

Seeking Safety? Applying the Risk Information Seeking and Processing Model to Sexual Aggression on a College Campus

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SEEKING SAFETY? APPLYING THE RISK INFORMATION
SEEKING AND PROCESSING MODEL TO
SEXUAL AGGRESSION ON
A COLLEGE CAMPUS

by

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ABSTRACT
SEEKING SAFETY? APPLYING THE RISK INFORMATION SEEKING AND PROCESSING MODEL
TO SEXUAL AGGRESSION ON A COLLEGE CAMPUS

Gregory J. Calhoun, B.A.

Marquette University, 2012

While a plethora of researchers have studied risk factors related to sexual violence, few studies have explored what differences account for the various ways women seek and process information about sexual violence. The study seeks to accomplish this by applying the Risk Information Seeking and Processing model (RISP) to the risk of sexual aggression on college campuses. RISP has been utilized to effectively explore the individual traits that influence how people seek and process risk information in a number of contexts. In analyzing a survey of 152 full-time female undergraduates at Marquette University, the results show that negative emotions and peer pressure are promising affective and cognitive factors that communication campaigns can influence in an attempt to improve information seeking and processing.

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I. INTRODUCTION

The issue of sexual aggression and victimization remains shrouded in taboo and secrecy since many crimes go unreported by victims fearful to lose even more privacy, dignity and sanity in the medical and legal processes that would follow a report (Nasta et al., 2005). Another source of confusion and doubt for victims is the fact that victims and perpetrators both often consume alcohol prior to an incident, leading to an exacerbated level of the fear, guilt and embarrassment that victims likely experience when determining whether or not to report a sexual assault (Nasta et al., 2005).

Nevertheless, a body of literature has investigated this problem, revealing consistent rates of victimization for American women both collegiate and those living in the general population (Gidycz, McNamara & Edwards, 2006). In order to better understand the phenomenon and provide effective educational programs for women, researchers have studied risk perception heavily, often using vignettes of dating and other social scenarios to see how women react to social cues of differing levels of risk (Cue, George & Norris, 1996; Norris, Nurius & Dimeff, 1996). Another well-studied path of research is the impact of alcohol on risk perception to see how different levels of alcohol consumption impact a respondent's reaction to social cues (Gidycz, McNamara & Edwards, 2006).

An avenue that remains open is how women seek and process information on sexual assault risks and self-protection behaviors. This study will examine that process using the Risk Information Seeking and Processing (RISP) model developed

by Griffin and colleagues (1999) over a decade ago. The model, at its most basic, posits that one motive for information seeking and active processing behavior will be when a person perceives an information gap, called information insufficiency, between the current knowledge he or she has and the amount of knowledge he or she needs to deal with the risk of concern (Griffin, Dunwoody & Neuwirth, 1999; Huurne, Griffin & Gutteling, 2009). The model has been successful in understanding the differences in people's risk information seeking and processing of topics related to risks, such as the environmental risks of polluted fish consumption and unsafe drinking water (Griffin, Neuwirth, Dunwoody & Giese, 2004). This test will help us understand why some women seek information about the risks of sexual assault in order to deal with that potential risk, and will also tell us which sources those women trust the most. It will also tell us why other women avoid this information. The first point will provide important knowledge to practitioners providing educational material for information seekers, while the second will help those seeking to persuade women to become more informed.

RQ1: What factors affect the ways women seek and process information about the risk of sexual aggression?

Present Status of the Problem

Scope

Gidycz, McNamara and Edwards (2006, 1) call sexual assault "an endemic problem in our society," with research consistently finding that around 15-20% of collegiate women surveyed report an experience of rape or attempted rape (Brenner,

McMahon, Warren & Douglas, 1999). In studies of the general public, an American woman's lifetime prevalence of sexual assault hovers between 5% and 25%, according to Nasta et al. (2005), while as of 2002 barely more than half of sexual assault and rape cases were reported based on estimates by the National Crime Victimization Survey. These rates actually peak in young women between 16 and 24 years old, who face a rate of sexual assault two to three times greater than older women (Nasta et al., 2005).

With most sexual assaults being perpetrated by acquaintances, studies by Nurius (2000) and Byers, Giles and Price (1987) have found that, when asked about the broader definition of acquaintance sexual aggression, 34-83% of women report encountering the problem at least once. Broach and Petretic (2006) expand the definition further to examine the issue of sexual coercion, where a partner consents to unwanted sexual activity, and found increased symptoms of trauma in women who consented to unwanted sexual intercourse. While definitions vary, the results demonstrate that sexual aggression and victimization is a hidden but very real threat on and outside college campuses.

The topic of this research borrows from the risk communication and information seeking and processing literature to narrow its focus on what factors affect how women seek and process information related to the risk of sexual aggression. Other research on the subject of sexual violence has focused on different aspects of the problem. Investigators have looked into the impact of the perceptions people have about the probability and severity of the risk of sexual aggression. One major finding in this area is that many women carry an optimistic

bias in which they perceive the risk of sexual aggression to be higher for their peers than it is for the respondents themselves (Nurius, 2000). Alcohol use is a related topic due to findings that alcohol use is common among victims and perpetrators in crimes that are reported (Ullman, 2003). Researchers are interested in how alcohol might influence risk perception and self-protection.

II. THEORETICAL MODEL

The theoretical approach in this study is the Risk Information Seeking and Processing (RISP) model developed by Griffin and his colleagues to understand how people seek and respond to messages about risks to their health and well-being or to the natural environment (Griffin, Dunwoody & Neuwirth, 1999). The model has been studied extensively since its introduction into the literature (Griffin, Dunwoody & Yang, in press), with examinations ranging from environmental risks to the risks of enrolling in clinical trials. The developers of RISP recognized that a significant portion of research on health communication campaigns used expertise, rather than research, to decide what information people wanted and how to present it effectively. RISP takes, instead, a bottom-up approach by studying how and why individuals seek and interpret information about risks in their lives. It is an integration of concepts that developed in several areas of the literature regarding risk perception, information seeking and processing and behavioral intent.

