiple approaches in the context of drinking behaviors. The complex relationships between

variables can be better understood by the causation among other predictor variables, such as social nature of human interaction and drinking behavioral outcomes.

In light of these findings, a critical issue influencing drinking behaviors may be the saliency of norms, or the degree of immediacy to an individual's environment (Borsari & Carey, 2001), which is related to the concept of social distance. The social distance corollary posits that the self-other perceptual gap of media effects (i.e., third-person perception) increases as the compared others become more distant from the respondents themselves. Although the concept was originally defined mainly with respect to geographic distance (Cohen, Mutz, Price, & Gunther, 1988), a body of research has tested it with different operationalizations, such as *close* (friends and acquaintances) versus *remote* (people in general) groups, *vague* versus *specific*, and *close friends* versus *distant* others (Paek, Pan, Sun, Abisaid, & Houden, 2005). The basic rationale for this argument is provided by social identity theory (Tajfel, 1982) that refers to the beliefs and feelings people have toward the groups to which they see themselves belonging. According to the social identity theory, people view themselves and others as group members who have a common or shared social identity. The stronger the social identification, the more magnified the tendencies toward perceptions of similarity between self and in-group members (i.e., in-group assimilation) and toward perceptions of difference between in-group and out-group members (i.e., intergroup contrast) (MacKie & Smith, 1998). The tendency to benefit members of one's own groups over members of other groups is related to in-group bias (Brewer, 1979; Tajfel, 1982). Specifically, past research has suggested that perceived alcohol use by proximal peers, such as best friends and friends, was a stronger predictor of students' personal

alcohol use than perceived alcohol use by more distant peers, such as students in general (Baer, 2002; Oetting & Donnermeyer, 1998; Real & Rimal, 2007; Yanovitzky et al., 2006).

The concept of social distance overlaps the idea of peer proximity. It is important to recognize that, theoretically, the term *peer* signifies a multidimensional concept that includes the following: best friends as the immediate social circle of friends, the peer group with which they interact, and the anonymous crowd in their school as the larger social context (Bearman, 2002). Peer influence operates at both proximal (close friends) and distal (leading crowds, peer groups) levels, a concept that Bearman (2002) termed “peer proximity.” In light of this, Gunther and Storey (2003) proposed a model called the influence of presumed influence (IPI) that predicts the indirect influence of media messages on individuals’ attitudes and behaviors via the presumed influence of the given media content on others. The importance of peer proximity in influencing health behaviors has been highlighted in health-related research fields. For example, Paek and Gunder (2007) found that respondents’ perception that proximal peers are influenced by anti-smoking messages leads to a significant decrease in their favorable thoughts toward smoking and intention to smoke.

Similarly, the role of peer communication has been emphasized in terms of reducing college students’ alcohol consumption. The theory of normative social behavior (TNSB; Rimal & Real, 2005) distinguishes the roles of descriptive and injunctive norms in behavior change and proposes a moderating effect of injunctive norms on the relationship between descriptive norms and intention to drink alcohol among college students. The theory also considers the role of other moderators, such

as “group identity (i.e., the strength of affiliation with one’s reference group; Tajfel, 1982) as well as outcome expectations (i.e., the belief that engaging in a behavior will confer positive outcomes; Bandura, 1986)” (Real & Rimal, 2007, p. 170). In particular, Real and Rimal (2007) found that peer communication about alcohol influenced the association between descriptive norms and behaviors, such that people who engage in discussions about alcohol-related issues are more likely to believe that many others engage in alcohol consumption. They also found the moderating role of discussion of alcohol in influencing the perceived prevalence of consumption. That is, when students talked about alcohol as opposed to when they did not, descriptive norms were more likely to predict the alcohol consumption. Consistent with previous findings (Campo, Brossard, Frazer, Lewis, & Talbot, 2003; Perkins, 1997), Real and Rimal’s (2007) study indicates that peer communication needs to be considered when conducting research on college students’ susceptibility to normative influences in their drinking patterns. Furthermore, Rimal’s (2008) study revealed that group identity and behavioral identity moderate the relationship between descriptive norms and behavioral intentions.

Notably, there are misperceptions about alcohol use in that college students are inclined to perceive that their best-friend pairs or the dyad (i.e., in-group members) drink less than students in general (i.e., out-group members) (Yanovitzky et al., 2006). People are likely to have stronger misperceptions about alcohol use by out-group members due to out-group bias, but the size of misperceptions is weaker in terms of their effect on individual drinking behaviors. On the other hand, people tend to have weaker misperceptions about alcohol use by in-group members due to in-group bias, yet the magnitude of misperceptions is stronger in terms of their effect on behaviors. Previous

research (e.g., Bosari & Carey, 2001; Carter & Kahnweiler, 2000; Thombs, Wolcott, & Farkash, 1997; Yanovitzky et al., 2006) conducted on college drinking has documented that as social distance increases, misperceptions about alcohol use by peers tends to increase. For instance, Borsari and Carey (2001) reviewed the existing literature about peer influence on an individual's behavior and found that individual drinking behavior is influenced by the social distance of the individual from the environment. Misperceptions tend to increase as social distance increases, while the closer or more prominent a social group's influence is, the stronger the influence on personal drinking behavior is (Berkowitz, 2001). For example, almost all students on a college campus are more influenced by campus behavior norms than by norms of off-campus behavior or behavioral norms at other schools (Perkins, 2003). In terms of drinking behavior and perception, an individual college student tends to perceive that his or her friends drink more than the individual does and that in general the student body drinks more than the individual's own friends (Berkowitz, 2001).

Message Strategy 2: Regulatory Focus

The persuasiveness of positively or negatively framed messages has been extensively studied in health-related behaviors (Block & Keller, 1995; Meyerowitz & Chaiken, 1987; Rothman & Salovey, 1997). Drawing on prospect theory (Tversky & Kahneman, 1981), research has revealed the differential effects of messages that contain negatively framed information versus those with positively framed information. The prospect theory proposes that people's responses to the stated probability of an outcome are sensitive to how message frames are presented as gains or losses. The framing postulate of the prospect theory suggests that two respective ways of presenting the same information would influence an individual's attitudinal and

behavioral responses differently. For instance, in the examination of skin cancer, messages can be positively framed: “If a cancerous growth is detected, 19 of 20 growths are [frequently diagnosed as] the less deadly non-melanoma cancer.” In contrast, they can be framed negatively as well: “If a cancerous growth is detected, 1 of 20 growths is [frequently diagnosed as] the more deadly melanoma cancer” (Rothman, Salovey, Antone, Keough, & Martin, 1993, p. 410).

Nevertheless, the literature cited above showed inconsistent findings related to the effectiveness of positively framed or negatively framed messages. For example, negative framing is more effective when it comes to detection behavior, such as breast self-examination (Meyerowitz & Chaiken, 1987), mammography screening (Banks et al., 1995), and skin cancer detection (Rothman et al., 1993), rather than when it refers to other behaviors. On the other hand, in terms of disease prevention or health promotion such as improvement of self-esteem through regular exercise (Robberson & Roger, 1988), use of sunscreen for prevention of skin cancer, and use of a car seat for one’s child (Rothman et al., 1993), positive framing is more persuasive than negative framing. In that sense, Kelly and Rothman (2002) proposed that loss-framed messages are more persuasive than gain-framed messages when the goal of the examination is to indicate a health problem rather than to accrue a health benefit. To resolve the inconsistent findings, Rothman, Bartels, Wlaschin, and Salovey (2006) also suggested a concrete framework for health campaigners who develop interventions as a means of promoting desirable health behaviors. While detection behaviors, such as cancer screening practices and breast-cancer examinations, are more likely to be affected by loss-framed

appeals, prevention behaviors, such as using sunscreen and exercising, are more likely to be influenced by gain-framed appeals (Rothman et al., 2006).

Certainly, matching the message frame to the type of behavior can enhance the message's persuasiveness. However, O'Keefe and Jensen's (2007) meta-analytic review indicated that there are no statistically significant differences in persuasiveness between gain- and loss-framed messages concerning preventive actions, such as safer sex behaviors, skin cancer prevention behaviors, or diet and nutrition behaviors. Moreover, O'Keefe and Jensen's (2009) meta-analysis revealed that using loss-framed rather than gain-framed appeals is unlikely to substantially improve persuasiveness in advocacy of disease detection behaviors. Along the same vein, recent research (e.g., Leshner & Cheng, 2009; Shen & Dillard, 2009; Quick & Bates, 2010) has attempted to consider message framing effectiveness at the level of individual type, not at the level of behavior type (prevention vs. detection behavior). Individuals' tendency to orient their behaviors toward favorable or unfavorable outcomes may influence their responses to framed messages (Latimer et al., 2007).

Given the importance of individuals' dispositional factors in the message-framing research, the current research suggests that the effects of message frames may be operationalized differently depending on message frame congruency with message recipient goals. Regulatory focus theory (Higgins, 1997) indicates that two distinct kinds of goals exist. One is to attain advancement and achievement by aiming for matches to desired end states (i.e., promotion focus); the other is to attain protection and safety by avoiding mismatches to desired end states (i.e., prevention focus). A promotion focus is geared to motivate people to pursue gains and aspire toward ideals, while a prevention

focus is geared to motivate people to avoid losses and fulfill obligations (Lee & Aaker, 2004). These distinct goals can be served by different strategic means. Promotion focus uses an approach strategy to goal attainment, whereas prevention focus uses an avoidance strategy to goal attainment (Cesario et al., 2004; Higgins, 2002; Kim, 2006; Lee & Aaker, 2004). Accordingly, there are two distinct types of people; promotion-focused people, who are motivated by achievement and are sensitive to opportunities for advancement, and prevention-focused people, who are motivated to avoid threats to security and safety, and are sensitive to occasions of hazard (Zhao & Pechmann, 2007).

Of special interest is that regulatory focus can be investigated either as a chronic individual difference or a situationally induced focus (Cesario et al., 2004). First, regulatory focus has been conceptualized as a chronic tendency, acknowledging that people have a natural predisposition to prefer a promotion orientation or gravitate more toward a prevention orientation. Previous research (e.g., Higgins, 1987; Lee, Aaker, & Gardner, 2000) has supported the idea that people have a chronic regulatory focus, suggesting that approximately half of people are chronically promotion focused and the other half are prevention focused. Also, regulatory focus has been examined as a situational factor in that it can be manipulated for a particular task or goal. People can momentarily activate an eager or vigilant means of obtaining the goal, or they can activate a prevention or promotion focus (Cesario et al., 2004). Regulatory goals can be elicited by momentary situations, such that message frames providing positive consequences to be gained elicit a promotion focus and those providing negative consequences to be avoided elicit a prevention focus (Kees, Burton, & Tangari, 2010; Kim, 2006; Lee & Aaker, 2004). A persuasive message can be framed as either an

eager means, focusing on achieving success, or a vigilant means, focusing on preventing failure (Cesario et al., 2004).

Regulatory focus effects have been examined in terms of how message framing moderates the effects of individuals' goals associated with regulatory focus on persuasion in the health-related advertising context. According to Aaker and Lee's (2001) study, promotion-focused information, including becoming energized, was found to be more persuasive for people who are exposed to a promotion focus than for those who were imbued with a prevention focus. Conversely, prevention-focused information, such as avoiding heart disease, was found to be more effective for people exposed to a prevention focus than to a promotion focus. With regard to the role of regulatory focus in message framing, Aaker and Lee (2001) found that appeals presented in gain frames were more persuasive when the message was promotion focused, whereas loss-framed appeals were more persuasive when the message was prevention focused. These regulatory focus effects suggesting heightened vigilance against negative outcomes and heightened eagerness toward positive outcomes were replicated when perceived risk was manipulated in their study. In a similar vein, Kim's (2006) study showed that a good match between antismoking ad messages and the regulatory goal led to adolescents who had lower smoking intentions and lower perceptions of the benefits of smoking. The study suggested that antismoking messages for adolescents with a promotion focus should emphasize promotion-related merits of abstaining from smoking, whereas antismoking messages for adolescents with a prevention focus should emphasize prevention-related merits of abstaining from smoking.

Moreover, recent research has proposed moderating effects of other variables on individuals' goals associated with regulatory focus. Kees et al. (2010) examined the effects of message framing of health advertisements and individual differences in temporal orientation on consumer risk perceptions, attitude, and behavioral intentions. Kees et al. found that consumers' temporal orientation moderates ad-framing effects related to goal pursuit strategies (GPSs). Also, they found that the fit between a GPS manipulation in the ad and consumers' chronic regulatory focus increases the effectiveness of the advertisement, but the regulatory fit effect is moderated by temporal orientation. Sung and Choi (2011) investigated how an individual's self-construal and self-regulatory focus interplay in determining advertising message persuasiveness. Examining the moderating role of an individual's chronically accessible self-construal with respect to regulatory focus, they found that individuals with a dominant independent self-construal (vs. a prevailing interdependent self-construal) exhibit more positive attitudes toward a promotion-focused (vs. a prevention-focused) advertising message and the advocated brand. Additionally, they confirmed that situationally primed self-construal, in conjunction with regulatory focus, has a similar impact on advertising message effectiveness.

Construal Level Perspectives

Recent studies (Eval, Liberman, Trope, & Walther, 2004; Nan, 2007) have suggested that positive attributes associated with a course of action constitute a higher construal level, while negative attributes make up a lower construal level. This kind of feeling-right experience provides an important theoretical underpinning of the social distance and regulatory focus interaction. Construal level theory (CLT) (Trope & Liberman, 2003) postulates that people construct different mental representations of the

same information depending on whether the information pertains to the near future (i.e., psychologically proximal) or the distant future (i.e., psychologically distant). Specifically, Eyal et al. (2004) found that people generated more arguments in favor of a social plan when it was expected to launch in the distant versus the near future. Further supporting the assertion that positive attributes constitute a higher construal level than negative attributes, Nan (2007) proposed that the persuasiveness of a gain frame, which focuses on positive consequences of performing the requested behavior, becomes stronger when people make judgments for socially distant versus proximal entities.

A basic tenet of construal level theory is that temporal distance influences the way people mentally represent the same information or event (Trope & Liberman, 2003). The greater the temporal distance, the more likely events will be represented in terms of abstract, schematic, and decontextualized features, often referred to as high-level construals. On the other hand, as temporal distance decreases, events will be more likely to be represented in terms of concrete, detailed, and contextualized features, often referred to as low-level construals. In other words, according to the construal level theory, people use concrete, low-level construals to represent near events. In contrast, people use abstract, high-level construals — defined in terms of schematic, decontextualized representations that extract the gist from the available information — to represent distant events (Trope, Liberman, & Wakslak, 2007). Research has shown that different dimensions of psychological distance (time, space, social distance, and probability) affect mental construal. In particular, numerous studies (Liberman, Sagristano, & Trope, 2002; Liberman & Trope, 1998; Forster, Friedman, & Liberman, 2004) have examined the hypothesis that distant future events are represented in a

more abstract, structured manner that emphasizes superordinate and incidental features of events, while near future events are represented in a concrete, contextualized manner that includes an emphasis on subordinate features of events.

Interestingly, the principles of construal level theory apply to various forms of psychological distance, including so-called social distance (e.g., in-group vs. out-group). Liviatan, Trope, and Liberman (2006) examined construal effects related to similarity, one form of social distance. Their research was based on the assumption that the less similar someone is to oneself, the more socially distant they typically seem. The researchers hypothesized that behavior performed by a dissimilar other would be represented at a higher level of construal than behavior performed by a similar other (Trope et al., 2007). Liviatan et al. (2006) hypothesized that behavior performed by a dissimilar other (i.e., a target person who had attended different classes than participants themselves) would be represented at a higher level of construal than behavior performed by a similar other (i.e., a target person who had attended similar classes as participants themselves). They found that if dissimilar targets' actions were represented in higher level terms than similar targets' actions, participants' preference for superordinate action identifications (i.e., description emphasizing the end for which the action is performed) relative to subordinate action identifications (i.e., description emphasizing the means by which the action is performed) was greater for a dissimilar than similar target. In addition, Smith and Trope (2006) examined the relationship between power activation and abstraction, such that merely activating the concept of power should cause people to view stimuli in terms of the "big picture," to focus on the gist and categorize broadly, even if these stimuli are unrelated to power itself. Smith and

Trope claimed that elevated power increases the psychological distance one feels from others, and this distance, according to construal level theory should lead to more abstract information processing. Smith and Trope's study measured the inclusiveness of categorization, indicating to what degree atypical exemplars (e.g., purse) are good members of a given category (e.g., clothing). If priming high power leads to more abstract thinking, high-power-primed participants should be more inclusive in their categorization than low-power-primed participants. Thus, high-power-primed participants should rate these atypical exemplars as better category members than low-power-primed participants. The results suggest that power priming leads to more abstract thinking and thus greater breadth of categorization.

The principles of construal level theory are similar to those of regulatory fit, a concept defined as the "increased motivational intensity that results when there is a match between the manner in which a person pursues a goal and his or her goal orientation" (Aaker & Lee, 2006, p. 15). The interaction effects between regulatory focus and temporal distance are evidence of a regulatory fit-type of effect (Aaker & Lee, 2006). Research on regulatory fit conveys the relationship between regulatory goal and strategic means during goal pursuit. The experience of feeling right resulting from a regulatory fit leads to more positive feelings about desirable choices and negative feelings about undesirable choices (Higgins, 2002). In other words, when people feel right about their reactions, positive reactions become more positive, and negative reactions become more negative (Cesario et al., 2004). This experience can increase individuals' level of confidence, the importance given to their reactions, and their engagement in reactions (e.g., Avnet & Higgins, 2006). In line with this, the effects of

self-regulatory focus can be operationalized differently depending on message frame congruency with message recipient goals. People with a promotion (vs. prevention) focus evaluate the target product and product features described at an abstract (vs. concrete) level of construal more favorably (Lee, Keller, & Sternthal, 2010). In a similar vein, positive or promotional outcomes of an event constitute high-level construals, whereas negative or preventional outcomes represent low-level construals. Thus, when people with a prevention focus are prompted to take on a proximal versus a distant temporal perspective, they have more positive attitudes toward the target product (Mogilner, Aaker, & Pennington, 2008; Pennington & Roese, 2003).

Involvement as a Moderator of Construal Level Effects

A potential boundary condition for the construal level theory that assumes the interaction effects between social distance and regulatory focus can be explained by the concept of involvement. Temporal construal, defined as the tendency to construe near future events concretely and distant future events abstractly, is a generalized heuristic that results from differences in what people typically know and do about near- and distant-future situations (Trope & Liberman, 2003). In a similar vein, the regulatory fit effect driven by people who experience regulatory fit depends on heuristic rather than systematic processing of information. Regulatory fit involves an experience of feeling right that occurs due to transfer from source confusion (i.e., misattribution) (Cesario et al., 2004; Higgins, Idson, Freitas, Spiegel, & Molden, 2003). People adjust their responses and correct the bias when they are aware of how they believe that the feeling may potentially influence their responses (Higgins et al., 2003). The bias correction is resource demanding; when people are less involved with alcohol use, processing

capacity is limited; thus, there might be insufficient resources to correct for the response bias (Wang & Lee, 2006).

The heuristic-systematic model (HSM) proposes two fundamental information processing modes and provides a theoretical framework for understanding the effects of construal level. The model makes a distinction between a systematic (i.e., a more comprehensive, analytic orientation) and a heuristic (i.e., simpler decision rules) view of persuasion (Zuckerman & Chaiken, 1998). Systematic processing occurs when people exert considerable cognitive effort in judging message validity, while heuristic processing requires comparatively little effort (Chaiken, 1980). According to the systematic view, people actively access, scrutinize, and integrate the message's arguments to reach their judgment; thus, people need to devote more cognitive resources to a judgment task to engage in systematic processing. In contrast, heuristic processing requires less cognitive capacity than systematic processing; therefore, people in the heuristic processing mode use simple decision rules and have limited ability to process argumentation and, subsequently, rely on more accessible information (e.g., non-content cues) in judging message validity (Chaiken, 1980; 1987; Chaiken & Maheswaran, 1994; Zuckerman & Chaiken, 1998). Furthermore, people are likely to perceive the importance of a highly accurate judgment under conditions of high involvement, which means when people receive messages of personal importance or when people feel that their judgments have important consequences for themselves. On the other hand, under low-involvement conditions, which means when the topic is perceived as unimportant or when the judgment is perceived as inconsequential, people may employ a heuristic processing strategy (Chaiken, 1980).

In light of this, previous findings showed how involvement moderates the regulatory fit effects on attitude. Wang and Lee (2006) examined the robustness of the regulatory fit effect under high- and low-involvement conditions. People who are not motivated to process information tend to pay attention to information that addresses their regulatory concerns more heuristically. In contrast, people who are motivated to process information are likely to attend to information more systematically, regardless of regulatory focus relevance. Wang and Lee found that participants paid more attention to (e.g., selectively searched for and spent more time processing) and evaluated their product based on the information that addresses their regulatory concerns only when they were not involved in processing the information, which means, only under the low-involvement condition. On the other hand, they found no sign of the regulatory fit effect in product evaluations for involved participants. In a similar vein, Briley and Aaker (2006) found that people who were culturally inclined to have a promotion or prevention focus held more favorable product attitudes only when they were unable to expend cognitive resources on the task (e.g., cognitively busy with a memory task) or when they were under high-time-pressure conditions; nevertheless, this effect disappeared when they were able to expend cognitive resources, or under low-time-pressure conditions.

Hypotheses and Research Questions

According to social identity theory, people have perceptions of the groups to which they see themselves belonging, and view themselves and others as their group member who have a common or shared social identity. Based on the consistent finding that misperceptions about alcohol use by peers increase with increased social distance, it is plausible that the effect of drinking norms misperceptions on college students' drinking behavior is contingent on perceived social distance from peers. In light of it,

Yanovitzky et al. (2006) found that perceptions about alcohol use by proximal peers (friends and best friends) exerted more influence on college students' personal alcohol use than perceptions about alcohol use by more distant peers (such as students at the same university, students in general, and members of fraternities or sororities). Thus, it is conceivable that anti-high-risk drinking advertising messages would be more persuasive when the messages are framed as socially proximal entities (e.g., in-groups) than for socially distant entities (e.g., out-groups). The following hypothesis is postulated:

H1: When individuals make judgments for a socially proximal entity, there will be (a) more positive attitudes toward advertising, (b) more positive attitudes toward moderate and responsible drinking, and (c) greater intentions to drink moderately and responsibly, compared to when individuals make judgments for a socially distant entity.

It is expected that the effects of promotion- and prevention-focused messages aimed at motivating moderate and responsible drinking will differ on a basis of Rothman and Salovey's (1997) framework regarding prevention behavior versus detection behavior. Previous studies that have examined the influences of message frames on reducing health-damaging behavior such as abusing alcohol and smoking have found that individuals tend to be more risk-averse and more likely to abandon the risky behavior when the potential gains from responsible drinking or smoking cessation are considered. Gain-framed messages were found to be more effective in lowering alcohol use by college students than were loss-framed messages that stressed the consequences of alcohol use (Gerend & Cullen, 2008). Similarly, gain-framed visual and auditory appeals that focus on the benefits of smoking cessation were more likely than were loss-framed ones to elicit anti-smoking beliefs and attitudes (Schneider et al.,

2001) and to generate intentions to quit smoking (Steward, Schneider, Piazarro, & Salovey, 2003).

Acknowledging that message frames providing positive consequences to be gained elicit a promotion focus or those providing negative consequences to be avoided elicit a prevention focus (Kees et al., 2010; Kim, 2006; Lee & Aaker, 2004), a message can be framed as either eager means or vigilant means, or either a promotion focus or a prevention focus. Therefore, with regard to the anti-high-risk drinking advertising messages, people should be more receptive to a message suggesting eager means (vs. vigilant means) to achieve a goal. That is, it is predicted that an ad focusing on a promotion focus will be evaluated more favorably than one suggesting more a prevention focus. Specifically, people will be more responsive to a message framed as a promotion focus and will have more positive attitudes toward advertising that contains a message highlighting the benefits of moderate and responsible drinking than a message highlighting the costs of high-risk drinking. Also, a message framed as a promotion focus, rather than as a prevention focus, may be more effective in terms of generating attitudes and intentions to favor moderate and responsible drinking. The following hypothesis is postulated:

H2: A promotion-focused advertising message will lead to (a) more positive attitudes toward advertising, (b) more positive attitudes toward moderate and responsible drinking, and (c) greater intentions to drink moderately and responsibly than will a prevention-focused message.

With regard to the interaction effects between regulatory focus and social distance, it is conceivable that a promotion message that focuses on the positive outcomes of compliance would be more persuasive when preventive health messages are framed as socially distant entities (e.g., out-groups) than for socially proximal

entities (e.g., in-groups) according to construal level theory. In contrast, a prevention message that emphasizes the negative outcomes of noncompliance would be more persuasive when preventive health messages are framed as socially proximal entities than for socially distant entities. That is, it is expected that an ad message that focuses on promotion-oriented means for obtaining a goal would be evaluated more favorably in terms of practicing moderate and responsible drinking, when messages in the ad are evaluated from the perspectives of socially proximal entities, and prevention-oriented means for goal attainment would be prioritized when messages are evaluated from the perspective of socially distant entities. Thus, the following hypothesis is suggested:

H3: There will be an interaction effect between social distance and regulatory focus. When individuals make judgments for a socially proximal entity, a prevention-focused versus promotion-focused advertising message will generate (a) more positive attitudes toward advertising, (b) more positive attitudes toward moderate and responsible drinking, and (c) greater intentions to drink moderately. When individuals make judgments for a socially distant entity, the promotion-focused versus prevention-focused advertising message will be more persuasive.

Nevertheless, this tendency may be dependent on the level of involvement with the alcohol-related issues. People are predicted to pay more attention to information that is relevant to their regulatory concerns, but only when they are not motivated to process information. According to the heuristic-systematic model, people who are not motivated to process information that addresses their regulatory concerns are more likely to pay attention to information heuristically. On the other hand, people who are motivated to process the information are more likely to pay attention to information systematically. The construal level effect, or the interaction effect between regulatory focus and social distance, would still be observed when people are not motivated to process information carefully under the low involvement condition. On the other hand,

the regulatory fit effect would not be observed under the high involvement condition.

Hence, the following hypothesis is proposed:

H4: There will be an interaction among social distance, regulatory focus, and involvement. Under high involvement conditions, there will be no interaction effect between social distance and regulatory focus on (a) advertising attitudes, (b) moderating and responsible drinking attitudes, and (c) moderate and responsible drinking intentions; on the other hand, under low involvement conditions, there will be an interaction effect between social distance and regulatory focus.

There are potential variables that might moderate the effects of regulatory focus and attitudinal/behavioral responses to the advertising. Of particular interest is that risk perceptions can influence individuals' message processing, attitudes, and intentions to perform the requested behavior (Menon, Block, & Ramanathan, 2002). Regarding regulatory focus and perceived risk, Lee and Aaker (2004) applied the regulatory fit principle to their study and examined whether the effects of the regulatory focus are moderated by perceived risk when manipulating rather than measuring risk. Message frames influence individuals who are in high- versus low-risk conditions differently. More specifically, the researchers asserted that "high risk makes negative outcomes more salient and hence promotes participants to be more vigilant" (p. 212). Individuals' high perception of threats leads to enhanced vigilance in relation to a prevention focus, (Lee & Aaker, 2004). They found that when featured in a promotion focus frame, messages that focus on low risk result in a more favorable brand attitude. In contrast, when shown in a prevention focus frame, messages that focus on high risk lead to a more positive brand attitude. In light of it, the following hypothesis is posited:

H5: Risk perceptions will moderate the effects of regulatory focus-based message on (a) advertising attitudes, (b) moderating and responsible drinking attitudes, and (c) moderate and responsible drinking intentions.

In addition, given that personalizing messages are effective when targeting characteristics relating to individuals' drinking behavior, there is a need to investigate factors predicting the effectiveness of persuasive messages aimed at decreasing high-risk drinking. With regards to alcohol-related variables, research suggested that an individual's drinking behavior is determined by a level of alcohol consumption (Real & Rimal, 2007; Quick & Bates, 2010) and drinking attitudes (Campo & Cameron, 2006) in that heavy drinking in past affects present and future drinking. Furthermore, research on drinking expectancies (Lee, 2010; Leigh & Stacy, 1993; Real & Rimal, 2007; Wood, Sher, & Strathman, 1996) showed that positive expectancies increase drinking, while negative expectancies decrease drinking. Given the previous findings, it is important to investigate the effects of alcohol-related variables on the message persuasiveness, such as attitudes toward ad and behavior and behavioral intentions. Thus, the following research question is proposed.

RQ1: Do an individual's alcohol consumption, drinking attitudes, and drinking expectancies influence the outcome variables of interest?

Finally, demographic variables are likely to affect message persuasiveness. The variables related to peers, social network and social affiliation include residential system (on vs. off campus), Greek membership and athletic participation (Brannon & Pilling, 2005). Research showed that living on-campus (Gfroerer, Greenblatt, & Wright, 1997; Valliant & Scanlan, 1996), Greek membership (Baer, 1994; Cashin, Presley, & Meilman, 1998, Rimal, 2008), and athletic participation (Leichliter et al., 1998; Wechsler, Dowdall, Davenport, & Castillo, 1995) have been found to increase drinking. In addition, gender was found to predict drinking behavior. Previous research proposed that males compared to females consume more alcohol (Haines & Spear, 1996; Perkins &

Wechsler, 1996, Rimal, 2008). On a basis of the previous findings, there is a need to explore the effects of demographic variables on the message persuasiveness.

Therefore, the following research question is suggested:

RQ2: Do gender, residential system, Greek membership, and athletic participation influence the outcome variables of interest?

Summary of the Hypotheses and Research Questions

In sum, the hypotheses that will be tested and research questions to be explored in the study are as follows:

H1: When individuals make judgments for a socially proximal entity, there will be (a) more positive attitudes toward advertising, (b) more positive attitudes toward moderate and responsible drinking, and (c) greater intentions to drink moderately and responsibly, compared to when individuals make judgments for a socially distant entity.

H2: A promotion-focused advertising message will lead to (a) more positive attitudes toward advertising, (b) more positive attitudes toward moderate and responsible drinking, and (c) greater intentions to drink moderately and responsibly than will a prevention-focused message.

H3: There will be an interaction effect between social distance and regulatory focus. When individuals make judgments for a socially proximal entity, a prevention-focused versus promotion-focused advertising message will generate (a) more positive attitudes toward advertising, (b) more positive attitudes toward moderate and responsible drinking, and (c) greater intentions to drink moderately. When individuals make judgments for a socially distant entity, the promotion-focused versus prevention-focused advertising message will be more persuasive.

H4: There will be an interaction among social distance, regulatory focus, and involvement. Under high involvement conditions, there will be no interaction effect between social distance and regulatory focus on (a) advertising attitudes, (b) moderating and responsible drinking attitudes, and (c) moderate and responsible drinking intentions; on the other hand, under low involvement conditions, there will be an interaction effect between social distance and regulatory focus.

H5: Risk perceptions will moderate the effects of regulatory focus-based message on (a) advertising attitudes, (b) moderating and responsible drinking attitudes, and (c) moderate and responsible drinking intentions.

RQ1: Do an individual's alcohol consumption, drinking attitudes, and drinking expectancies influence the outcome variables of interest?

RQ2: Do gender, residential system, Greek membership, and athletic participation influence the outcome variables of interest?

CHAPTER 3 METHODOLOGY

Study Design

An experiment was implemented with a 2 (social distance: proximal vs. distant) X 2 (message frame: promotion focus vs. prevention focus) X 2 (involvement: high vs. low) between-subjects randomized experimental design to test the proposed hypotheses. The study consisted of three independent variables: 1) social distance; 2) regulatory focus frame; and 3) involvement. Social distance, defined as the saliency of norms or the degree of immediacy to an individual's environment, consisted of two levels: (1) proximal and (2) distant. The second independent variable, message frame, related to regulatory focus, consisted of two types: (1) promotion- and (2) prevention-focused. Finally, the third independent variable, involvement, defined as personal importance and relevance, varied at two levels: (1) high and (2) low. Subjects were randomly assigned to one of the eight conditions (Table 3-1).

Table 3-1. 2 X 2 X 2 factorial design

	High Involvement			Low Involvement	
	Promotion	Prevention		Promotion	Prevention
Proximal	I	II	Proximal	III	IV
Distant	V	VI	Distant	VII	VIII

The following sections present further information about the implementation of the research design, including information on the measurement instrument design, stimulus development, sampling and recruiting, and steps taken to pretest the research design.

Recruitment

Sampling criteria prior to the main experiment focused on that of being a college student. College students were chosen due to the fact that high-risk drinking or heavy

episodic drinking continues to be one of the most challenging problems facing college campuses (Wolburg, 2001). This study recruited the target audiences who are college students between the age of 18 and 24. Choosing a homogeneous group in terms of one specific university (i.e., UF) allows for a more controlled research sample that is consistent from pretests to main study. In that sense, undergraduate students from campus-wide introductory courses at University of Florida (UF) were recruited for this research in exchange for extra credit, in an amount to be determined at the course instructor's discretion. No other compensation was given to the subjects. Specifically, students were recruited from various kinds of courses in the College of Journalism and Communications at UF, including Principle of Advertising, Principle of Public Relations, Introduction to Telecommunication, TV & American Society, and Rock/Roll & America, Also, students from courses outside of the College of Journalism and Communications, such as Principle of Microeconomics and Introduction to Statistics, were invited to the current experimental study.

Prior to the experiment, an instructor for each class made an announcement of the study invitation, specifically regarding what the research was about, how to enroll via the online sign-up sheet, and how to participate in the research (e.g., research lab location, time) in classroom. Then, prospective sample in the campus-wide courses received an invitation e-mail from the researcher and was told that the purpose of this study as to examine UF students' responses to the initial messages developed for advertising campaigns to reduce alcohol use, which will be launched by UF Health Promotion Services (*GatorWell*). In the invitation email the reason why they were being asked to participate was emphasized in a sense that the present study might contribute

to the development of successful advertising campaigns to reduce alcohol use and that the results might affect the public health improvement on campus. In the invitation letter, subjects were directed to the link for the online sign-up sheet (i.e., doodle.com) and provided a complete list of available sessions for the study. Then, they were asked to click only one among the options given to sign up for a study session from October 3rd to 7th of 2011, and click only one among the options given. Finally, they were asked to type in their UF email address for a study session which was the day and time that was convenient for them, in order for a researcher to send a reminder email to them prior to the experiment.