Information Seeking and Processing

The RISP model incorporates Eagly and Chaiken's (1993) Heuristic-Systematic Model (HSM), one of the major models delineating how people absorb and manage the information they come across in their daily lives. The Heuristic-Systematic model describes two methods of processing. In systematic processing, an individual utilizes rigorous and demanding information processing, which includes active thinking about a subject that explores the topic with some depth of

focus and effort (Eagly & Chaiken, 1993). Heuristic processing involves a more superficial level of processing that uses mental shortcuts to quickly store information using prior knowledge (Eagly & Chaiken, 1993). Heuristic processing, Chaiken (1980) tells us, requires a less strenuous cognitive workout, which is often helpful for organizing and managing the vast amounts of less important information that people come across in their lives. The trouble is that heuristic processing may be problematic when a mental shortcut prevents someone from fully digesting and analyzing the flaws in an argument. That person may then adopt a negative health behavior, or resist changing a current negative health behavior, all because of a quick categorization and acceptance of flawed information.

Because systematic processing requires a larger investment of time and energy, scholars recognize that people must be motivated to make that extra effort (Griffin, Dunwoody & Yang, in press). HSM, for example, predicts that subjects' decisions to use either processing style are based on their capacity and their motivation to process information at a deeper level (Eagly & Chaiken, 1993). Built upon the notion of accuracy motivation, i.e., an individual's desire to develop and hold cognitions and attitudes consistent with reality (Eagly & Chaiken, 1993), RISP measures "information insufficiency," or the "gap" between what people believe they know and how much they believe they need to know to feel adequately confident in their judgments about how to deal with a particular risk in their life (Huurne, Griffin & Gutteling, 2009). In terms of capacity, RISP uses a variable that also echoes a concept (Perceived Behavioral Control) in the Theory of Planned Behavior.

Theory of Planned Behavior

Capacity is conceptualized in the RISP model as "perceived information gathering capacity," which is an individual's perception of their ability to gain more knowledge about a risk as a behavior (Griffin, Dunwoody & Neuwirth, 1999). The use of this concept reflects RISP's roots in another theory, the Theory of Planned Behavior (TPB) (Griffin, Dunwoody & Neuwirth, 1999; Huurne, Griffin & Gutteling, 2009). In this case, capacity represents TPB's construct of Perceived Behavioral Control (PBC), which is a person's sense of his or her ability to perform a specific behavior. RISP conceptualizes the seeking (or avoidance) and processing of risk information as behaviors.

PBC is the first of three components that TPB predicts will influence behavioral intention. The second is a subject's attitude toward the act (Aact), which emerges from their beliefs about the behavior. Aact is represented indirectly in the RISP model as underlying the latter's concept of "Relevant Channel Beliefs." The third is an individual's perception of how others would view and judge the behavior, known as Subjective Norms (Ajzen, 1985). TPB begins with PBC due to Bandura's work on self-efficacy, which prompted Fishbein and Ajzen (2010) to supplement the TPB's predecessor, the Theory of Reasoned Action (TRA).

Bandura conceptualized self-efficacy as a person's perception of his or her ability to exert control over his or her functioning and other important life events (Bandura, 1991). He eventually understood that a person's self-efficacy is mercurial, changing with circumstances (Bandura, 1997). PBC is similar to this nuanced version, and only looks to measure what people think they are able to do

when performing a particular behavior (Fishbein & Ajzen, 2010). Two important aspects of PBC are autonomy and capacity. Autonomy, in measurement, focuses on an individual's sense of control over a behavior, while capacity measures his or her perception of the ease or difficulty of performing the same behavior (Fishbein and Ajzen, 2010). Between these two categories lies every belief a person can have about their control over a behavior. A person's total PBC, then, is measured by aggregating a person's full set of these control beliefs about their capacity and autonomy for a given behavior (Ajzen, 1991).

As information seeking and processing are behavioral processes related to risk communication, RISP includes the important construct from TPB of perceived behavioral control, or self-efficacy in Bandura's literature (Huurne, Griffin & Gutteling, 2009; Bandura, 1997; Ajzen, 1991). Reconfigured as perceived informational gathering capacity, this idea measures the subject's perceived aptitude to conduct the seeking and processing needed to achieve the desired outcome, given the challenges of additional cognitive exertion and finding knowledge in nonroutine sources (Griffin, Dunwoody & Neuwirth, 1999).

The second factor in the behavioral intention construct is the individual's Attitude toward the Act (Aact). TPB follows the standard modern definition of attitude for the Aact portion of the model, except that most research has examined attitudes towards objects rather than specific behaviors (Fishbein & Ajzen, 2010). This modern position sees attitude as the inherent temperament to respond favorably or unfavorably to some degree when presented with an object, or in TPB's case, an act (Fishbein & Ajzen, 2010). TPB measures attitude using semantic

differential scales. TPB believes that the expectancy-value model explains the formation of attitudinal judgments, and proposes a direct correlation between attitudinal measures and an individual's response to a set of behavioral beliefs about the nature and likelihood of a behavior's consequences (Fishbein & Ajzen, 2010).

The behavioral beliefs concept is incorporated into the RISP model through the concept of relevant channel beliefs (Griffin, Dunwoody & Neuwirth, 1999). These channel beliefs, which come one step prior to information seeking and processing, measure the beliefs that participants have about the various communication channels they could utilize to learn about a risk (Griffin et al., 2008). While the understanding and measurement of channel beliefs are still in the exploratory phase, two factors have emerged to be substantial: the belief that media channels report skewed versions of reality and the belief that media channels give helpful cues for processing the information they deliver (Griffin et al., 2008). The channels of interest in this study are the mass media, universities, government agencies like the Centers for Disease Control, non-profit advocacy groups like the National Sexual Violence Resource Center, and interpersonal sources like family members and friends.

RISP researchers have proposed revisions to the model that would measure relevant channel beliefs using the behavioral beliefs that are scaled to form Aact (Griffin, Dunwoody & Yang, in press). This would involve using an expectancy-value approach for each channel that multiplies the expected outcome of its use by its value (Griffin, Dunwoody & Yang, in press). The challenge with this approach is that

it requires two questions per channel and extends the length of the questionnaire. Because this project requires a short and efficient questionnaire due to its online format and lack of incentive, channel beliefs will be measured on a scale of usefulness adopted by Griffin et al. (2005) for a study of communication about energy consumption. Students will be asked to rate how useful each relevant channel is when it comes to finding information related to the risk of sexual aggression. While this is less precise in measurement, it also gathers similar information while shortening the questionnaire.