Procedure

The experiment was conducted in a research lab (Weimer 2052) in the College of Journalism and Communications at UF where subjects used individual laptop computers to view the study materials. Each experiment session was held with up to 18 subjects due to a limit to the number of computers. Subjects were randomly assigned to one of the eight experimental conditions. When arriving at the research lab, the researcher informed subjects about their rights as study participants. Subjects were asked to read the informed consent form highlighting the purpose of research and the fact that no risks were associated with study participation and reinforcing the fact that their responses to all information requests would be confidential. After consenting to participate, subjects were directed to the next pages of the questionnaire made by Qualtrics software program, where they were guided to answer a series of questions regarding the study. The instrument was self-guided, and had no time limit. Individuals' goal-directed behaviors, regulated by two distinct motivational systems, were measured in the beginning of the experiment. In the pre-manipulation phase they were asked to

answer questions intended to measure their chronic-regulatory focus, defined as a natural predisposition to prefer a promotion orientation or gravitate more toward a prevention orientation. They were then asked to read the background information describing the definition of high-risk drinking as an introductory instruction. Then, based on a tool for randomization available in the Qualtrics, subjects were randomly assigned to one of the eight conditions.

Next, subjects were asked to read a newspaper excerpt for the involvement manipulation. After viewing the newspaper excerpt, they viewed a fictitious Facebook page that was meant to prime subjects with either a promotion or prevention focus. After viewing the Facebook page, they viewed a stimulus ad featuring a promotion focused- or prevention focused-message related to alcohol use and asking for judgments for a socially proximal- or distant-entity. The Facebook page and the stimulus ad were consistent in subjects' message focus. Following the ad exposure, subjects completed a post-manipulation questionnaire that measured the manipulation's effectiveness, dependent variables, moderating variables, alcohol usage-related variables and classification variables. Subjects were informed that the classification information would only be used to confirm that they participated in the research, and their identity was kept confidential to the extent provided by law. Last, they were thanked for their participation, debriefed, and were directed to the *GatorWell* Health Promotion Services website (i.e., <http://gatorwell.ufsa.ufl.edu/Alcohol-and-Other-Drugs.aspx>) for more information about how to get help regarding the excessive alcohol use.

Stimulus Development

The stimulus development was an important part of the research process during implementation of the research design. Each condition consisted of the stimulus

materials encouraging people to practice moderate and responsible drinking, and manipulating involvement, regulatory focus and social distance. Prior to the manipulation, subjects viewed the following introductory instruction upon agreeing to take part:

The following pages present you with information about high-risk drinking. High-risk drinking is defined as a pattern of alcohol consumption that brings the blood alcohol concentration (BAC) level to .08 DL/ML or more. This pattern of drinking usually corresponds to 5 or more drinks on a single occasion for men or 4 or more drinks on a single occasion for women, generally in about 2 hours. Please read the newspaper article on the next page. Then view the Facebook page and public service ad (PSA) about high-risk drinking in the pages that follow.

Involvement was differentiated by two levels: (1) high and (2) low. A fictitious newspaper excerpt regarding alcohol use was created, and a real newspaper name, *The Gainesville Sun*, was used to enhance the experimental realism. Under the high involvement condition, subjects learned the subject issue is personally relevant to them such that alcohol abuse is a growing problem among UF students. Subsequently, adapted from Maheswaran and Meyers-Levy's (1990) statements regarding the issue involvement, subjects assigned to the high involvement condition were instructed to read a scenario that highlighted findings from a recent study conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA) in the U.S. Department of Health and Human Services, "College students in particular have a very high risk of becoming alcohol dependent, which may be as high as 80% for those who are engaged in high-risk drinking. Susceptibility to alcohol dependence or abuse later in life actually is established early when people are in their late teens and twenties. Thus, the risk of becoming alcohol dependent is real, increasing, and important to be aware of especially when people are between the ages of 18-24." Further, they were told "High-

risk drinking negatively affects their academic performance, social relationships and health. Frequent high-risk drinkers are 21 times more likely than non-high-risk drinkers to fall behind in schoolwork, be injured, engage in domestic violence or drive a car after drinking.” Subjects in the low involvement condition were also apprised of the SAMHSA, but the study purportedly reported that “Middle-age people in particular have a very high risk of becoming alcohol dependent, which may be as high as 80% for those who are engaged in high-risk drinking. The tendency toward alcohol dependence or abuse greatly increases as people grow older. Thus, the risk of becoming alcohol dependent is of utmost concern for those between the ages of 45-54.” Further, they were told that “High-risk drinking negatively affects their job performance, social relationships and health. Frequent high-risk drinkers are 21 times more likely than non-high-risk drinkers to fall behind with work, be injured, engage in domestic violence or drive a car after drinking.”

Then, the regulatory focus was manipulated by altering the appeals, and varied two types: (1) promotion focus and (2) prevention focus. Two types of stimuli, such as a Facebook page and a full-color advertisement, were designed for the manipulation of regulatory focus frames. First, a Facebook page for anti-high-risk drinking was created to prime either a promotion or prevention focus before showing the ad. In each condition subjects viewed a Facebook page. The *GatorWell* health promotion services provided by the Division of Student Affairs of UF, which were meant to enhance quality of life by promoting wellness and fostering a vibrant UF campus community for student success, was chosen as a sponsor and the manipulations of regulatory focus frames were embedded. The screenshot of the real *GatorWell* Facebook page was altered either a

promotion- or prevention-focus frame in the News Feed of the page. Gerend and Cullen's (2008) statements relating to the health and psychological consequences of alcohol use were modified in the promotion- or prevention-focus manner. Half of the subjects was in the promotion focus condition and read the Facebook page emphasizing self-regulation toward positive outcomes (i.e., advancement and achievement):

If you do not drink alcohol, you can obtain positive outcomes, such as increasing your likelihood of driving safely, having a healthy liver, maintaining a healthy weight, and decreasing your likelihood of risk for sexually transmitted diseases (STDs). Also, limiting alcohol use may lead to better moods and higher self-esteem, while alcohol use may result in impaired judgment, poorer memory, and difficulty concentrating. If you do not drink, you will feel greater energy for your everyday life!

The other group of subjects was in the prevention-focus condition and reviewed the Facebook page emphasizing self-regulation away from negative outcomes (i.e., protection and safety):

If you do not drink alcohol, you can avoid negative outcomes, such as increasing your likelihood of driving accidents, having an unhealthy liver, gaining weight, and increasing your likelihood of risk for sexually transmitted diseases (STDs). Also, limiting alcohol use may not lead to depression and lower self-esteem, while alcohol use may result in impaired judgment, poorer memory, and difficulty concentrating. If you do not drink, you can protect your everyday life!

In addition to the Facebook page, two versions of an ad were designed to manipulate the regulatory focus frames (promotion vs. prevention). The advertisement was created with a made-up image containing a beer glass in order to increase the external validity of the study. The image of the rocking beer glass, which was shown on the right side of the stimulus ad, was used to represent the outcome of the high-risk drinking. The *GatorWell's* was shown at the bottom of the stimulus ad to enhance the experimental realism of the ad. Adopted from the National Institute on Alcohol Abuse

and Alcoholism (1997)'s guidelines, in the promotion focus condition, the message emphasized achieving a healthy life, and avoiding health risks in the prevention focus condition. The regulatory focus frames were featured on the left side of the stimulus ad.

The promotion focus manipulation that appeared in the text of the ad was as follows:

Want to attain a healthy life? Then, you should know how much alcohol you can handle. No more than one drink per hour will keep you in control of a drinking situation and help you maintain a healthy lifestyle, such as safe driving, safe sex, a healthy weight, a healthy liver, better moods, and higher self-esteem. Safe, sensible and responsible drinking will boost your energy level and make you better able to accomplish all you want out of life!

The prevention focus manipulation from the text of the ad was shown below:

Want to avoid health risks? Then, you should know how much alcohol you can handle. No more than one drink per hour will prevent you from losing control of a drinking situation and help you prevent an unhealthy lifestyle, such as injury, unsafe sexual practices, weight gain, liver disease, suicide attempts, and depression. Safe, sensible and responsible drinking will protect your body and keep you safe!

Finally, social distance was manipulated via the tagline shown in the appeal of the same ad. Within the promotion focus or prevention focus condition, either a proximal or distant tagline was highlighted at the bottom of the stimulus ad. Specifically, modified from Nan's (2007) method, the following message was highlighted under the proximal condition: "What would your best friend tell you about high-risk drinking? Drink moderately and responsibly for the sake of your best friend." On the other hand, the following message was featured under the distant condition: "What would an average college student tell you about high-risk drinking? Drink moderately and responsibly for the sake of an average college student." See the Appendix A for the stimuli, and the Appendix B for the questionnaire.

Therefore, eight variations of the stimuli set, combining newspaper excerpt, Facebook page and advertisement, were developed and implemented for the present study. The first group was exposed to high involvement-news, promotion focus-Facebook and ad, and proximal-ad. The second group was shown to high involvement-news, prevention focus-Facebook and ad, and proximal-ad. The third group was directed to low involvement-news, promotion focus-Facebook and ad, and proximal-ad. The fourth group was guided to low involvement-news, prevention focus-Facebook and ad, and proximal-ad. The fifth group was exposed to high involvement-news, promotion focus-Facebook and ad, and distant-ad. The sixth group was shown to high involvement-news, prevention focus-Facebook and ad, and distant-ad. The seventh group was directed to low involvement-news, promotion focus-Facebook and ad, and distant-ad. The eighth group was guided to low involvement-news, prevention focus-Facebook and ad, and distant-ad. Subjects were randomly assigned to each condition.

Measurement Instrument

In the process of research design implementation, the measurement instrument was also designed. The questionnaire was organized into two parts: a pre-manipulation questionnaire and a post-manipulation questionnaire. The measurement instrument for the experimental study included items measuring independent variables for the manipulation checks, dependent variables, variables related to alcohol use, classification variables, a moderating variable and covariate (Table 3-2). First, chronic-regulatory focus was measured as a covariate prior to the manipulation. In the post-manipulation, three variables for manipulation checks (i.e., social distance, framed regulatory-focus, involvement) and three dependent variables (i.e., attitude toward advertisement, attitude toward the requested behavior, and intention to perform the

requested behavior) were measured followed by a moderating variable (i.e., the perceived risk). Also, alcohol-related variables (i.e., alcohol consumption level, drinking attitudes, drinking expectancy) and classification variables (i.e., gender, residential system, Greek membership, athletic participation) were measured. The instrument applied was identical across all eight experimental conditions.

Table 3-2. Measurement instrument

Variable type	Variable	# of items	Study	α
Independent variable	Social distance	1	Nan, 2007	N/A
	Regulatory focus	1	Lee & Aaker, 2004	N/A
	Involvement	4	Wang & Lee, 2006	.79
Dependent variable	Ad attitude	3	MacKenzie & Lutz, 1989	.86
	Behavioral attitude	3	MacKenzie & Lutz, 1989	.94
	Behavioral intention	3	Lee & Aaker, 2004	.94
Moderator	Perceived risk	1	Lee & Aaker, 2004	N/A
Covariate	Chronic regulatory focus		Higgins et al., 2001	
	Promotion focus	6		.72
	Prevention focus	5		.75
Alcohol-related variable	Alcohol consumption	1	Quick & Bates, 2010	N/A
	Drinking attitude	3	Campo & Cameron, 2006	.72
	Drinking expectancies		Real & Rimal, 2007	
	Perceived benefits	4		.92
	Anticipatory socialization	4		.87
Classification variable	Residential system	1	Gfroerer et al., 1997	N/A
	Greek membership	1	Rimal, 2008	N/A
	Athletic participation	1	Leichliter et al., 1998	N/A

Regarding the variables for manipulation checks, whether variation in the manipulated variables cause differences in the dependent variable was measured. For the social distance manipulation, subjects were asked to indicate the likelihood that the ad message asked them to think about moderate and responsible drinking for the proximal entity, a single item, Likert-type scale, ranging from 1 (definitely not) to 7 (definitely yes) (Nan, 2007). For the regulatory focus manipulation (Lee & Aaker, 2004), subjects were asked to indicate the degree to which ad message focuses on achieving

a healthy life (promotion-framed messages). The scale also ranged from 1 (definitely not) to 7 (definitely yes). The manipulation of involvement was examined with four items on a seven-point semantic differential scale: not at all involved/very involved, not at all interested/very interested, skimmed it quickly/read it carefully. Paid little attention/paid a lot attention (Wang & Lee, 2006).

For the dependent variables, subjects were asked to rate their attitudes toward the ad and the moderate and responsible drinking behavior on a three-item, seven-point bipolar adjective scale anchored by good/bad, favorable/unfavorable, and positive/negative based on MacKenzie and Lutz's (1989) measurement for attitudes. Subjects' intentions to engage in moderate and responsible drinking were assessed via a three-item, seven-point bipolar scale anchored by very likely/very unlikely, probable/improbable, and possible/impossible (Lee & Aaker, 2004).

To examine the moderating effects on responses to promotion- versus prevention-focused advertising messages, the perceived risk was measured to investigate whether it moderates the effects of regulatory focus-based message on the dependent variables. To assess the degree to which subjects perceived themselves to be at risk for health consequences of alcohol use, they were asked, "What is the likelihood that high-risk drinking places your health at risk?" (1 = not at all likely, 7 = very likely) (Lee & Aaker, 2004). Also, the study measured subjects' chronic regulatory focus as a covariate. The Regulatory Focus Questionnaire (RFQ) (Higgins et al., 2001) was used to measure subjects' chronic regulatory focus, operationalized as the subjective history of promotion success versus prevention success. The RFQ is an eleven-item measure, with subjects rating their history of promotion (e.g., Compared to most people,

are you typically unable to get what you want out of life?) and prevention (e.g., Growing up, would you ever “cross the line” by doing things that your parents would not tolerate?) success and failure on five-point scales from 1 (never or seldom) to 5 (very often). There were six items related to subjects’ promotion-focused history, while there were five items related to their prevention-focused history.

Regarding the alcohol-related variables, to assess alcohol consumption frequency, the following item was employed (Quick & Bates, 2010): “On average, how many drinks of alcohol do you have per week?” Subjects were told that one standard drink equals one bottle of beer, one glass of wine, or one shot of hard liquor. In addition, subjects were asked to provide estimates of their drinking behaviors, which will be measured by a two-item scale measuring situational drinking behavior (“On average, how many alcohol drinks do you consume when you socialize in a setting with alcohol?” and “Within the last two weeks, how many times have you had five or more alcoholic drinks in a sitting?”) (Campo & Cameron, 2006). Attitudes toward drinking were measured using three items on a five-point, Likert-type scale (“I don’t have to get drunk to have a good time,” “I think drinking to get drunk is a bad idea,” and “I feel better when I do not drink.”). The scale was ranged from 1 (strongly disagree) to 7 (strongly agree) (Campo & Cameron, 2006), and reverse coded. Drinking expectancies were also measured as outcome expectations, which refer to the degree to which individuals perceive that a given action will result in benefits that they seek (Bandura, 1986). According to Real and Rimal (2007), outcome expectation was operationalized in two ways. First, it was measured as students’ perceived benefits: the extent to which students believe that drinking alcohol with friends is (a) rewarding, (b) pleasurable, (c)

enjoyable, and (d) fun. Responses to these four items, each coded on a seven-point, Likert-type scale, ranging from 1 (strongly disagree) to 7 (strongly agree), were averaged into an index of perceived benefits to oneself. Second, outcome expectations were also conceptualized as anticipatory socialization, the belief that consuming alcohol five questions: the extent to which students believe that (a) drinking alcohol is a part of a college experience, (b) college students are expected to drink alcohol, (c) drinking alcohol is an important part of social life, (d) college freshmen look forward to being able to drink, and (e) drinking alcohol allow students to make friends. Responses, each measured on a seven-point, Likert-type scale, ranging from 1 (strongly disagree) to 7 (strongly agree), were averaged into an index of anticipatory socialization.

Finally, three lifestyle classification variables were measured. Subjects were asked to indicate whether they resided on- or off-campus (Gfroerer, Greenblatt & Wright, 1997), Greek membership-status (Rimal, 2008), and their degree of membership in school athletic teams (Leichliter et al., 1998). Also, gender was asked.

Pretest

Prior to the main study, a pretest was conducted to ensure the validity of involvement, regulatory focus and social distance manipulations developed. A total of 90 subjects from classes (e.g., Advertising Research, Public Relations Research, and Emerging Media in Advertising) in the College of Journalism and Communications at UF participated in the study in exchange for extra course credit. Subjects were randomly assigned to one of the eight conditions by Qualtrics, and subsequently, there were 11 or 12 subjects per condition. Upon consenting to take part in the Web-based study, subjects were asked to read an introductory instruction regarding high-risk drinking,

view the corresponding newspaper article, Facebook page and advertisement, and then fill out the questionnaire, which consisted of measures of the manipulated items.

After the data collection, independent samples *t*-tests were performed to verify whether the manipulations of involvement, regulatory focus framing, and social distance were significantly differed. First, four items on a seven-point semantic differential scale (e.g., not at all involved/very involved) were measured for involvement manipulation. The results reveal that the involvement was manipulated in that the mean score for high involvement condition ($M_{high} = 5.51$) was significantly different from that for low involvement condition ($M_{low} = 4.28, t = 2.96, p < .05$). Also, a single item Likert-type scale ranging from 1 (definitely not) to 7 (definitely yes) regarding the extent to which ad message focuses on promotion-framed messages was used to measure the regulatory focus manipulation. The results indicate that the regulatory focus was successfully manipulated in that the mean score for promotion focus frames ($M_{promotion} = 5.76$) was significantly different from that for prevention focus frames ($M_{prevention} = 4.46, t = 3.69, p < .01$). Finally, the social distance manipulation examined subjects' likelihood that the ad message asked them to think about moderate and responsible drinking for proximal entity, based on a single item Likert-type scale ranging from 1 (definitely not) to 7 (definitely yes). The results of the pretest show that the manipulation check were successful in that the mean score for proximal condition ($M_{proximal} = 4.41$) was greater than the mean score for distant condition ($M_{distant} = 2.20, t = 54.41, p < .001$). Overall, the results of the pretest reveal that the manipulation was successful, and all of the stimuli were used for the main study subsequently.