The final piece of TPB's model explaining Behavioral Intention (BI) is a set of Subjective Norms (SN). These norms represent the impact of the individual's perception of their external environment. The construct is subdivided into two categories: injunctive norms, the perception of how relevant others' would judge the action, and descriptive norms, the perception of whether relevant others are themselves engaging in the action (Fishbein & Ajzen, 2010). Both categories have their own antecedents, called normative beliefs, much like control beliefs for PBC and behavioral beliefs for Aact. To manage the scope of this project, however, injunctive and descriptive norms were measured directly as informational subjective norms, based on that concept from the RISP model (Griffin, Dunwoody & Neuwirth, 1999), that seek to represent how women perceive their peers' actions and expectations related to seeking and processing information about the risk of sexual aggression.

These informational subjective norms draw on TPB in predicting that the subjective norms of relevant others create a perceived social force, impacting the

subject's behavior, which is their seeking and processing of information on risks (Ajzen, 1991). This behavioral impact has traditionally been predicted as an indirect effect in RISP studies (Griffin, Dunwoody & Neuwirth, 1999). This means that social expectations could increase the amount of knowledge the subject feels is necessary to deal with a particular risk, which in turn increases the gap between that level and current knowledge (Griffin, Dunwoody & Neuwirth, 1999; Huurne, Griffin & Gutteling, 2009). The fourth hypothesis, then, predicts a relationship in which a student, even one who is not worried or angry enough to seek and process actively and deeply by individual standards, will feel socially pressured to know more information in order to deal with the risk of sexual aggression.

Affective Response and Avoidance

While the emphasis on emotion's impact in risk perception has waxed and waned throughout the years, RISP includes two major concepts pulled from the affective side of the perception debate (Griffin, Dunwoody & Yang, in press). Negative emotions, like worry and anger, have evidence as antecedents for seeking and processing behavior, and have been investigated by Slovic (2010) in the form of "dread" and by Sandman (1987) in the form of "outrage." In RISP, negative emotions can influence an individual's likelihood to actively seek and systematically process risk information by increasing information insufficiency. The need to manage fear and anxiety levels is quite strong.

While people often worry different amounts about many things simultaneously, anger is a more acute, intense reaction. People get angry when they

want to control a situation, and oftentimes their anger is provoked by situations involving risks (Frijda, 1986). Anger is of interest to RISP because it can be related to institutional trust when blame is attributed externally, as Dunn and Schweitzer (2005) found, and because, as Weiner (2000) found, anger may increase active campaigning against institutions involved in risk mitigation. RISP studies predict, then, that anger may be capable of indirectly impacting the seeking and processing variables through information insufficiency (Griffin et al., 2008).

Some health communicators have a different view and believe that emotional messages, like fear appeals, can produce the opposite effect by making people so afraid that they avoid information about a risk to keep their emotions stable (Schiavo, 2007). Witte (1992) even includes this concept, called defensive avoidance, in her Extended Parallel Process Model predicting that people's behavioral reactions to fear appeals would be effected by an interaction between fear and self-efficacy. While her model focused on the extreme emotion of fear and RISP focuses on less-severe, everyday reactions like worry, RISP still uses the concept of avoidance to understand what may make someone block out information relating to specific risks. It should be noted that Witte and Allen's (2000) meta-analysis of fear appeal research did not favor an avoidance effect, but rather found emotional response helpful in generating positive health behaviors and reducing negative health behaviors when messages also included clear behavioral recommendations.

The Model

RISP incorporates all of the models reviewed here, using its own construction of variables and its own pathway of effects to analyze how individuals seek and process risk messages.

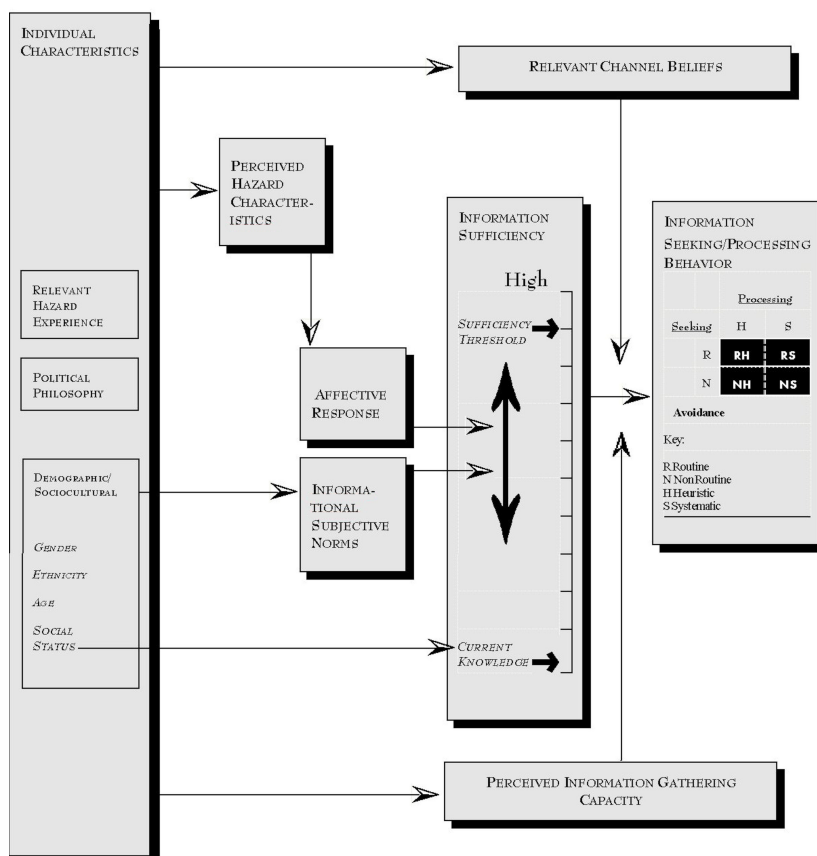


FIG 1. Model of risk information seeking and processing based on Griffin, Dunwoody & Neuwirth (1999)

Variables

At the end of the model, on the far right side of the graphic in figure 1, are the key dependent variables in the study: information seeking and processing behavior. These outcomes measure how actively individuals seek and process information about a risk. The goal of RISP research is to understand what factors explain the

differences between individuals' levels of seeking and processing. Both outcomes are important to measure. In terms of seeking, it is important to know why some women seek out information to learn the real likelihood of this risk and what they can do to protect themselves and reduce the likelihood and severity of the threat. This knowledge can help educators and advocates target the factors that influence women to be non-seekers. On the processing side of the outcome variables, it is critical that research discovers what factors influence women to process information more deeply, because research indicates systematic processing is associated with longer-lasting cognitive, attitudinal and behavioral changes (Eagly & Chaiken, 1993). Knowing this, educators and advocates can try to maximize factors that facilitate individuals' systematic processing of information related to risks and self-protection strategies.