CHAPTER 4 RESULTS

Subjects

A total of 262 subjects were assigned randomly to one of eight experimental groups. Among them, the responses from 11 subjects who failed to complete the questionnaire were excluded; thus, 251 responses were used for the data analyses. Specifically, the number of subjects in the proximal and distant conditions was 125 and 126, respectively, and the number of subjects in the promotion and prevention focus conditions was 127 and 124 each. Also, 125 subjects were assigned to the high involvement condition and completed the study, while the 126 in the low involvement condition completed the test (Table 4-1).

Table 4-1. Number of subjects by experimental groups

	High Involvement			Low Involvement	
	Promotion	Prevention		Promotion	Prevention
Proximal	31	31	Proximal	32	31
Distant	32	31	Distant	32	31

Males and females comprised 36.4 percent and 63.6 percent of the sample, respectively. The average age of subjects was 20.2 years ($SD = 1.11$). Approximately seventy percent of subjects were Caucasian, 14.7 percent Hispanic, 7.2 percent African-American, 4.8 percent Asian, and 3.2 percent other races. A majority of them (55.4%) were communication majors, followed by business majors (18.3%), liberal arts and science majors (16.7%), and health and human performance majors (7.6%). Nearly seventy eight percent of subjects indicated that they live off campus, while 21.9 percent live on campus. Approximately thirty seven percent of subjects were members of a fraternity or sorority, and 38.2 percent has ever participated to any degree in school athletic teams, including both formal team sports and intramural sports. Subjects

reported that they have 5.43 drinks of alcohol per week ($SD = 6.46$) and 3.35 drinks when they socialize in a setting with alcohol ($SD = 2.07$) (i.e., bottles of beer, glasses of wine, and shots of hard liquor). In addition, it was reported that subjects had “binged” recently; which means, they had five or more alcohol drinks in a sitting 1.24 times on average within the last two weeks ($SD = 1.73$). Sample profile was summarized in Table 4-2.

Table 4-2. Sample profile

	Number	Percent
Gender		
Male	91	36.4
Female	160	63.6
Age		
Average (SD)	20.20 (1.11)	
Ethnicity		
Caucasian	176	70.1
Hispanic	18	7.2
African-American	37	14.7
Asian	12	4.8
Other	8	3.2
Major		
Communication majors	139	55.4
Business majors	46	18.3
Liberal arts and science majors	42	16.7
Health and human performance majors	19	7.6
Other	5	2
Residential system		
On-campus	55	21.9
Off-campus	196	78.1
Greek membership		
Yes	93	37.1
No	158	62.9
Athletic affiliation		
Yes	96	38.2
No	155	61.8
# of drinks per week (e.g., bottles of beer)		
Average (SD)	5.43 (6.46)	
# of drinks in a social setting		
Average (SD)	3.35 (2.07)	
# of high-risk drinks		
Average (SD)	1.24 (1.73)	

Reliability Checks

Reliability checks for variables measure with a multi-item scale were conducted. Regarding the independent variables the involvement was measured on four, seven-point semantic differential scales developed by Wang and Lee (2006). The reliability estimate for this measure was acceptable (Cronbach's $\alpha = .79$). With regards to the dependent variables participants' attitudes toward the ad and attitudes toward the moderate and responsible drinking behavior were examined via a three-item, seven-point bipolar adjective scale developed by MacKenzie and Lutz (1989). The reliability of this ad attitude scale (Cronbach's $\alpha = .86$) and this behavior attitude scale (Cronbach's $\alpha = .94$) was acceptable, respectively. A three-item, seven-point bipolar scale based on Lee and Aaker (2004) was also used to measure participants' intentions to engage in moderate and responsible drinking were assessed via a three-item, seven-point bipolar scale. The reliability estimate for this measure was acceptable (Cronbach's $\alpha = .94$).

The reliability estimate for other variables was also measured. Participants' chronic regulatory focus was measured as a covariate based on the Regulatory Focus Questionnaire (RFQ) (Higgins et al., 2001) with an eleven-item, five-point scales from 1 (never or seldom) to 5 (very often). There were six items related to participants' promotion-focused history, while there were five items related to their prevention-focused history. The reliability estimate for this promotion focus scale (Cronbach's $\alpha = .72$) and this prevention focus scale (Cronbach's $\alpha = .75$) was acceptable. In terms of the alcohol-related variables, overall attitudes toward drinking were measured using a general attitude index that was adapted from Campo and Cameron (2006). This measure asked participants to report their attitude toward drinking across three, five-point, Likert-type scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The

reliability estimate for this scale (Cronbach's $\alpha = .72$) was acceptable. Additionally, drinking expectancies were measured in two ways suggested by Real and Rimal (2007). First, the perceived benefits of drinking alcohol were measured by four, seven-point, Likert-type scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The reliability of this scale was acceptable (Cronbach's $\alpha = .92$). Second, the outcome expectations as anticipatory socialization were measured by five, seven-point, Likert-type scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The reliability of this scale was acceptable (Cronbach's $\alpha = .87$).

Manipulation Checks

In order to examine if no other independent variables moderated the effects of a single independent variable, a series of three-way ANOVAs (analysis of variances) was conducted. Regarding the social distance manipulation, no other main or interaction effects were found except the main effect of social distance, $F(1, 243) = 42.50, p < .001$. For the regulatory focus manipulation, the regulatory focus manipulation was also the sole factor that affected the type of regulatory focus, $F(1, 243) = 23.68, p < .001$. Finally, the involvement manipulation was moderated by no other independent variables, $F(1, 243) = 15.23, p < .001$.

Additionally, a series of one-way ANOVAs was performed to verify whether the manipulations of social distance, regulatory focus and involvement differ significantly. The results showed that there were significant manipulation effects for social distance. The mean score of the proximal entity ($M_{proximal} = 4.32$) was significantly different from that of the distant entity ($M_{distant} = 2.59, F = 43.18, p < .001$). Also, the mean score for the ad containing the information about promotion focus frames ($M_{promotion} = 5.64$) was significantly different from that for the ad containing the information about prevention

focus frames ($M_{prevention} = 4.77, F = 23.83, p < .001$). Finally, the mean score for high involvement condition ($M_{high} = 5.01$) was significantly different from that for low involvement condition ($M_{low} = 4.52, F = 14.70, p < .001$). Hence, all independent variables were successfully manipulated.

Hypothesis Tests

A series of three-way ANOVAs were used to test the hypotheses to determine the main effects of social distance, regulatory focus frames and involvement, and their interaction effects. Hypothesis 1 predicted that judgments for a socially proximal entity were more likely to positively lead to (a) attitudes toward advertising, (b) attitudes toward moderate and responsible drinking, and (c) intentions to drink moderately and responsibly. The results for the hypothesis 1 showed that the social distance, however, had no significant main effects on the dependent variables. That is, there were no significant differences between proximal and distant conditions. When subjects were exposed to the advertising message that encourages them to make judgments for a socially proximal entity compared to a socially distant entity, they did not show significantly more positive attitudes toward the advertising, more positive attitudes toward the requested behavior, and greater intentions to perform the requested behavior. Thus, H1(a), H1(b), and H1(c) were not supported. Means and standard deviations for all dependent variables are summarized in Table 4-3.

Table 4-3. Means and standard deviations (social distance)

Dependent variable	Proximal entity	Distant entity
Ad Attitude	4.90 (.95)	4.97 (1.01)
Behavioral attitude	5.79 (1.14)	5.69 (1.12)
Behavioral intention	5.43 (1.37)	5.44 (1.34)

Hypothesis 2 suggested that a promotion-focused advertising message was more likely to positively lead to (a) attitudes toward advertising, (b) attitudes toward moderate and responsible drinking, and (c) intentions to drink moderately and responsibly. The results for the hypothesis 2 revealed that the regulatory focus had significant main effects on attitudes toward advertising, $F(1, 243) = 4.73, p < .05$, attitudes toward moderate and responsible drinking, $F(1, 243) = 7.12, p < .01$, and intentions to drink moderately and responsibly, $F(1, 243) = 4.78, p < .05$. The significant main effects of regulatory focus were found to be in the predicted direction. When subjects were under the promotion focus condition compared to the prevention focus condition, they showed significantly more positive attitudes toward the advertising ($M_{promotion} = 5.07, SD = 1.02$ vs. $M_{prevention} = 4.80, SD = .92$), more positive attitudes toward the requested behavior ($M_{promotion} = 5.91, SD = 1.02$ vs. $M_{prevention} = 5.56, SD = 1.21$), and greater intentions to perform the requested behavior ($M_{promotion} = 5.61, SD = 1.19$ vs. $M_{prevention} = 5.25, SD = 1.48$). Hence, H2(a), H2(b), and H2(c) were supported. Means and standard deviations for all dependent variables are summarized in Table 4-4.

Table 4-4. Means and standard deviations (regulatory focus)

Dependent variable	Promotion focus	Prevention focus
Ad Attitude	5.07 (1.02)	4.80 (.92)
Behavioral attitude	5.91 (1.02)	5.56 (1.21)
Behavioral intention	5.61 (1.19)	5.25 (1.48)

Hypothesis 3 suggested that under the proximal entity condition a prevention-focused advertising message was more likely to positively lead to (a) attitudes toward advertising, (b) attitudes toward moderate and responsible drinking, and (c) intentions to drink moderately and responsibly; on the other hand, under the distant entity condition a

promotion-focused advertising message was more likely to be effective. The results for the effects predicted in H3 revealed that the interaction effects between social distance and regulatory focus frames were significant on attitudes toward advertising, $F(1, 243) = 6.33, p < .05$, attitudes toward moderate and responsible drinking, $F(1, 243) = 8.41, p < .01$, and intentions to drink moderately and responsibly, $F(1, 243) = 4.79, p < .05$. The results revealed that the effects of regulatory focus frames on individuals' overall impressions of the anti-high-risk drinking advertising and attitudinal and behavioral responses to the moderate and responsible drinking depended primarily on the perceived social distance level, and the effects were more pronounced for the messages that emphasized the judgments for a socially distant entity rather than a socially proximal entity.

More specifically, as shown in Table 4-5, the results of the simple main effects revealed that the mean difference between promotion- and prevention-focus message frames within the distant entity condition reached statistical significance for attitudes toward the advertising ($M_{promotion} = 5.26, SD = .94$ vs. $M_{prevention} = 4.69, SD = 1.00, F = 10.63, p < .01$); attitudes toward the requested behavior ($M_{promotion} = 6.05, SD = .81$ vs. $M_{prevention} = 5.31, SD = 1.28, F = 15.33, p < .001$); and intentions to perform the requested behavior ($M_{promotion} = 5.80, SD = .93$ vs. $M_{prevention} = 5.07, SD = 1.59, F = 9.96, p < .01$). Nevertheless, when people make judgments for a socially proximal entity, there were no significant differences between promotion- and prevention-focus framing conditions. The results of the simple main effects revealed that under the proximal entity condition the mean values of prevention-focus message frames were not significantly greater than those of promotion-focus message frames in terms of attitudes toward the

advertising ($M_{promotion} = 4.88, SD = 1.06$ vs. $M_{prevention} = 4.92, SD = .83, F = .07, p > .1$); attitudes toward the requested behavior ($M_{promotion} = 5.77, SD = 1.18$ vs. $M_{prevention} = 5.81, SD = 1.03, F = .04, p > .1$); and intentions to perform the requested behavior ($M_{promotion} = 5.42, SD = 1.38$ vs. $M_{prevention} = 5.43, SD = 1.36, F = .00, p > .1$). In conclusion, as shown in Figure 4-1, 4-2 and 4-3, when they were exposed to messages including the promotion-focus frames and the distant entity, the campaign was more effective in general; yet, there were no significant differences in subjects' responses to the promotion- and prevention-focused messages under the condition of the proximal entity. Thus, H3(a), H3(b), and H3(c) were supported; however, it partially confirmed that the direction of the interaction effects was consistent with the prediction in H3.

Means and standard deviations for all dependent variables are summarized in Table 4-6.

Table 4-5. Simple main effects of means (social distance X regulatory focus)

Dependent variable	Proximal entity	Distant entity
	Promotion vs. Prevention	Promotion vs. Prevention
Ad Attitude	4.88 vs. 4.92	5.26 vs. 4.69 ^{***}
Behavioral attitude	5.77 vs. 5.81	6.05 vs. 5.31 ^{***}
Behavioral intention	5.42 vs. 5.43	5.80 vs. 5.07 ^{***}

Note: ^{***} $p < .001$

Table 4-6. Means and standard deviations (social distance x regulatory focus)

Dependent variable	Proximal entity		Distant entity	
	Promotion	Prevention	Promotion	Prevention
Ad Attitude	4.88 (1.06)	4.92 (.83)	5.26 (.94)	4.69 (1.00)
Behavioral attitude	5.77 (1.18)	5.81 (1.03)	6.05 (.81)	5.31 (1.28)
Behavioral intention	5.42 (1.38)	5.43 (1.36)	5.80 (.93)	5.07 (1.59)

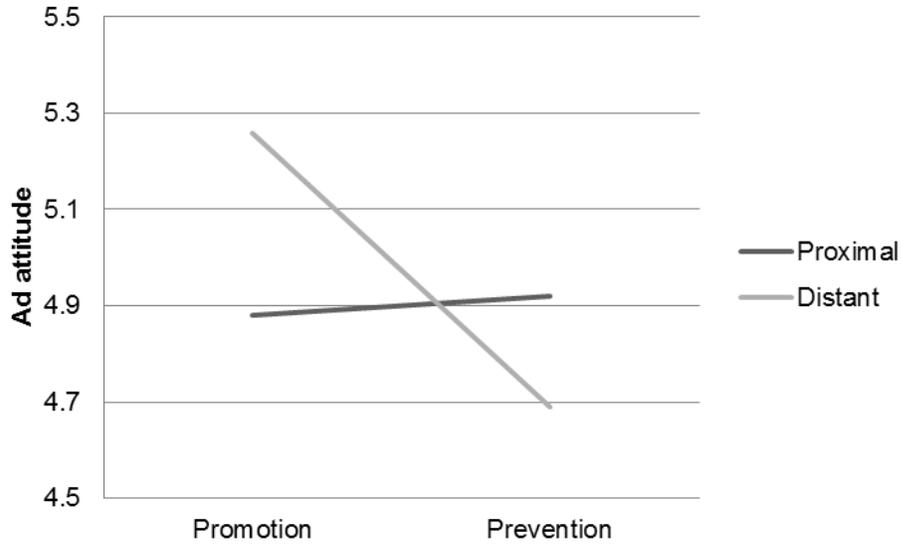


Figure 4-1. Two-way interaction between social distance and regulatory focus (DV: Attitude toward advertising)

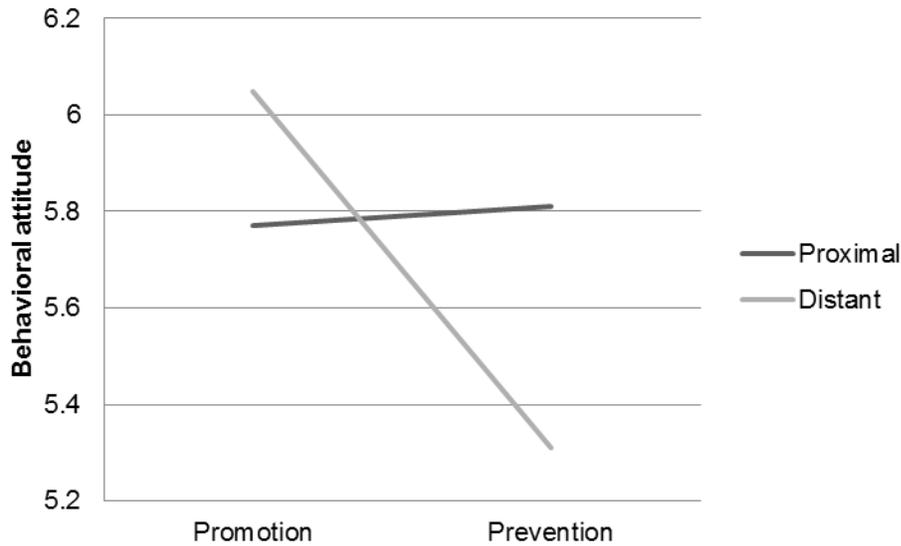


Figure 4-2. Two-way interaction between social distance and regulatory focus (DV: Attitude toward moderate and responsible drinking)

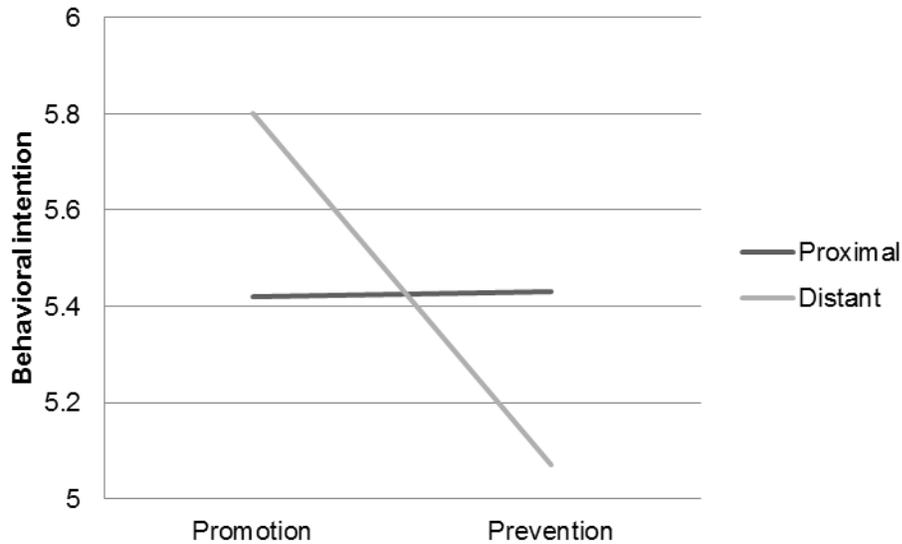


Figure 4-3. Two-way interaction between social distance and regulatory focus (DV: Intention to drink moderately and responsibly)

Hypothesis 4 proposed that under the low involvement condition there would be interaction effects between social distance and regulatory focus on (a) attitudes toward advertising, (b) attitudes toward moderate and responsible drinking, and (c) intentions to drink moderately and responsibly, while under the high involvement condition there would be no interaction effects between social distance and regulatory focus. The results showed significant three-way interaction effects on attitudes toward advertising, $F(1, 243) = 4.64, p < .05$, attitudes toward moderate and responsible drinking, $F(1, 243) = 4.26, p < .05$, and intentions to drink moderately and responsibly, $F(1, 243) = 4.01, p < .05$. The results revealed that the interaction effects between social distance and regulatory focus frames depended primarily on issue-involvement levels.