Risk information seeking and processing is measured on continuous scales to reflect the possibility of overlap and simultaneity of heuristic and systematic processing (Griffin, Dunwoody & Neuwirth, 1999). RISP does, however, also outline four generic categories that will encompass the majority of participants in a study:

- Routine/Heuristic (RH), where individuals give superficial attention and effort to messages about risk that they experience in the course of their normal use of media and other communication channels (Griffin, Dunwoody & Neuwirth, 1999).
- Routine/Systematic (RS), where individuals fail to change their communication and media use patterns, but do give more careful thought

and attention to information on a risk they encounter in these sources (Griffin, Dunwoody & Neuwirth, 1999).

- Nonroutine/Heuristic (NH), where individuals do take the time and energy to explore nonroutine sources of information, but not to process the knowledge within critically (Griffin, Dunwoody & Neuwirth, 1999). Griffin and colleagues (1999) provide the example of a person calling their doctor for advice with the plan of following whatever advice is given without challenging the information or seeking a second opinion.
- Nonroutine/Systematic (NS), where individuals take the time and energy to find nonroutine sources of information with the plan of critically examining the knowledge before taking action (Griffin, Dunwoody & Neuwirth, 1999).

Information Insufficiency

The third element, directly to the left of seeking and processing behavior in the model, is information insufficiency. Information insufficiency is constructed as the gap between a person's sufficiency threshold, or how much a person perceives they need to know about a risk to deal with it, and his or her current knowledge about a risk (Hurne, Griffin & Gutteling, 2009). RISP predicts that people are motivated to seek more information and process it with greater effort (i.e., systematic processing), depending in part on the size of the divide between current knowledge and the sufficiency threshold (Griffin, Dunwoody & Neuwirth, 1999).

Affective Response

Directly affecting information insufficiency is an individual's affective response to a risk. RISP draws on a number of studies on coping styles that find negative emotions often have an effect on information processing distinct from that of positive emotions (Ben-Zur 2002; Miller 1987). As Paul Slovic and his associates (2004) find, a person's risk-related decision making is determined both by analysis and by the way the person feels about the risk. The strongest influences come when thinking about a risk generates emotions of worry, anxiety and fear (Huurne & Gutteling, 2008). RISP predicts that the stronger these negative emotional reactions are (e.g. primarily worry and anger), the higher the likelihood grows that a person will seek information on the risk (Huurne, Griffin & Gutteling, 2009). This relationship, however, will be modified by the individual's personal efficacy in dealing with the risk (Witte, 1992). In terms of information processing, research finds that positive moods are linked to heuristic processing while negative emotions are tied to systematic processing (Griffin, Dunwoody & Neuwirth, 1999). The caveat, here, and a major one, is that fear in its extremes can generate heuristic processing or information avoidant behavior, especially if individuals feel low personal efficacy, i.e., feeling incapable of changing their behavior to lower or eliminate the risk. However, the RISP model tends to deal with more everyday and lower-level emotions such as worry (Griffin, Dunwoody & Neuwirth, 1999).

Perceived Hazard Characteristics

This category is predicted to influence the affective response a respondent has toward a risk. Perceived hazard characteristics encompass the salient perceptions an individual has about a particular hazard. Attribution theory says that the way a person perceives a hazard is affected by whether he or she attributes responsibility for a particular outcome to an internal or external force (Griffin et al. 2008). The first of three other items contained here is risk perception, generally the subjective evaluation a person has assessing the likelihood of harm and the severity of harm of a hazard (Huurne, Griffin & Gutteling, 2009). The second is institutional trust, which obtains information on a person's belief in the ability of relevant institutions to prevent one's harm from a risk (Huurne, Griffin & Gutteling, 2009). The final item is personal efficacy in managing the potential harm from a hazard experience (Huurne, Griffin & Gutteling, 2009). The impact of these characteristics is in forming attitudes and emotions that influence the seeking and processing of risk information.

Individual Characteristics

RISP's model also has a place for individual characteristics that are likely to explain variance in a given study. Gender and ethnicity, especially, have historically been included here in the model, as both have proven important to understanding variance in numerous risk perception research efforts (Griffin, Dunwoody & Neuwirth, 1999). Many studies include education, as will this one, although the college population targeted by this study will diminish the variance due to

education since all subjects will be enrolled at a freshman level at minimum (Griffin et al., 2008).

Two other concepts under individual characteristics are political philosophy and relevant hazard experience. Political philosophy, on a liberalism-conservatism spectrum, can impact subjects' beliefs about the ability of governmental bodies to regulate risk, in this case through funding effective educational programs aimed at prevention and through the criminal justice system aimed at punishment and rehabilitation of offenders (Griffin, Dunwoody & Neuwirth, 1999). This variable is only marginally related to this study at best, and so will not be included. However, relevant hazard experience, or the prior contact an individual has with the risk of study or a risk similar enough to be referenced, is expected to impact seeking and processing of risk information as well (Griffin, Dunwoody & Neuwirth, 1999). In the current study, analysis of this variable relative to others would expect to show that women who have experienced unwanted sexual advances seek and process differently from those who have not experienced those advances. Finally, measures of optimistic bias, alcohol consumption and binge drinking habits will be added in this study, as warranted by the body of research on alcohol's effect on women's risk perception of sexual aggression. Based on the literature, it is expected that optimistic bias and alcohol consumption habits will affect risk perception.

Risk Perception & Optimistic Bias

Perceiving the risk of sexual aggression is a complicated task. Some of the warning signs, Nurius (2000) points out, happen to be quite common in typical

contemporary dating and socializing scenarios, such as men paying for costs and one or both parties drinking alcoholic beverages. The vast majority of these interactions end safely, however, blurring the line between a regular date or party and a risky one. The risk, then, at any particular time is low while the cumulative risks over time are very significant (Nurius, 2000).