As shown in Table 4-7, the results of the simple main effects for low involvement condition showed that the mean values of promotion-focus message frames were significantly greater than those of prevention-focus message frames for attitudes toward the advertising ($M_{promotion} = 5.23, SD = .83$ vs. $M_{prevention} = 4.65, SD = .80, F = 7.95, p <$

.01); attitudes toward the requested behavior ($M_{promotion} = 6.04$, $SD = .86$ vs. $M_{prevention} = 5.45$, $SD = 1.17$, $F = 5.18$, $p < .05$); and intentions to perform the requested behavior ($M_{promotion} = 5.85$, $SD = .94$ vs. $M_{prevention} = 5.15$, $SD = 1.25$, $F = 6.39$, $p < .05$) under the distant entity condition, while the mean values of prevention-focus message frames were significantly greater than those of promotion-focus message frames in terms of attitudes toward the advertising ($M_{promotion} = 4.55$, $SD = 1.02$ vs. $M_{prevention} = 5.10$, $SD = .90$, $F = 4.96$, $p < .05$); attitudes toward the requested behavior ($M_{promotion} = 5.25$, $SD = 1.31$ vs. $M_{prevention} = 5.97$, $SD = .97$, $F = 6.01$, $p < .05$); and intentions to perform the requested behavior ($M_{promotion} = 5.02$, $SD = 1.66$ vs. $M_{prevention} = 5.72$, $SD = 1.17$, $F = 3.70$, $p < .1$) under the proximal entity condition.

Nevertheless, as predicted, under the high involvement condition, there were no significant interaction effects between social distance and regulatory focus frames. For the high involvement condition, the effects of promotion focus frames on proximal- vs. distant-entity conditions were nearly identical to the effects of prevention focus frames on proximal- vs. distant-entity conditions. More specifically, as shown in Table 4-7, the results of the simple main effects for high involvement condition showed that the mean values of promotion-focus message frames were significantly greater than those of prevention-focus message frames for attitudes toward the advertising ($M_{promotion} = 5.28$, $SD = 1.05$ vs. $M_{prevention} = 4.73$, $SD = 1.18$, $F = 3.79$, $p < .1$); attitudes toward the requested behavior ($M_{promotion} = 6.06$, $SD = .77$ vs. $M_{prevention} = 5.16$, $SD = 1.38$, $F = 10.29$, $p < .01$); and intentions to perform the requested behavior ($M_{promotion} = 5.75$, $SD = .93$ vs. $M_{prevention} = 4.99$, $SD = 1.89$, $F = 4.11$, $p < .05$) under the distant entity condition. Similarly, under the proximal entity condition, the mean values of promotion-focus

message frames were also significantly greater than those of prevention-focus message frames for attitudes toward the advertising ($M_{promotion} = 5.20, SD = 1.02$ vs. $M_{prevention} = 4.74, SD = .72, F = 4.21, p < .05$); attitudes toward the requested behavior ($M_{promotion} = 6.30, SD = .73$ vs. $M_{prevention} = 5.58, SD = 1.22, F = 7.89, p < .01$); and intentions to perform the requested behavior ($M_{promotion} = 5.83, SD = .88$ vs. $M_{prevention} = 5.13, SD = 1.48, F = 5.03, p < .05$). That is, across the level of the perceived social distance, promotion focus frames as opposed to prevention focus frames were more effective in terms of yielding positive attitudinal and behavioral responses to the anti-high-risk drinking advertising campaign (Figure 4-4, 4-5 and 4-6). Therefore, H4(a), H4(b), and H4(c) were supported. Means and standard deviations for all dependent variables are summarized in Table 4-8, and a summary of ANOVA results are presented in Table 4-9.

Table 4-7. Simple main effects of means (social distance x regulatory focus x involvement)

Dependent variable	High involvement	
	Proximal entity Promotion vs. Prevention	Distant entity Promotion- vs. Prevention
Ad Attitude	5.20 vs. 4.74*	5.28 vs. 4.73 ^α
Behavioral attitude	6.30 vs. 5.58**	6.06 vs. 5.16*
Behavioral intention	5.83 vs. 5.13*	5.75 vs. 4.99*
Dependent variable	Low involvement	
	Proximal entity Promotion vs. Prevention	Distant entity Promotion vs. Prevention
Ad Attitude	4.55 vs. 5.10*	5.23 vs. 4.65**
Behavioral attitude	5.25 vs. 5.97*	6.04 vs. 5.45*
Behavioral intention	5.02 vs. 5.72 ^α	5.85 vs. 5.15*

Note: ^α $p < .1$, * $p < .05$, ** $p < .01$

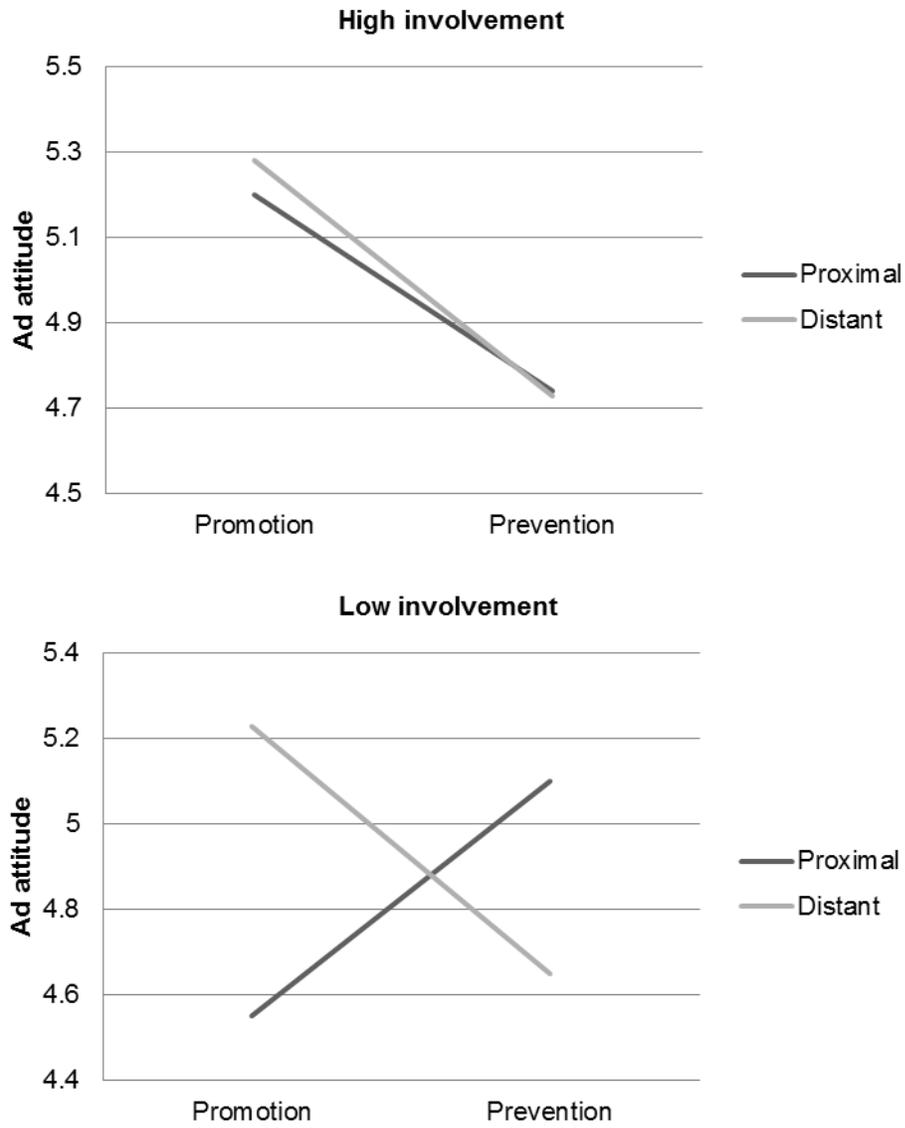


Figure 4-4. Three-way interaction among social distance, regulatory focus and Involvement (DV: Attitude toward advertising)

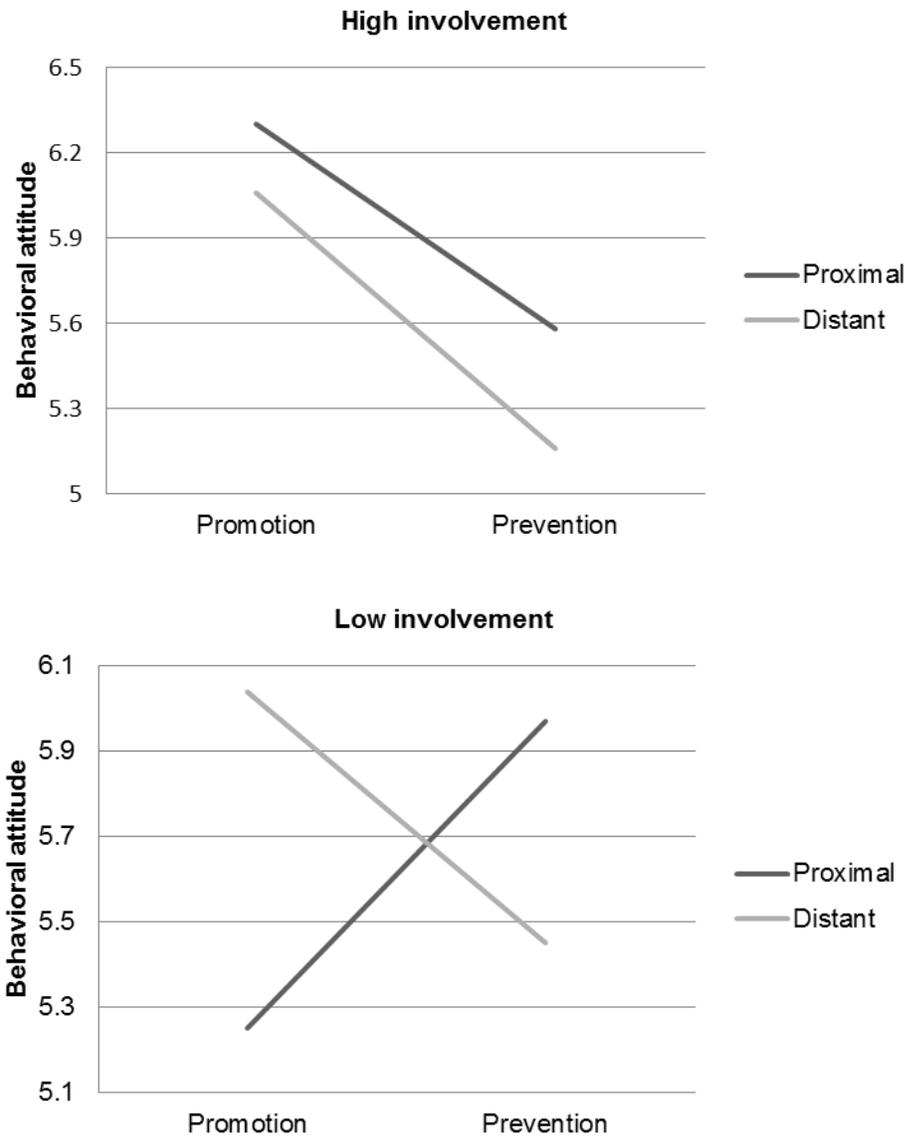


Figure 4-5. Three-way interaction among social distance, regulatory focus and involvement (DV: Attitude toward moderate and responsible drinking)

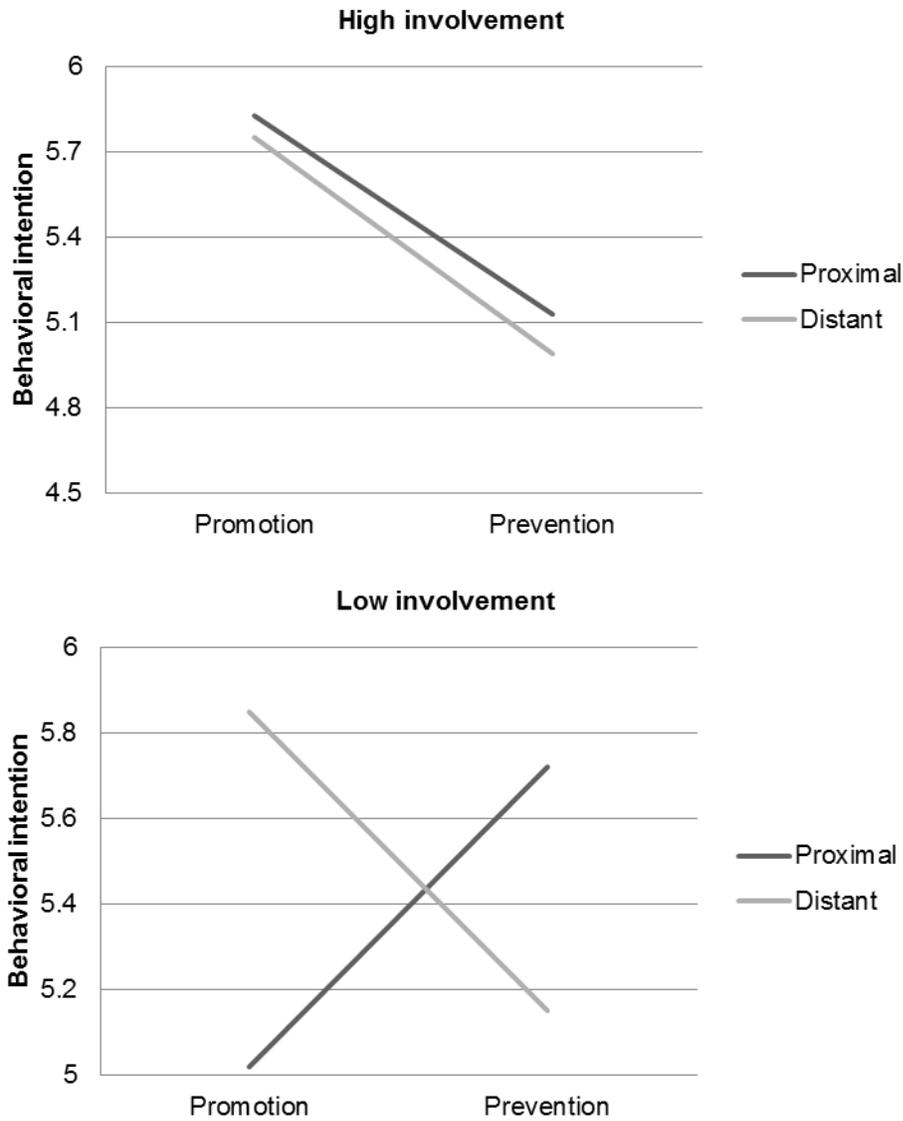


Figure 4-6. Three-way interaction among social distance, regulatory focus and involvement (DV: Intention to drink moderately and responsibly)

Table 4-8. Means and standard deviations (social distance x regulatory focus x involvement)

Dependent variable	High involvement			
	Proximal entity		Distant entity	
	Promotion	Prevention	Promotion	Prevention
Ad Attitude	5.20 (1.02)	4.74 (.72)	5.28 (1.05)	4.73 (1.18)
Behavioral attitude	6.30 (.73)	5.58 (1.22)	6.06 (.77)	5.16 (1.38)
Behavioral intention	5.83 (.88)	5.13 (1.48)	5.75 (.93)	4.99 (1.89)
Dependent variable	Low involvement			
	Proximal entity		Distant entity	
	Promotion	Prevention	Promotion	Prevention
Ad Attitude	4.55 (1.02)	5.10 (.90)	5.23 (.83)	4.65 (.80)
Behavioral attitude	5.25 (5.25)	5.97 (.97)	6.04 (.86)	5.45 (1.17)
Behavioral intention	5.02 (1.66)	5.72 (1.17)	5.85 (.94)	5.15 (1.25)

Table 4-9. A summary of ANOVA results

Dependent variable	Social distance main effect	Regulatory focus main effect	Social distance x regulatory focus	Social distance x regulatory focus x involvement
Ad attitude	$F = .36$	$F = 4.73^*$	$F = 6.33^*$	$F = 4.64^*$
Behavioral attitude	$F = .69$	$F = 7.12^{**}$	$F = 8.41^{**}$	$F = 3.93^*$
Behavioral intention	$F = .01$	$F = 4.78^*$	$F = 4.79^*$	$F = 4.01^*$

Note: * $p < .05$, ** $p < .01$

Hypothesis 5 predicted that the perceived risk would moderate the effects of regulatory focus-based message on (a) advertising attitudes, (b) moderating and responsible drinking attitudes, and (c) moderate and responsible drinking intentions. Subjects' risk perception was split at the median to create two subgroups: high- and low-group ($M_{high} = 6.69$ vs. $M_{low} = 3.80$, $F = 526.41$, $p < .001$). The results for the effects predicted in H5 indicated that the interaction effects between perceived risk and regulatory focus frames were significant on attitudes toward advertising, $F(1, 243) = 4.44$, $p < .05$, and attitudes toward moderate and responsible drinking, $F(1, 243) = 3.46$, $p < .1$. Nevertheless, the interaction effects were not significant on intentions to drink moderately and responsibly, $F(1, 243) = .26$, $p > .1$. The results revealed that the effects of regulatory focus frames on individuals' overall attitudes toward the anti-high-risk

advertising and the moderate and responsible drinking behavior, not behavioral intentions, depended primarily on the perceived risk.