One idea that has been thoroughly investigated is the notion that victimized women are less capable at recognizing risk in social scenarios. Gidycz, McNamara and Edwards (2006) find evidence for this concept to be mixed in their meta-analysis of sexual victimization research. Several studies using audio-taped vignettes prompted women to stop the tape when the man had escalated the situation beyond tolerance, and found that victims demonstrated inferior risk recognition due to slower response times (Breitenbecher, 1999; Marx, Calhoun, Wilson & Meyerson, 2001). On the other hand, Breitenbecher (1999) did not find the same relationship at the 5-month follow-up, a finding replicated in several other studies (Naugle, 2000; Norris, Nurius & Dimeff, 1996). There is a consensus among the studies Gidycz, McNamara and Edwards (2006) reviewed that respondents with victimization histories report being more likely to use indirect and passive resistance strategies (Naugle, 2000; VanZile-Tamsen, Testa & Livingston, 2005).

Another major topic in the risk perception literature surrounding sexual aggression and assault is the role of optimistic bias. Optimistic bias, according to Nurius (2000) and other researchers, "is an egocentric optimism" in which people believe that their own risk of health and safety concerns are smaller than the risks that they perceive their peers face. This bias is widespread, as Weinstein (1987)

found a rosy view of personal risk across groups distinguished by gender, age, educational achievement and job status. What is disconcerting to researchers is that this distorted self-perception diminishes risk perceptions, minimizing self-protective behavior while potentially encouraging risk-taking (Shepperd, Carroll, Grace & Terry, 2002). When applied to the topic of sexual aggression, this concern seems warranted by Gidycz, McNamara and Edwards' (2006) finding of a consensus among studies of women in and outside the college settings that women report a lower risk of sexual victimization for themselves than for other women (Hickman & Muehlenhard, 1997; Cue, George & Norris, 1996; Norris, Nurius & Dimeff, 1996; Norris, Nurius & Graham, 1999). Dealing with the optimistic bias tends to be tricky. Nurius (2000) advises that well-intentioned interventions, like fear appeals, seeking to diminish the optimistic bias by increasing perceived vulnerability also can reduce the "mental health asset[s]" that come with optimism, like self-esteem and self-efficacy. This study will compare students' perceptions of their own likelihood of facing sexual aggression to their perceptions of the likelihood of their peers facing sexual aggression. The scope of this project warrants measurement to see if optimistic bias can be measured by RISP measures. The relationship of optimistic bias to risk perception, and possibly to information seeking and processing, could be explored by future research if this exploratory set of findings warrants a closer look.

Alcohol

Alcohol plays a significant role in this subject area because it has been identified as the most influential situational factor linking cases of sexual aggression

and victimization. Ullman's (2003) comprehensive literature review on the subject of sexual violence and alcohol use finds that between 50 and 66 percent of sexual assault incidents involve alcohol consumption. This is of no surprise to criminologists, who know that alcohol is identified as a situational factor in numerous aggressive acts like homicide (Testa & Parks, 1996). What remains less clear is how alcohol impacts behavior like sexual aggression, and Franklin identifies a number of proposed relationships between alcohol use and sexual aggression with supporting research (2010).

Research has shown that, while consuming alcohol, men may act with increased aggression, feel more entitled to sexual acts, and display less inhibition towards initiating sexual acts (Brown, Goldman, Inn & Anderson, 1980; George & Norris, 1991). Alcohol also makes it easier for men to misinterpret friendliness as sexual interest (Franklin, 2010). Also, men often believe women who are drinking are more licentious than women who abstain from alcohol (George, Gournic & McAfee, 1988). On the part of women, alcohol has been shown to reduce the risk recognition capacities discussed earlier while also lessening women's abilities at resisting unwanted sexual advances (Franklin, 2010). While alcohol use is not the primary interest of this study, it is a crucial piece that will be included as a mediating individual characteristic.

Hypotheses

Because individuals with higher perceived informational gathering capacity should be better equipped cognitively to seek and process information about the risk of sexual aggression, the researcher predicts that:

H1a: Perceived informational gathering capacity will be positively associated with information seeking.

H1b: Perceived informational gathering capacity will be positively associated with systematic information processing.

The RISP model suggests that a cognitive drive for information is a major factor in both information seeking styles and information processing methods. Students with more cognitive motivation should be more likely to participate in active seeking and nuanced processing. Therefore, the researcher predicts that:

H2a: Information insufficiency will be positively associated with active information seeking.

H2b: Information insufficiency will be positively associated with systematic processing.

H2c: Information insufficiency will be negatively associated with avoidance.

H2d: Information insufficiency will be negatively associated with heuristic processing.

Greater levels of negative emotions should lead students to perceive increased levels of motivation to learn about the risk of sexual aggression on college campuses. Therefore, the researcher predicts that:

H3: The negative emotions of worry and anger will be positively associated with information insufficiency.

When students feel significant pressures to be knowledgeable about the risk of sexual aggression, they will also perceive a more substantial need for knowledge. Therefore, the researcher predicts that:

H4: Informational subjective norms will be positively associated with information insufficiency.

A number of perceived hazard characteristics influence the emotional response to the risk of sexual aggression on college campuses. Students who perceive a greater likelihood and seriousness to the risk will feel more anger and worry about the risk. Those students who have more trust in Marquette University as a risk mitigating institution will have less extreme worry and anger, as will those students with more confidence in their ability to protect themselves. The researcher, therefore, predicts that:

H5: Risk perception will be positively associated with affective response.

H6: Institutional trust will be negatively associated with affective response.

H7: Efficacy will be negatively associated with affective response.

III. METHOD

This study's purpose is to understand the seeking and processing of risk information related to potential sexual aggression. The previously stated hypotheses will be tested using a probability sample survey. This quantitative approach is appropriate because the RISP model predicts bivariate and complex multivariate relationships among a set of variables. A survey of a random sample of female undergraduates is the best method and context for recruiting respondents and retrieving information on all of the necessary items in a way that is efficient for both the participant and the researcher.

The questionnaire had an extensive list of objectives, along with obtaining informed consent. First, the questionnaire had to measure the student's current knowledge and perceived need for information to calculate the student's level of information insufficiency, or the gap between the two informational levels. Second, the questionnaire measured the major dependent variables: the information seeking (active and avoidance) and processing behaviors (systematic and heuristic). Third, the questionnaire measured the student's beliefs about a variety of relevant information channels. Fourth, the questionnaire measured the student's perceived capability to gather information on the topic of sexual aggression. Fifth, the student was asked to report their perceptions of how likely she is to experience this risk and how serious it would be to experience. Sixth, the student was asked about the type and level of emotions this risk makes them feel. Seventh, the questionnaire measured the perceived normative pressures faced by the student to be informed

about the risk of sexual violence. Eighth, the student was asked about their ability to avoid unwanted sexual aggression from strangers and from acquaintances. Ninth, the questionnaire measured the student's level of trust in Marquette University's efforts to prevent sexual aggression. Tenth, the respondent reported on her level of personal experience with the hazard of sexual violence. Finally, the questionnaire measured demographic and alcohol consumption variables to be used as controls.