More specifically, the results of the simple main effects revealed that subjects in the high-risk condition found the prevention focus frames ($M_{prevention} = 4.76$, $SD = 1.05$) to be more persuasive relative to the promotion focus frames ($M_{promotion} = 4.62$, $SD = .99$) in terms of attitudes toward the advertising. Although the mean value of the prevention focus frames was not significantly greater than the mean value of the promotion focus, $F = .55$, $p > .1$, the results confirmed the prediction. Subjects in the low-risk condition found the promotion focus frames ($M_{promotion} = 5.24$, $SD = .87$) to be more persuasive than the prevention focus frames ($M_{prevention} = 4.82$, $SD = .98$, $F = 8.84$, $p < .01$) (Figure 4-7). Similarly, in terms of attitudes toward the requested behavior, the results of the simple main effects showed that subjects in the high-risk condition found the prevention focus frames ($M_{prevention} = 5.46$, $SD = 1.18$) to be more persuasive relative to the promotion focus frames ($M_{promotion} = 5.37$, $SD = 1.19$). Although the mean value of the prevention focus frames was not significantly greater than the mean value of the promotion focus, $F = .12$, $p > .1$, the results confirmed the prediction. Subjects in the low-risk condition found the promotion focus frames ($M_{promotion} = 6.12$, $SD = .86$) to be more persuasive than the prevention focus frames ($M_{prevention} = 5.60$, $SD = 1.23$, $F = 10.75$, $p < .01$) (Figure 4-8). Nevertheless, although there was no significant difference, the results of the simple main effects showed that the mean values of promotion-focus message frames were greater than those of prevention-focus message frames for intentions to perform the requested behavior ($M_{promotion} = 5.39$, $SD = 1.25$ vs. $M_{prevention} = 4.91$, $SD = 1.37$, $F = 2.52$, $p > .1$) under the high-risk condition; similarly, the mean

values of promotion-focus message frames were greater than those of prevention-focus message frames for intentions to perform the requested behavior under the low-risk condition ($M_{promotion} = 5.70, SD = 1.16$ vs. $M_{prevention} = 5.40, SD = 1.52, F = 2.11, p > .1$). That is, across the level of the perceived risk, promotion focus frames as opposed to prevention focus frames were more effective in terms of eliciting behavioral intentions. Therefore, H5(a) and H5(b) were supported; yet, H5(c) was not supported. The results of simple main effects of means are shown in Table 4-10, and means and standard deviations for all dependent variables are summarized in Table 4-11.

Table 4-10. Simple main effects of means (perceived risk X regulatory focus)

Dependent variable	High risk	Low risk
	Promotion vs. Prevention	Promotion vs. Prevention
Ad Attitude	4.62 vs. 4.76	5.24 vs. 4.82**
Behavioral attitude	5.37 vs. 5.46	6.12 vs. 5.60**
Behavioral intention	5.39 vs. 4.91	5.70 vs. 5.40

Note: ** $p < .01$

Table 4-11. Means and standard deviations (perceived risk x regulatory focus)

Dependent variable	High risk		Low risk	
	Promotion	Prevention	Promotion	Prevention
Ad Attitude	4.62 (.99)	4.76 (1.05)	5.24 (.87)	4.82 (.98)
Behavioral attitude	5.37 (1.19)	5.46 (1.18)	6.12 (.86)	5.60 (1.23)
Behavioral intention	5.39 (1.25)	4.91 (1.37)	5.70 (1.16)	5.40 (1.52)

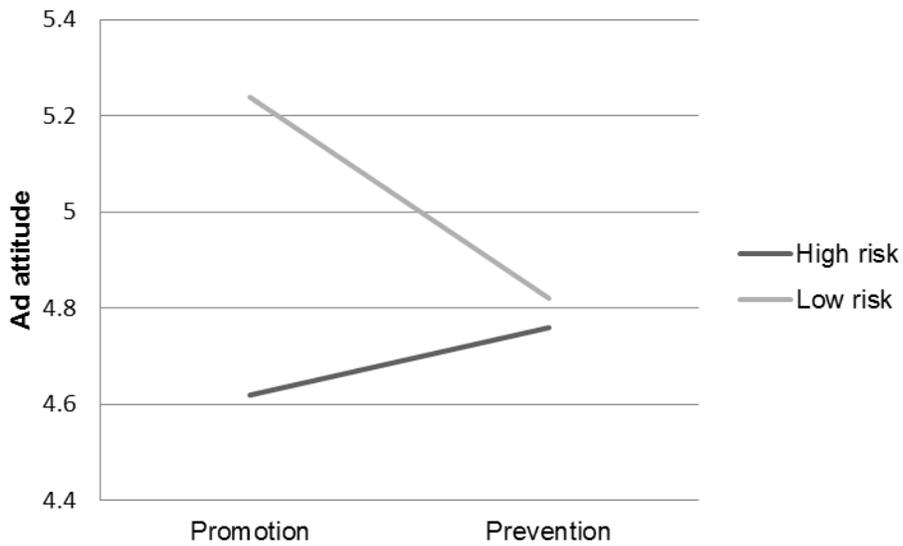


Figure 4-7. Two-way interaction between perceived risk and regulatory focus (DV: Attitude toward advertising)

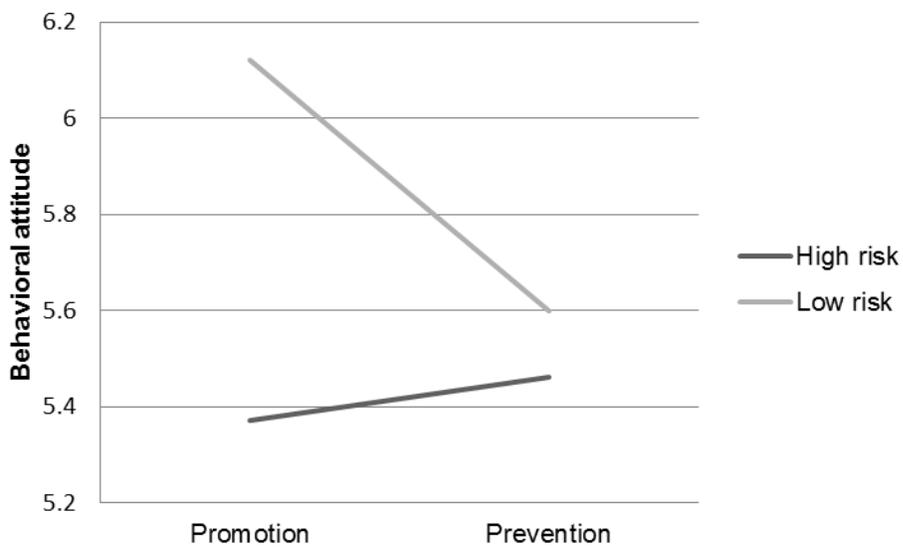


Figure 4-8. Two-way interaction between perceived risk and regulatory focus (DV: Attitude toward moderate and responsible drinking)

Research Questions

Research questions were tested using regression analysis. Regarding RQ1, the primary outcome variable of attitudes toward the advertising was associated with alcohol consumption level ($\beta = -.13$; $t = -2.05$, $p < .05$) and attitudes toward drinking ($\beta = -.20$; $t = -3.20$, $p < .01$). Attitudes toward the anti-high-risk advertising were negatively related to the alcohol consumption level and attitudes toward drinking. In addition, the primary outcome variable of attitudes toward the requested behavior were associated with the perceived benefits as outcome expectation ($\beta = .18$; $t = 2.94$, $p < .01$). Attitudes toward moderate and responsible drinking were positively related to the perceived benefits. Finally, the primary outcome variable of intentions to perform the requested behavior was associated with alcohol consumption level ($\beta = -.20$; $t = -3.17$, $p < .01$) and the perceived benefits as outcome expectation ($\beta = .15$; $t = 2.35$, $p < .05$). Intentions to drinking moderately and responsively were negatively related to attitudes toward drinking. In contrast, the behavioral intentions were positively related to the perceived benefits. Also, the results of the regression analysis for RQ2 showed that the primary outcome variable of attitudes toward the advertising was negatively associated with Greek membership ($\beta = -.14$; $t = -2.24$, $p < .05$). Being a member of a fraternity or sorority was negatively related to overall impressions of the anti-high-risk drinking advertising. Also, the primary outcome variable of attitudes toward the requested behavior was positively associated with gender ($\beta = .12$; $t = 1.97$, $p < .05$). Female subjects were related to positive attitudinal responses to moderate and responsible drinking. On the other hand, intentions to perform the requested behavior were related to none of the classification variables such as gender, residential system, Greek membership and school athletic teams (Table 4-12).

Table 4-12. Regression analyses for alcohol-related and classification variables

Dependent variable	Ad attitude		Behavioral attitude		Behavioral intention	
	Std. Beta	t-value	Std. Beta	t-value	Std. Beta	t-value
Alcohol consumption	-.13	-2.05*	-.10	-1.64	-.20	-3.17**
Drinking attitudes	-.20	-3.20**	-.08	-1.28	-.11	-1.76
Drinking expectancies						
Perceived benefits	-.09	-1.37	.18	2.94**	.15	2.35*
Anticipatory socialization	-.09	-1.45	-.03	-.44	-.08	-1.26
Gender	-.04	-.66	.12	1.97*	.05	.76
Residential system	-.07	-1.06	-.02	-.29	.05	.78
Greek membership	-.14	-2.24*	-.02	-.32	-.04	-.59
Athletic affiliation	-.07	-1.08	-.09	-1.47	.06	.92

Note: * $p < .05$, ** $p < .01$

Covariates

In the present study, regulatory focus was operationalized and manipulated as a situational factor, given that people can momentarily activate a promotion or prevention focus. However, it can be conceptualized as a chronic tendency in that individuals have a natural tendency to prefer a promotion or prevention orientation (Higgins, 1987; Lee et al., 2000). Previous research (e.g., Kim, 2006) suggests that subjects rate advertising messages as more persuasive when the fit between the chronic regulatory goal and the message framing is congruent. In that sense, it is conceivable that chronic regulatory orientations would play a role of changing the effects of the regulatory focus frames. Thus, the present research selected and examined whether the influences of chronic regulatory focus were exerted. Three-way ANCOVAs (analysis of covariances) were performed to test the previously investigated main and interaction effects of the independent variables on the dependent variables while controlling for chronic promotion focus and chronic prevention focus. The results showed that when chronic promotion focus was entered as a covariate chronic promotion focus significantly

influenced attitudes toward advertising, $F(1, 242) = 8.89, p < .001$, while the significant main and interaction effects were preserved. Nevertheless, the results indicated that chronic promotion focus did not significantly influence attitudes toward the requested behavior and intentions to perform the requested behavior, and the main and interaction effects were still significant when chronic promotion focus was controlled. Also, chronic prevention focus significantly influenced none of the dependent variables, while the main and interaction effects remained significant when chronic prevention focus was entered as a covariate.

CHAPTER 5 DISCUSSION

Summary and Implications

The present study provides helpful insights into the potential utilizations of messages about responsible alcohol use in public health campaigns. First of all, this study postulated that the effect of anti-high-risk drinking advertising messages on college students' drinking attitudes and behaviors would be contingent upon perceived social distance from peers. Specifically, drawing on social identity theory, the first hypothesis predicted that anti-high-risk drinking advertising messages would be more persuasive when the messages were framed as socially proximal entities (i.e., in-groups) than for socially distant entities (i.e., out-groups). Nevertheless, the results reveal that perceived alcohol use by proximate peers (i.e., best friends and friends, in this study) was not a stronger predictor of students' personal alcohol use than perceived alcohol use by more distant peers (i.e., students in general, in this study). Perceptions about alcohol use by proximate peers were found to exert influences on attitudinal and behavioral responses to drinking similar to perceptions about alcohol use by more distant peers. The results of the present study suggest that moderate and responsible drinking may be considered important to by most people regardless of the level of the perceived social distance. It is plausible that although the manipulation was successful subjects were not influenced by the taglines asking them to make judgments for the sake of their best friends or the average students. It might result in significant effects that social distance is manipulated in the questionnaire as Nan (2007) suggested.

More importantly, as Yanovitzky et al. (2006) acknowledged, it seems that the results observed in one study may not provide an accurate portrayal of the relationship

between perceived alcohol use by peers and personal drinking at universities with a relatively homogenous drinking culture. In other words, the anti-high-risk drinking ad messages focusing on judgments for proximal peers may be less effective on relatively homogeneous college campuses, where social identities related to alcohol use and, consequently, perceptions about alcohol use by proximal and distant peers are likely to be homogeneous, but more effective on heterogeneous college campuses. Thus, the present study suggests a better approach to customize social norm messages to the particular drinking culture at each university (Berkowitz, 2000). Colleges with a fairly homogeneous demographic and cultural mix of students may find effective an ad message by normative peers, who are influential, and from whom most students on campus are likely to perceive the least social distance. For instance, a message encouraging moderate and responsible alcohol use by well-known figures on campus may be more effective in reducing drinking norm misperceptions and lead to behavior change among students. The present study suggests that a careful investigation of alcohol-related social identities on campus is needed prior to designing social norm messages.

The relative effectiveness of promotion- versus prevention-framed messages in the execution of the advertising strategy for anti-high-risk drinking was also discerned from the present study. An advertising message has been framed as being either 'eager means' or 'vigilant means', or having either a 'promotion focus' or a 'prevention focus' in numerous studies (e.g., Kees et al., 2010; Kim, 2006; Lee & Aaker, 2004); yet, the advantage for promotion- and prevention-focused messages has been observed differently depending on the type of health behavior promoted in the study. As predicted

in the second hypothesis, the results of this study provide important empirical findings in that people were more receptive to a message that suggested a promotion (vs. prevention) focus to achieve a goal with regards to anti-high-risk drinking ad messages. The results reveal that an anti-high risk drinking ad focusing on a promotion focus was evaluated more favorably than one suggesting a prevention focus. The findings suggest that anti-high risk advertising messages may yield more positive attitudinal and behavioral responses when they emphasize advancement and achievement by aiming for matches to desired goals (i.e., promotion focus), as opposed to when the messages emphasize protection and safety by avoiding mismatches to desired goals (i.e., prevention focus). In other words, anti-high-risk drinking advertising messages should motivate people to pursue gains and aspire toward a healthy life, rather than motivating people to avoid losses and fulfill obligations to avoid health risks. It provides practical implications for strategic use of individually tailored messages, particularly in anti-high-risk drinking advertising, shedding light on the potential effects of the framed messages.

Of particular interest is that findings from the present study offer theoretical contributions that shed light on specific conditions in which goal pursuit strategies of health messages may be more effective in influencing attitudinal and behavioral responses. This study offers support for the suitability of the construal hypothesis (Trope & Liberman, 2003), which predicts a correspondence between regulatory focus and level of construal, and provides a guide for the construction of advertising messages that engage people at the appropriate level of construal to enhance advertising effectiveness. Consistent with construal level theory's proposition that judgments are more susceptible to the influence of low-level construal as psychological

distance decreases, the findings of the third hypothesis suggest that messages framed in promotion-oriented terms may be more effective when the object of judgment is a distant entity. On the other hand, there was no significant difference between messages framed in promotion-oriented terms and prevention-oriented terms when judgment was made for a proximal entity, unlike the hypothesis that prevention-focused messages would be more persuasive under the distant condition. That is, when faced with the proximal condition, the prevention-focused messages were not significantly more effective than promotion-focused messages in yielding subjects' positive reactions. Indeed, some studies applying the construal level theory indicate that low-level construals may be equally salient at different levels of psychological distance. For instance, judgments are not more susceptible to the influence of low-level construals (i.e., loss-framed message) as psychological distance increases (Nan, 2007), and people's preventional concerns (i.e., concerns about the negative outcomes of an event), which constitute low-level construals, do not vary with temporal distance (Pennington & Roese, 2003). It could be that the salience of low-level construals is not as affected by psychological distance as that of high-level construals.