Sampling

After receiving the university's Institutional Review Board approval for the research project, the registrar's office drew the sample from the registrar's list of Marquette University. Privacy restrictions prohibited the registrar from providing a sampling frame consisting only of female students. Instead, the probability sample was drawn from all full-time undergraduate students at the university. Approval was obtained from the Online Survey Review Group to use Opinio, Marquette's internet survey software, and the questionnaire was sent to a random sample of 1500 undergraduates, male and female. Students were informed of the minimal risks involved with the topic area and that participation was completely voluntary. In order to continue in the survey, students were required to give their consent by agreeing to participate. While this question stated that females were the targeted audience, some males did agree to participate. They were screened out by the second question and thanked for their time. After eliminating unfinished questionnaires, 152 useable responses remained, or approximately 10.1 percent of

potential respondents. The undergraduate population at Marquette is, however, 51.6 percent female (Princeton Review, 2012). Therefore, the researcher's recruitment of 152 respondents out of an estimated pool of 774 females produced an adjusted response rate of approximately 19.6 percent. According to Marquette University's freshman census (2012), the average percentage of enrolled students in ethnic minorities is approximately 17.8 percent. The sample represented this portion was Marquette's population fairly well with 14.4 percent ethnic minority respondents.

It was important to maximize the return of completed surveys because the sampling frame was not able to be limited only to the target audience of female undergraduates. The survey was in the field for ten days, from March 19, 2012 to March 29, 2012. The best practices described by Dillman, Smyth and Christian (2009) were used to the extent possible. A pre-notice was not possible because Opinio questionnaires go live upon first e-mail contact, but two reminders were sent at four and eight days to encourage respondents to participate (Dillman, Smyth and Christian 2009). It was not possible to offer a tangible incentive, which would have improved the response rate (Dillman, Smyth and Christian 2009). Rather, an appeal to the students' altruism was made as a verbal incentive through a description of the benefits to society that included potentially improving sexual violence risk communication efforts (Dillman, Smyth and Christian 2009).

This research required the study of human subjects to gather the data necessary to explore what explains the differences in information seeking and processing behaviors among female undergraduate students regarding the risk of

sexual aggression. In order to study human subjects, approval was obtained from the Office of Research Compliance at Marquette University. While e-mail addresses of students were stored in the Opinio system for the purpose of sending reminder messages, the study was anonymous for the researcher as respondents were identified only by an identification number. Proper protocols were followed throughout the research process, and all responses were kept confidential by the researcher. Explanations of human subjects' rights and the minimal risks were voiced in the e-mail messages and at the beginning of the questionnaire, where respondents were required to agree to participate or decline participation.

Measurement

This study focused on a quantitative analysis of students' information seeking and processing behavior related to the risk of sexual violence. The instrument was a 58-item questionnaire administered using the Opinio online survey software to a random sample of undergraduate students at Marquette University. Only data from female students who completed the questionnaire was used for analysis.

In explaining the items used to gather data, descriptive statistics will be reported for certain items. In these cases, the indexes of central tendency or dispersion are especially relevant in understanding the analysis. The meaning derived from these relevant descriptive statistics will be examined in the results chapter. Descriptive statistics for all of the items are located in appendix B.

Salience and information sufficiency. The first three questions operationalized the concepts of perceived importance, current knowledge (mean = 68.50, s.d. = 18.62) and sufficiency threshold (mean = 73.59, s.d. = 17.96). Students were asked how important this risk was to them on a ten-point semantic differential scale anchored by the terms “Not Important” and “Very Important.” Students gave their current level of knowledge about the risk of sexual aggression on a 100-point scale. They then were asked to estimate, using the same scale, how much information they would need to deal adequately with this risk. How much information they perceive they still need, or information insufficiency, is the regressed difference between the threshold and current knowledge. These items were based on Griffin, Neuwirth, Dunwoody and Giese’s (2004) study of two Great Lakes cities regarding the risks of eating contaminated fish and drinking unsafe water.

Information seeking, processing and relevant channel beliefs. Questions 4 through 19 used multiple items to measure the concepts of systematic processing, heuristic processing, information seeking and avoidance. These items, based on Griffin et al.’s (2008) flooding study, used Likert scales format ranging from *strongly disagree* to *strongly agree* to observe levels of agreement with statements expressing various aspects of the information seeking and processing styles. Questions 4, 11 and 16 measured information avoidance behavior through agreement with statements such as, “Gathering a lot of information about the risk of unwanted sexual advances is a waste of time.” Information seeking was measured with items 6, 9 and 13 using statements such as, “When it comes to the risk of

unwanted sexual advances, I'm likely to go out of my way to get more information." Questions 8, 10, 17 and 19 focused on systematic processing and included statements such as, "If I need to act on this matter, the more viewpoints I get the better." Heuristic processing was assessed with items 5, 14, 15 and 18 using statements like, "When I see or hear information on this topic, I rarely spend much time thinking about it." Questions 20 through 25 were modified from measures of relevant channel beliefs focused on usefulness (Griffin et al., 2005). Students rated media, government, academic and interpersonal channels for perceived usefulness in providing quality information about the risk of sexual aggression on college campuses.

Perceived informational gathering capacity, perceived likelihood and perceived seriousness. The next set of questions, from 26 to 29, was again based on Griffin, Neuwirth, Dunwoody and Giese's (2004) study regarding the risks of drinking unsafe water and eating contaminated fish. These items measured facets of perceived informational gathering capacity using the same Likert scale of agreement that the seeking and processing questions employed. Questions 30 and 31 were reserve channel belief items not based on perceived channel usefulness. Students were asked in questions 32 through 37 about their perceptions of the likelihood and seriousness of sexual aggression, which begins a section on perceived hazard characteristics based on items from Griffin, Neuwirth, Dunwoody and Giese's (2004) study of health risks related to the Great Lakes. Likelihood was measured on a ten-point semantic differential scale anchored by "Never" and "Certain," and students were asked to provide a likelihood for both date and parties, the two most relevant

environments for the risk of study. Students were also asked to provide the same likelihood ratings for other women their age. This was done in order to gather data for analyzing the concept of optimistic bias, a finding discussed earlier in which other researchers found that people often estimate that their own risk level is lower than that of other similar people (Nurius, 2000; Shepperd, Carroll, Grace & Terry, 2002; Weinstein, 1987). The students' perceived seriousness of experiencing the risk of sexual aggression was also measured for dates and parties using a ten-point semantic differential scale, this time anchored by the terms "Not Serious" and "Very Serious."

Affective response and informational subjective norms. Questions 38, 39 and 40 measured students' affective response concerning the risk of sexual aggression. Worry, anger and uncertainty were measured with ten-point semantic differential scales anchored by "None" and "A Lot." The following set of questions, from 41 to 46, focused on informational subjective norms. Students were asked about descriptive norms, such as their agreement with the perception that relevant others are staying on top of information related to the hazard of study. Students were also asked about injunctive norms, such as their agreement with statements about relevant others' expecting the students to become more informed about the hazard of study. Level of agreement was again measured using the same Likert scale from earlier items, ranging from *strongly disagree* to *strongly agree*.

Perceived self-efficacy and institutional trust. Next on the questionnaire is a pair of items, questions 47 and 48, related to perceived self-efficacy of preventing the risk of sexual aggression (Griffin, Neuwirth, Dunwoody & Giese, 2004). The first

was framed in terms of preventing sexual advances from strangers and the second from acquaintances. Following these items, questions 49, 50 and 51 probed the students about their level of trust in Marquette University regarding the risk of sexual aggression. These items measured students' levels of agreement with three statements using a Likert scale ranging from *strongly disagree* to *strongly agree* and were based on measures in Huurne, Griffin and Gutteling's (2009) study concerning the risk of industrial chemicals.

Relevant hazard experience. Questions 52 through 54 measured the concept of relevant hazard experience. This was the most sensitive measure because it included sexual aggression ranging from unwanted sexual advances like verbal coercion, touching and dancing to sexual assaults (Koss et al., 2007). This concept was explored using simple nominal variables of 'yes' or 'no,' and respondents were asked about attempted sexual assault rather than completed sexual assault to reduce sensitivity. Relevant counseling and therapeutic information that students could use was included along with this item and with the informed consent page beginning the survey experience. Eighty of the 152 respondents had experienced verbal coercion, but, surprisingly, even more respondents (109, or 71.7 percent) had experienced inappropriate and unwanted touching or dancing. In a sobering finding, 33 students, or 21.7 percent of those surveyed, had experienced an attempted sexual assault, the most serious form of sexual aggression measured.

Individual characteristics. To close out the questionnaire, questions 55 through 58 broached the individual characteristics and demographics that are used as control variables. Alcohol consumption was measured using two items, with the

first capturing weekly consumption and the second capturing monthly binge drinking behavior (with 'binge' defined as the consumption of more than four alcoholic beverages in one day). Age was ascertained in a self-reported number and ethnicity was determined by a set of nominal categories (later condensed so white=0 and nonwhite=1).

Dependent Variables

Active information seeking was employed as a scale containing two Likert-scale items, questions 6 and 9, which address students' level of information gathering, including how willing they were to go out of their way to find more information. The scale's Cronbach's standardized reliability coefficient is .70 (see Appendix B). Avoidance was constructed as a scale containing four Likert-scale items, questions 4, 7, 11 and 16, and it measured agreement with statements like, "When this topic comes up, I'm likely to tune it out," and, "Gathering a lot of information about the risks of unwanted sexual advances is a waste of time." This scale has a Cronbach's standardized reliability coefficient of .56.

Heuristic processing is scaled from three Likert-scale items, questions 5, 14 and 18, which measured agreement to statements like, "When I see or hear information about this topic I rarely spend much time thinking about it," and, "When I encounter information about the risks of unwanted sexual advances, I focus on only a few key points." The heuristic processing scale's Cronbach's standardized reliability coefficient is .53. Systematic processing is scaled from five Likert-scale items, questions 8, 10, 12, 17 and 19, which address agreement levels to statements

such as, “After I encounter information on this topic, I am likely to stop and think about it,” and, “When I encounter information on this topic, I read or listen to most of it, even though I may not agree with its perspective.” The Cronbach’s standardized reliability coefficient for this scale is .60.

The fifth and final dependent variable is information insufficiency, and it was analyzed as regressed change, as the forthcoming analysis section will explain.

Independent Variables

Perceived information gathering capacity (mean = 14.84, s.d. = 2.15) was scaled from four Likert-scale items investigating agreement with statements like, “I would know where to go for more information,” and, “I am able to make sense of information on this topic.” The items scaled were questions 26, a reversal of 27, 28 and 29. The Cronbach’s standardized reliability coefficient for this scale is .63.

Negative affective response was scaled from two ten-point semantic differential scales measuring levels of anger and worry. The items scaled were questions 38 and 39. The Cronbach’s standardized reliability coefficient for this scale is .77.

Informational subjective norms were subdivided into normative influences coming from parents (items 41 and 43) and those coming from friends (items 42 and 44). The scale for informational subjective norms from friends was derived from two Likert-scale items, one measuring descriptive norms (“My friends are concerned about their risk of unwanted sexual advances”) and the other measuring injunctive norms (“My friends think I should stay on top of information about the

risks of unwanted sexual advances”). This scale’s Cronbach’s standardized reliability coefficient is .62. The scale for informational subjective norms from parents was similarly derived from two Likert-scale items, one measuring descriptive norms (“My parents are concerned about my risk of unwanted sexual advances”) and the other measuring injunctive norms (“My parents think I should stay on top of information about the risks of unwanted sexual advances”). This scale’s Cronbach’s standardized reliability coefficient is .68.

The perceived hazard characteristics contain four independent variables. Personal efficacy was measured by two variables (question 47 and a reversal of question 48) with Likert-scale items measuring the students’ agreement with statements about their ability to stop sexual aggression from strangers and from acquaintances. Institutional trust was scaled from three Likert-scale items measuring levels of agreement with statements like, “I trust Marquette University to protect me from unwanted sexual advances,” and, “Marquette University officials care about the health and safety of people like me.” The items scaled were questions 49, 50 and 51. This scale’s Cronbach’s standardized reliability coefficient is .86. Risk judgment was calculated by multiplying measures of estimated seriousness of the risk of sexual aggression by estimates of students’ perceived likelihood of experiencing sexual aggression. This was done for the two scenarios represented in the questionnaire: dates and parties.