This can be also explained by the fact that the negative consequences of high-risk drinking behaviors (e.g., injury, unsafe sexual practices, weight gain, liver disease, suicide attempts, and depression) are not imminent compared to other types of health-damaging behaviors, although these consequences are relevant to the target population; thus, prevention-focused ad messages may not be as powerful as expected. Notably, the findings of this study suggest that the condition of the prevention-focus-framed messages and the distant entity was least effective in yielding attitudinal and

behavioral intentions. Like other preventive behaviors, the abstinence program stressing the negative consequences of drinking (e.g., Drug Abuse Resistance Education (DARE)) tend to be relatively ineffective at reducing alcohol use (Gerend & Cullen, 2008). Thus, it is not recommended that health campaigners develop advertising messages that reinforce health risks by not performing the requested behavior when people were asked to make judgments for their best friends. In that sense, although partially confirming that the direction of the interaction effects was consistent with the prediction in the third hypothesis, the findings still suggest the moderating role of social distance in affecting attitudinal and behavioral responses. In other words, the findings show that the effectiveness of these framing techniques may depend on the degree to which individuals are influenced by the perceived social distance. Preliminary evidence from this research suggests that advertisers should consider the goal pursuit strategies of persuasive messages as they develop public service advertisements.

Moreover, the present study advances research on the theory such that the construal level effect can be moderated by individuals' level of involvement with the subject issue. The findings of the fourth hypothesis reveal a situation in which the predictions of the regulatory fit type backfire, moving people away from the predicted responses. Specifically, the construal level effect (i.e., the interaction effect between regulatory focus and social distance) was found to be observed when people were not motivated to process information carefully, that is, under the low-involvement condition. On the other hand, the interaction effect was not observed under the high-involvement condition. The present study lays the theoretical framework for the role of individuals' involvement as a boundary condition for construal level theory. The construal level

effects suggest that people feel right when they use a goal pursuit strategy that is compatible with their regulatory orientation. Previous research showed that the experience of feeling right is moderated by subjects' need for cognition (Evans & Petty, 2003), and may be attributed to certain objects when people do not recognize the source of this feeling (Cesario et al., 2004; Higgins et al., 2003). Consistent with Wang and Lee's (2006) findings, the results of the present study provide evidence that the effect of regulatory fit type on persuasion is moderated by involvement, suggesting that the effect of regulatory fit is reflective of heuristic versus systematic processing.

The boundary condition for the construal level effect highlights the important role of involvement, providing health communication campaigns and advertisers helpful insights into the potential utilizations of messages about anti-high-risk drinking advertising. The results indicate that it may be optimal to include health benefits that address both promotion and prevention concerns in the anti-high-risk drinking advertising message, especially when people are unlikely to pay much attention to the message. In doing so, promotion-focused people would selectively pay attention to benefits that address growth and advancement concerns, especially related to the general population, and prevention-focused people would pay attention to benefits that address safety and security concerns, especially related to their proximal peers. There is a need, however, to include the benefits that focus on promotion concerns in the ad message when targeting people who are likely to be motivated to process information and personally relevant to the alcohol-related issues.

Furthermore, the findings regarding the fifth hypothesis suggest that the effectiveness of promotion-framed (vs. prevention-framed) messages would be

maximized when targeting people who have low (vs. high) perceived risk. The results are consistent with Lee and Aaker's (2004) findings regarding the moderating effect of perceived risk on regulatory focus frames. The regulatory fit effects between message framing and risk perception propose that when prevention-focused messages are oriented toward people at relatively high risk for high-risk drinking, the overall advertising effectiveness is enhanced. In a similar vein, when promotion-focused messages are aimed at people with relatively low risk, overall favorable individual responses occur. The present study addresses that the high (vs. low) risk perception of high-risk drinking makes salient the outcomes related to prevention-focus messages, and the opposite holds true. The prevention (vs. promotion) framing effects may be more pronounced among people at higher (vs. lower) risk. That perceived risk plays a moderating role in framing effects can be explained by Higgins' (2002) regulatory fit principle in that a good fit between the message framing (prevention- vs. promotion-framing) and strategic means (high vs. low risk focus) increases the overall message effectiveness. Although the present study did not show the regulatory fit effect in yielding greater behavioral intentions, from a managerial perspective, it is important for health communication campaigners to understand the circumstances in which the advertising message effects are enhanced, particularly in terms of generating positive attitudes toward overall preventive behaviors as well as responsible and moderate drinking.

Finally, additional analyses provide implications for future research on alcohol interventions. The present study investigated how individuals' characteristics or traits were associated with the outcome variables of interest. Regarding the first and second

research questions, some of the alcohol-related variables were found to be important factors predicting the advertising effectiveness. According to the results, people who drink less, who have favorable attitudes toward staying sober, or who are not a member of fraternity or sorority are likely to have positive attitudes toward anti-high-risk drinking advertising. In addition, people who have stronger perceived benefits of drinking alcohol with friends or who are females may have positive attitudes toward moderate and responsible drinking behavior. In a similar vein, people who drink less, or who have stronger perceived benefits of drinking alcohol with friends are likely to have stronger behavioral intentions. Also, individuals' chronic regulatory orientation, including chronic promotion focus and chronic prevention focus, was tested as a covariate that might affect the results of the experiment. The results reveal that chronic promotion focus significantly affected the advertising attitudes, while the main and interaction effects were still significant when controlled. It is important to note that people who have a natural tendency to prefer a promotion orientation are more likely to have favorable attitudes toward anti-high-risk drinking advertising. The finding that individual factors in public health could influence the effects of advertising messages on health outcomes provides practical implications for selection of the right advertising messages for the right target audiences.

Limitations and Suggests for Future Research

Several limitations of this research must be acknowledged. It shares common weaknesses of experimental studies, such as an artificial scenario in a laboratory setting and the use of a student sample of convenience. It employed a college student convenience sample since the sample was chosen based on the relevance of the health topic. Having employed the student samples in this study, however, warrants that more

work be done to examine whether the results of this research translate to nonstudent samples. In particular, the use of a female-dominant sample reduces the generalizability of the study findings. Also, considering that the perceived social distance did not significantly affect the outcome variables of interest in this research, there is a need to replicate the study with the heterogeneous nature of the sample to investigate the perception-behavior relationship at universities with heterogeneous social identities and drinking cultures. Therefore, for greater generalizability of these results, future research should be conducted with a more representative population sample and other advertising types. Furthermore, although cautious efforts were made to embrace executional formats, this research still relied on a limited number of advertising forms (i.e., print ads). Further research with different advertising types (i.e., commercials) is needed to better identify the degree of generalizability of the findings.

Another major limitation of this study is that the use of a real sponsor name (i.e., *Gainesville Sun*, *GatorWell*), which was intended to heighten the external validity of the study, might have increased the confounding effects. Thus, an alternative experimental design can use a real sponsor name in the newspaper excerpt or print advertisement while statistically controlling for subjects' prior attitudes toward, and perceptions of, the specific organization that sponsors the advertising campaigns. Also, subjects' overall attitudes toward PSAs and anti-high-risk drinking advertising campaigns should be gauged to determine whether and how these kinds of prior attitudes might also influence their responses. Furthermore, the way in which the newspaper excerpt and print advertisement were shown to the subjects may lack realism due to the made-up design features; thus, it might moderate their responses to the advertising campaign examined

in this research. To enhance overall internal validity of the study, future studies should prevent these confounding effects; that is, future research needs to consider this controlled context and environment which provides experimental control and minimizes alternative explanations for effects, although findings may still not be generalizable to a more natural environment.

The present study incorporated both social contextual factors (e.g., social distance) and individual factors (e.g., involvement, risk perceptions, chronic regulatory focus) in the research hypotheses, which concern the effects of these variables on the message framing effects. In addition, the present study gauged the role of individual differences (e.g., alcohol consumption level, alcohol attitudes, alcohol expectancies, Greek membership) in influencing attitudes and behavioral intentions. Nevertheless, whether and how these individual factors moderate or mediate the effects of perceptions of social distance and regulatory focus framing as well as their interaction effects were not examined in this study. Additionally, previous research (e.g., Lee & Chen, 2004) found that moderate drinkers exhibit a higher level of intention to change their drinking behavior in negative reinforcement conditions than those in positive reinforcement conditions; however, no significant condition effect was found among heavy drinkers with regard to their intention to change their drinking behaviors. Similarly, individuals' personal traits, such as sensation seeking, might serve as another important variable that determines the effectiveness of the advertising campaigns. Young adults who are more likely to have "the need for novel, complex, ambiguous, and emotionally intense stimuli and the willingness to take risks to obtain such stimulation" are called "high-sensation seekers", and are much more at risk for use of a variety of

drug and alcohol items (Palmgreen & Hoyle, 2001, p. 292). In light of these findings, the role of individual drinking practices or personal traits in moderating the main effects and interaction effects can be further investigated.

Another promising direction for future research may be along the lines of further assessing the primary effects of message appeals. The present research was also limited in its scope in that only one message feature – message tone or message framing – was examined. The potential moderating effects of other important message features, such as argument strength, message complexity, and visual versus verbal treatment, were largely ignored. To better understand message effects, however, it is essential to gain an understanding of the effects of message features. In addition, ‘message tone’ is defined here broadly in terms of the type of impact induced by the message, which is either positive or negative. Recent developments in discrete emotions research suggest a broader spectrum of effect that encompasses discrete emotions, such as fear, guilt, and happiness (Dillard & Peck, 2001; Nabi, 2002). A more specific definition of ‘message tone’ that takes into account discrete emotions may prove useful in testing the effects of message tone as a message feature. Therefore, additional research is warranted to understand the mechanism that links such message feature variables to perception of social distance, regulatory goals and individual difference variables and to identify other antecedents of construal level of mental representations in advertising contexts.

Finally, further research is needed that examines how individuals’ perceptions of social distance, self-regulatory orientations and issue involvement influence the construal level of mental representations in a broader context. Only one type of health

behavior (i.e. moderate and responsible alcohol use) was tested in the present study. The major causes of mortality and morbidity among college students are problem behaviors, such as substance (e.g., alcohol, tobacco, drug) abuse and unprotected sexual practices; and such health hazards are all preventable with responsible behaviors (Schulenberg, Maggs & Hurrelmann, 1997). Therefore, in order to strengthen the generalizability of the findings, future research with a larger set of health problems is needed. Moreover, the habits and lifestyles formed and consolidated during this period of time may continue into individuals' later life, leading to long-term health consequences. Hence, future studies that examine actual lifestyle changes based on the ad appeals studied in this research would be meaningful. In terms of practical implications of this research, it is important to study whether persuasive messages viewed over time as part of a specific campaign can actually change health behavior (beyond measuring how positively or negatively consumers evaluate the ad or how the ad affects persuasion or intentions). Future research may use methodologies that capture individuals' advertising responses over longer periods of time and/or attempt to capture actual behavioral change that may result from ad-based exposures.

Conclusion

This research indicates that the same message strategy may be differentially effective depending on whether the message recipients act as the ultimate target audience or not. Overall, a message framed as a promotion focus, compared to a prevention focus, is more effective in terms of yielding attitudes and intentions to favor moderate and responsible drinking. In particular, when asked to make judgments for distant entities (i.e., acting as the influence groups), people are more persuaded by high-level construals of the advocated issue, such as a promotion-focused frame (i.e., a

message framed as advancement and achievement) than when asked to make judgments for proximal entities (i.e., acting as the ultimate target audience). Nevertheless, the results of the current research do not show a differential effect of the regulatory focus frame on judgments associated with proximal entities. This means that low-level construals, such as a prevention-focused frame (i.e., a message framed as protection and safety), are less susceptible to role changes. Additionally, the current research investigates the role of involvement in moderating the construal level effect, examining its boundary conditions through systematic research on how involvement, as well as social distance and regulatory focus, influence the construal level of mental representations. Suggesting that the regulatory fit effect is reflective of heuristic versus systematic processing, this research reveals that the effects of the experience of feeling right do not remain significant when people are more motivated to process information. Understanding how social distance influences the way in which people make judgments is an important scientific inquiry especially in the context of anti-high-risk drinking advertising campaigns targeting college population. By approaching this issue uniquely from a construal level perspective and relating it to the study of framing and involvement effects, this research aims to serve as a springboard for future inquiries in the realm of health communication and strategic communication in general.

APPENDIX A THE STIMULI

Involvement: a newspaper excerpt

High involvement



Alcohol Abuse: A Growing Problem Among UF Students

By Jeremiah Payne

Sun Staff Writer

Assistant Vice President of Student Affairs and Dean of Students JenDay Shaw said the UF alcohol abuse rates among high-risk drinkers actually increases by 19.8 percent between 2008 and 2011, although it is said that University of Florida (UF) has seen decreases in alcohol-related issues in recent years. About 31 percent of UF students met criteria for a diagnosis of alcohol abuse and 6 percent for a diagnosis of alcohol dependence in the past 12 months according to UF GatorWell's Student Health Surveys.

According to a recent study conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA) in the U.S. Department of Health and Human Services, especially college students have a very high risk of becoming alcohol dependent, which may be as high as 80% for those who are engaged in the high-risk drinking. Susceptibility to alcohol dependence or abuse later in life actually is established early when people are in their late teens and twenties. Thus, the risk of becoming an alcohol dependent patient is real, increasing, and important to be aware of especially when people are between the ages of 18-24.

High-risk drinking negatively affects their academic performance, social relationships and health. Frequent high-risk drinkers are 21 times more likely than non-high-risk drinkers to fall behind in schoolwork, be injured or hurt, engage in domestic violence or drive a car after drinking.

Shaw pointed out that while UF students estimated 65.5 percent of the student population to be habitual party-goers, 42 percent of students answered that they consume five or more drinks in a social setting, or engaging in "risky behavior."

Low involvement



Alcohol Abuse: A Growing Problem Among Middle-Aged People

By Jeremiah Payne

Sun Staff Writer

According to a recent study conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA) in the U.S. Department of Health and Human Services, especially middle-age people have a very high risk of becoming alcohol dependent, which may be as high as 80% for those who are engaged in the high-risk drinking. The tendency toward alcohol dependence or abuse greatly increases as people grow older. Thus, the risk of becoming an alcohol dependent patient is of utmost concern for those between the ages of 45-54.

High-risk drinking negatively affects their job performance, social relationships and health. Frequent high-risk drinkers are 21 times more likely than non-high-risk drinkers to fall behind with work, be injured or hurt, engage in domestic violence or drive a car after drinking.

Regulatory focus: a Facebook page (priming)

Promotion focus

facebook Search Home Profile Account

GatorWell Health Promotion Services

Organization · Gainesville, Florida

Wall GatorWell Health Promo... · Most Recent

Share: Post Photo Link Video

Write something...

GatorWell Health Promotion Services

If you do not drink alcohol, you can obtain positive outcomes, such as increasing your likelihood of driving safely, having a healthy liver, maintaining a healthy weight, and decreasing your likelihood of risk for sexually transmitted diseases (STDs). Also, limiting alcohol use may lead to better moods and higher self-esteem, while alcohol use may result in impaired judgment, poorer memory, and difficulty concentrating. If you do not drink, you will feel greater energy for your everyday life!

Health Hut - UF GatorWell
gatorwell.ufsa.ufl.edu

The GatorWell Health Hut is a wellness program developed to promote a health-conscious campus. This program is committed to encouraging and empowering University of Florida students to integrate one's self-image, mind, feelings, body, community, relationships, meaning and purpose to achieve overall

July 13 at 12:11pm · Like · Comment · Share

GatorWell Health Promotion Services

Check out the Health Hut at GatorNights tonight and Gatormania 2011 tomorrow. Looking forward to seeing you there!

Gatormania 2011
Location: Reitz Union North Lawn
Time: 11:00AM Saturday, July 9th

July 8 at 8:38am · Like · Comment · Share

GatorWell Health Promotion Services

yay! week 2 of Summer B is almost complete :)

July 7 at 10:57pm · Like · Comment

GatorWell Health Promotion Services

if you want to feel good, do good.

June 29 at 7:45am · Like · Comment

4 people like this

Recommend This Place

Help your friends discover great places to visit by recommending this.

Write a recommendation...

You and GatorWell Health Promotion Services

Sun-Young Park likes this.

Recommended Pages See All

The Social Norms Campaign - UMass...
Sun-Young Park likes this.
Like

University of Florida Student Heal...
Sun-Young Park likes this.
Like

Sponsored Story

Candace Caswell likes Facebook Studio.

Facebook Studio
Like

Sponsored Create an Ad

Fun With Notation
discusmusic.com

Unique note panel sets that allow your students to become much more involved in writing and reading notation. Click now for more info!

North Social

Create a custom Facebook page in minutes... without writing a single line of code!

NORTH SOCIAL

we are where you are

Health Hut | CWC Building on Radio Road | Jennings & Springs

Wall

Info
Friend Activity
Welcome
Events
Video
Photos
Notes

About

Be Well. Do Well. GatorWell

387 like this

Likes See All

Healthy Gators

GatorWell at Jennings

Prevention focus

facebook
Home Profile Account

we are where you are

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Healthy Gators

GatorWell at Jennings

GatorWell Health Promotion Services

Organization · Gainesville, Florida

Wall GatorWell Health Promo... · Most Recent

Share: [Post](#) [Photo](#) [Link](#) [Video](#)

Write something...

GatorWell Health Promotion Services

If you do not drink alcohol, you can avoid negative outcomes, such as increasing your likelihood of driving accidents, having an unhealthy liver, gaining weight, and increasing your likelihood of risk for sexually transmitted diseases (STDs). Also, limiting alcohol use may not lead to depression and lower self-esteem, while alcohol use may result in impaired judgment, poorer memory, and difficulty concentrating. If you do not drink, you can protect your everyday life!

Health Hut - UF GatorWell

gatorwell.ufsa.ufl.edu

The GatorWell Health Hut is a wellness program developed to promote a health-conscious campus. This program is committed to encouraging and empowering University of Florida students to integrate one's self-image, mind, feelings, body, community, relationships, meaning and purpose to achieve overall

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GatorWell Health Promotion Services

yay! week 2 of Summer B is almost complete :)

July 7 at 10:57pm · Like · Comment

GatorWell Health Promotion Services

If you want to feel good, do good.

June 29 at 7:45am · Like · Comment

Recommend This Place

Help your friends discover great places to visit by recommending this.

Write a recommendation...

You and GatorWell Health Promotion Services

Sun-Young Park likes this.

Recommended Pages

See All

Sun-Young Park likes this.

Sun-Young Park likes this.

Sponsored Story

Like

Sponsored

Create an Ad

discusmusic.com

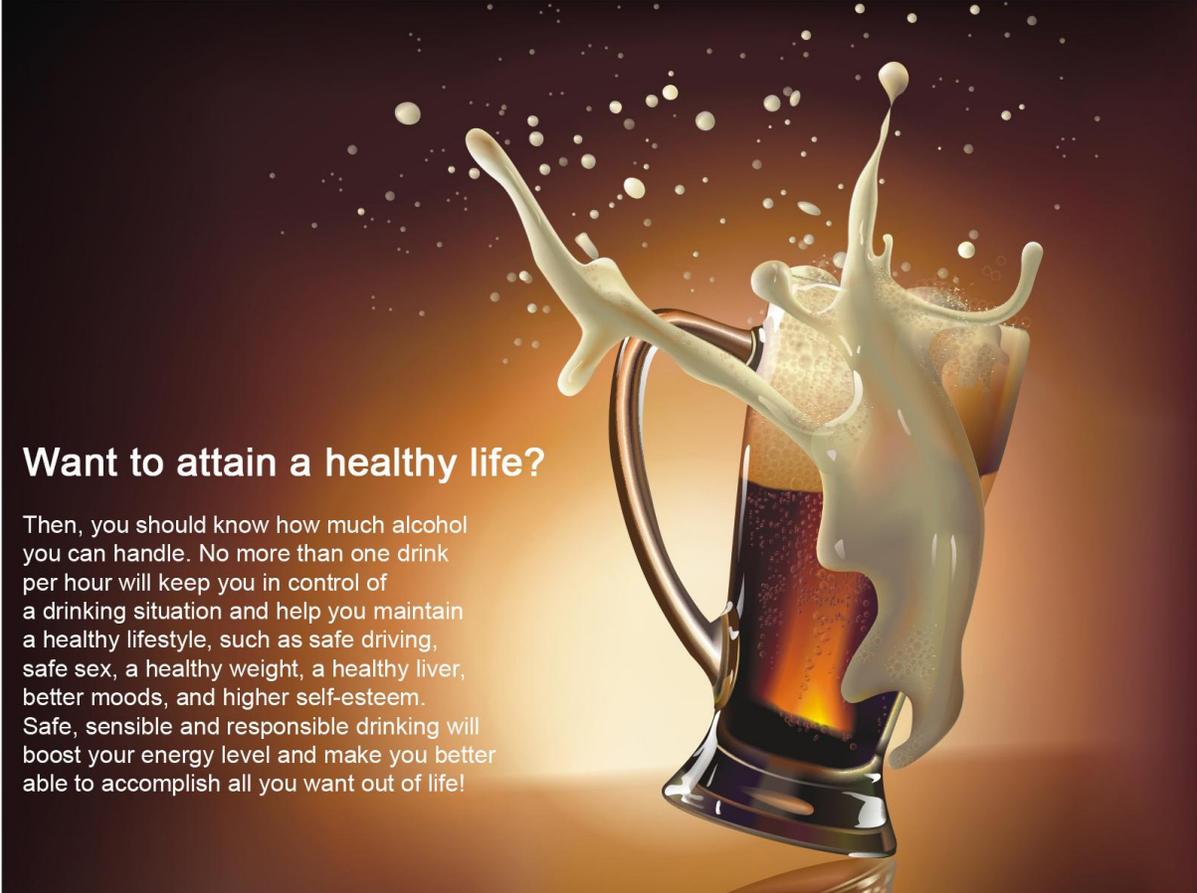
Unique note panel sets that allow your students to become much more involved in writing and reading notation. Click now for more info!

North Social

Create a custom Facebook page in minutes... without writing a single line of code!

Regulatory focus & social distance: an ad

Promotion focus + proximal



Want to attain a healthy life?

Then, you should know how much alcohol you can handle. No more than one drink per hour will keep you in control of a drinking situation and help you maintain a healthy lifestyle, such as safe driving, safe sex, a healthy weight, a healthy liver, better moods, and higher self-esteem. Safe, sensible and responsible drinking will boost your energy level and make you better able to accomplish all you want out of life!

What would your best friend tell you about high-risk drinking?
Drink moderately and responsibly for the sake of your best friend.



Prevention focus + proximal



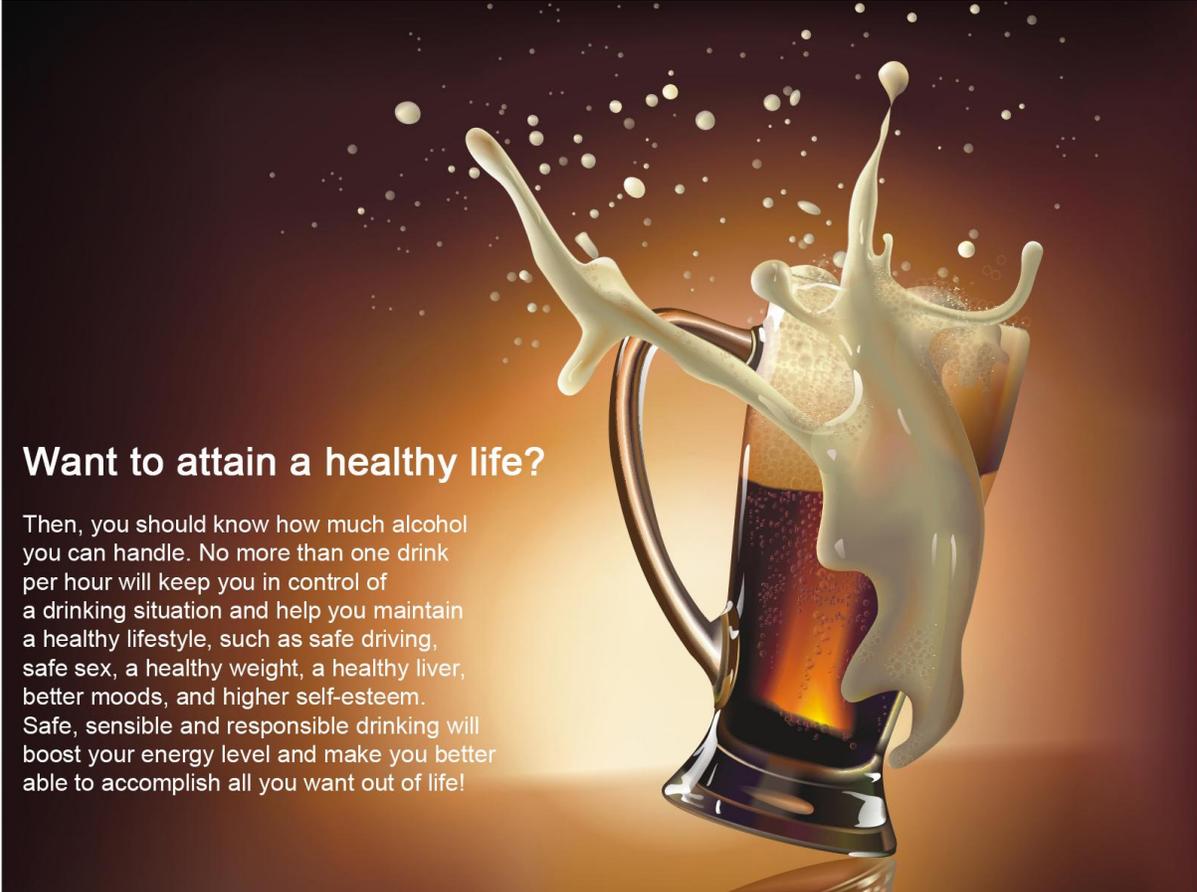
Want to avoid health risks?

Then, you should know how much alcohol you can handle. No more than one drink per hour will prevent you from losing control of a drinking situation and help you prevent an unhealthy lifestyle, such as injury, unsafe sexual practices, weight gain, liver disease, suicide attempts, and depression. Safe, sensible and responsible drinking will protect your body and keep you safe!

What would your best friend tell you about high-risk drinking?
Drink moderately and responsibly for the sake of your best friend.



Promotion focus + distant



Want to attain a healthy life?

Then, you should know how much alcohol you can handle. No more than one drink per hour will keep you in control of a drinking situation and help you maintain a healthy lifestyle, such as safe driving, safe sex, a healthy weight, a healthy liver, better moods, and higher self-esteem. Safe, sensible and responsible drinking will boost your energy level and make you better able to accomplish all you want out of life!

What would an average college student tell you about high-risk drinking?
Drink moderately and responsibly for the sake of an average college student.



Prevention focus + distant



Want to avoid health risks?

Then, you should know how much alcohol you can handle. No more than one drink per hour will prevent you from losing control of a drinking situation and help you prevent an unhealthy lifestyle, such as injury, unsafe sexual practices, weight gain, liver disease, suicide attempts, and depression. Safe, sensible and responsible drinking will protect your body and keep you safe!

What would an average college student tell you about high-risk drinking?
Drink moderately and responsibly for the sake of an average college student.



APPENDIX B
QUESTIONNAIRE

Pre-Manipulation Questionnaire

This set of questions asks you about specific events in your life. Please indicate your answer to each question by circling the appropriate number below it.

	Never		Sometimes		Very often				
1. Compared to most people, are you typically unable to get what you want out of life?	1	:	2	:	3	:	4	:	5
2. Growing up, would you ever "cross the line" by doing things that your parents would not tolerate?	1	:	2	:	3	:	4	:	5
3. How often have you accomplished things that got you "psyched" to work even harder?	1	:	2	:	3	:	4	:	5
4. Did you get on your parents' nerves often when you were growing up?	1	:	2	:	3	:	4	:	5
5. How often did you obey rules and regulations that were established by your parents?	1	:	2	:	3	:	4	:	5
6. Growing up, did you ever act in ways that your parents thought were objectionable?	1	:	2	:	3	:	4	:	5
7. Do you often do well at different things that you try?	1	:	2	:	3	:	4	:	5
8. Not being careful enough has gotten me into trouble at times.	1	:	2	:	3	:	4	:	5
9. When it comes to achieving things that are important to me, I find that I don't perform as well as I ideally would like to do.	1	:	2	:	3	:	4	:	5
10. I feel like I have made progress toward being successful in my life.	1	:	2	:	3	:	4	:	5
11. I have found very few hobbies or activities in my life that capture my interest or motivate me to put effort into them.	1	:	2	:	3	:	4	:	5

Post-Manipulation Questionnaire

Please indicate how you feel about the message in the newspaper article about alcohol abuse that you just read by selecting one of each bipolar adjective pair.

Not at all involved	_____	_____	_____	_____	_____	_____	_____	Very involved
	1	2	3	4	5	6	7	
Not at all interested	_____	_____	_____	_____	_____	_____	_____	Very interested
	1	2	3	4	5	6	7	
Skimmed it quickly	_____	_____	_____	_____	_____	_____	_____	Read it carefully
	1	2	3	4	5	6	7	
Paid little attention	_____	_____	_____	_____	_____	_____	_____	Paid a lot of attention
	1	2	3	4	5	6	7	

For the following statements, please indicate how you feel about the message in the ad that you just saw by selecting one of the given options.

	Definitely not							Definitely yes
The ad message focuses on achieving a healthy life.	_____	_____	_____	_____	_____	_____	_____	
	1	2	3	4	5	6	7	

Please indicate the likelihood that the ad message asked you to think about moderate and responsible drinking for someone by selecting one of the given options.

	Definitely not							Definitely yes
The ad message asked me to think about moderate and responsible drinking for the proximal entity.	_____	_____	_____	_____	_____	_____	_____	
	1	2	3	4	5	6	7	

Please indicate how you feel about the ad that you just saw by selecting one of each bipolar adjective pair.

Bad	_____	1	_____	2	_____	3	_____	4	_____	5	_____	6	_____	7	Good
Unfavorable	_____	1	_____	2	_____	3	_____	4	_____	5	_____	6	_____	7	Favorable
Unpleasant	_____	1	_____	2	_____	3	_____	4	_____	5	_____	6	_____	7	Pleasant

Please indicate how you feel about moderate and responsible drinking by selecting one of each bipolar adjective pair.

Bad	_____	1	_____	2	_____	3	_____	4	_____	5	_____	6	_____	7	Good
Unfavorable	_____	1	_____	2	_____	3	_____	4	_____	5	_____	6	_____	7	Favorable
Unpleasant	_____	1	_____	2	_____	3	_____	4	_____	5	_____	6	_____	7	Pleasant

How likely would it be that you will perform the following behavior? Please choose the answers that most reflect your opinions about moderate and responsible drinking by selecting one of each bipolar adjective pair.

Very Unlikely	_____	1	_____	2	_____	3	_____	4	_____	5	_____	6	_____	7	Very Likely
Improbable	_____	1	_____	2	_____	3	_____	4	_____	5	_____	6	_____	7	Probable
Impossible	_____	1	_____	2	_____	3	_____	4	_____	5	_____	6	_____	7	Possible

Not at all likely Very likely

What is the likelihood that high-risk drinking places your health at risk?

_____	1	_____	2	_____	3	_____	4	_____	5	_____	6	_____	7
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Your responses to the following questions or statements should reflect your experience of “drinking.” Please respond to the following questions. (Please remember all of your answers remain strictly confidential.)

On average, how many drinks of alcohol do you have per week? Please assume that one standard drink equals one bottle of beer, one glass of wine, or one shot of hard liquor.

On average, how many alcohol drinks do you consume when you socialize in a setting with alcohol?

Within the last two weeks, how many times have you had five or more alcohol drinks in a sitting?

How you feel about drinking alcohol in general? Please select one of the given options.

- | | Strongly disagree | | | | Strongly agree |
|---|-------------------|---|---|---|----------------|
| 1. I don't have to get drunk to have a good time. | 1 | 2 | 3 | 4 | 5 |
| 2. I think drinking to get drunk is a bad idea. | 1 | 2 | 3 | 4 | 5 |
| 3. I feel better when I do not drink. | 1 | 2 | 3 | 4 | 5 |

For the following questions, please indicate the extent to which you believe about drinking alcohol with friends selecting one of the given options.

- | | Strongly disagree | | | | Strongly agree | | |
|-------------|-------------------|---|---|---|----------------|---|---|
| Rewarding | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Pleasurable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Enjoyable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Fun | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

How do you feel about drinking alcohol? For the following questions, please click the answers that most reflect your opinions.

	Strongly disagree						Strongly agree												
Drinking alcohol was a part of a college experience.	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____
	1		2		3		4		5		6		7						
College students were expected to drink alcohol.	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____
	1		2		3		4		5		6		7						
Drinking alcohol was an important social life.	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____
	1		2		3		4		5		6		7						
College freshmen looked forward to being able to drink.	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____
	1		2		3		4		5		6		7						
Drinking alcohol allowed students to make friends.	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____	:	_____
	1		2		3		4		5		6		7						

In order to effectively evaluate the survey responses, please answer the following questions about yourself. Please remember all of your answers remain strictly confidential.

Gender: Male _____ Female _____

Age : _____

Year in School : Freshmen _____ Sophomore _____ Junior _____ Senior _____ Graduate _____ Other (Please specify _____)

Major : _____

Ethnicity: White _____ Black _____ Hispanic _____ Asian _____ Other _____

Residential system: Please click your current living situation.

1) On-campus 2) Off-campus

Greek membership: Are you a member of a fraternity or sorority? 1) Yes 2) No

School athletic teams: Have you ever participated to any degree in school athletic teams?

1) Yes 2) No

Please indicate the last four digits of your UFID number. This information will only be used to confirm that you participated in this research. Your identity will be kept confidential to the extent provided by law.

Thank you so much for your participation. Your input is extremely value to your study!

If you have questions or concerns about this survey, please contact Maureen Miller at GatorWell Health Promotion Services at 352-392-1161 or emm@ufl.edu.

If you are interested in general alcohol information, please visit the GatorWell website:

<http://gatorwell.ufsa.ufl.edu/Alcohol-and-Other-Drugs.aspx>

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BIOGRAPHICAL SKETCH

Sun Young Park, born in Seoul, South Korea, graduated from Sogang University, where she received her triple degrees of Bachelor of Arts in French, English, and mass communication in February 2004. After graduation, she worked as an account executive at a major advertising agency, such as Diamond Ogilvy Group and Innocean Worldwide, for two and a half years. After the industry experience, she earned a Master of Arts in advertising at the University of Texas at Austin in 2008. During her four years in the Ph.D. program at University of Florida, she received the Grinter Fellowship from the College of Journalism and Communications, and taught advertising research, advertising strategy and international advertising courses in the Department of Advertising. She was married to Mark Yi-Cheon Yim, who is now an assistant professor in Marketing & Information Systems at Canisius College, and they have one lovely son, Philip, age 1. For this dissertation project, she won the 2012 American Academy of Advertising Doctoral Dissertation Proposal Award. Sun-Young has accepted a position as an Assistant Professor at the Department of Communication at Drury University and will teach undergraduate advertising courses and graduate integrated marketing communications courses in the Fall of 2012.