Control Variables

Ethnicity was measured with an item based on the manner in which the U.S. Census records ethnic diversity. An “Other/Dual Ethnicity” category was included along with the other major ethnic backgrounds. For analysis, this variable was condensed into a binomial variable with zero representing Caucasian students (frequency = 130) and one representing minority students (frequency = 22).

Age was asked in a straightforward continuous variable. Alcohol consumption was measured in terms of how many days in a week a student drinks, as well as in terms of number of binge episodes per month. A binge was defined as consuming more than four alcoholic beverages in a single day. In terms of measuring alcohol consumption, weekly drinking turned out to be a more useful measure than did measuring binge episodes. 120 of the 152 students reported engaging in three or fewer binge episodes per month, which significantly restricted the variable’s variance. Perhaps it was an unreliable measurement because students do not view their drinking habits on a monthly basis, or maybe they had difficulty comparing the four-plus beverages described in the measure to the alcohol they actually consume. They may, then, have discounted less voluminous drinks like a glass of wine or a shot that do not ‘seem’ the equivalent of a beer or mixed drink. Alcohol consumption on a weekly basis, therefore, will be the variable used in analysis.

Relevant hazard experience (mean = 1.46, s.d. = 1.07) was scaled from three binomial variables asking the student whether or not she had experienced verbal

aggression, unwelcome touching or dancing, or an attempted sexual assault. The Cronbach's standardized reliability coefficient for the scale is .67.

Reliability

The internal consistencies reported in the previous section are adequate, albeit not ideal. The standard RISP questionnaire includes additional items for the four major dependent variables' scales and for the perceived information gathering capacity scale that may have improved the Cronbach's alpha scores, but the questionnaire was reduced in scope due to the online atmosphere and in order to reduce participants' time commitment since they lacked an incentive to participate. Also, a higher final number of respondents might also have helped improve internal consistency ratings.

In two cases, items were removed from scales to improve internal consistency. In the first, one measure, "When it comes to this topic, I'm content to let information come to me in the course of my daily life," was eliminated from the active information seeking scale. The question was worded as a reverse item, but it was too ambiguous, or perhaps even too close conceptually to avoidance, to scale well. This adjusted the scale reliability, raising the Cronbach's alpha from .55 to .70. In the second case, the measure, "If I need to act on this matter, the advice of one expert is enough for me," was excised from the heuristic processing scale to bring the alpha from .499 to .53, a weak but adequate consistency for the following analyses.

Analysis

The data were analyzed using the multiple linear regression technique within the Statistical Package for the Social Sciences (SPSS). To test the hypotheses, each one of the five dependent variables (information seeking, avoidance, heuristic processing, systematic processing and information insufficiency) was regressed on blocks of variables articulated by the RISP model. Rather than calculating a difference score between current knowledge and sufficiency threshold to represent information insufficiency, a preferred technique of regressed change (Cohen & Cohen, 1983) was used instead. When regressing information insufficiency (i.e., sufficiency threshold), the blocks of independent variables entered into the multiple regression were as follows: (1) current knowledge; (2) pertinent demographic variables and relevant hazard experience; (3) perceived hazard characteristics; (4) negative affective responses of anger and worry; (5) informational subjective norms regarding friends and parents; (6) relevant channel beliefs; (7) perceived information gathering capacity. When the seeking and processing variables were regressed on the independent variables, the order of blocks entered was the same as above, except that sufficiency threshold was entered as a last (8th) block. In either situation, the sufficiency threshold measure effectively represents information insufficiency, i.e., the "gap" between current knowledge and itself. Also, to test H5 through H7, the effect of perceived hazard characteristics on affective response was investigated by regressing affective response on the following blocks: (1) relevant demographic variables and (2) perceived hazard characteristics.

IV. RESULTS

Multiple Regression

Table 1 shows the outcomes of the multiple regressions run to calculate the relationships between the predictor variables and the dependent variables of information insufficiency, information seeking, avoidance, heuristic processing and systematic processing.

	<i>Dependent variables</i>				
	Sufficiency Threshold	Information Seeking	Avoidance	Systematic Processing	Heuristic Processing
	beta(sig.)	beta(sig.)	beta(sig.)	beta(sig.)	beta(sig.)
Current knowledge	0.06	0.04	0.13	0.07	0.02
R2 change	0.00	0.00	0.02	0.01	0.00
Individual Characteristics					
Ethnicity	0.11	0.07	0.08	0.01	0.02
Age	0.15	0.16	-0.10	0.05	-0.15
Alcohol per week	-0.09	-0.12	.19a	-0.16	0.09
Relevant Hazard Experience	0.03	.18a	-.17a	0.18a	-0.18
R2 change	0.01	0.17c	0.13c	0.08a	0.13c
Perceived Hazard Characteristics					
Personal Efficacy (stranger)	-0.03	-0.13	.19a	-.17a	0.20
Personal Efficacy (acquaintance)	-0.02	0.02	-0.09	0.00	-0.09
Risk judgment (date)	-0.17	0.01	0.01	-0.03	-0.06
Risk judgment (party)	0.18	0.02	-0.01	-0.09	0.05
Institutional Trust (MU)	0.14	0.04	0.05	0.16	0.17
R2 change	0.03	0.04	0.06	0.05	0.02
Affective Response					
Negative affect (worry, anger)	-0.06	.29c	-.24b	.29b	-0.17
R2 change	0.00	0.08c	0.06b	0.08c	0.04a
Informational Subjective Norms					
Norms (friends)	0.03	0.19	-.22a	0.15	-.25a
Norms (parents)	0.04	-0.06	0.04	-0.01	0.08
R2 change	0.00	0.02	0.03	0.02	0.03a
Relevant Channel Beliefs	-0.08	-0.03	-0.09	0.05	-0.11
R2 change	0.01	0.00	0.01	0.00	0.01
Perceived Informational Gathering Capacity					
Capacity	-0.06	-0.06	0.14	-0.01	0.05
R2 change	0.00	0.00	0.02	0.00	0.00
Sufficiency Threshold	NA	0.07	-.15a	0.09	-0.11
R2 change	NA	0.01	0.02a	0.01	0.01
Multiple R	0.24	.56c	.57c	.49c	.5c
Adjusted R2	0.06	0.24	0.25	0.15	0.16
Overall ANOVA	F(15,136)=.55	F(16,135)=3.9	F(16,135)=4.15	F(16,135)=2.69	F(16,135)=2.76
N=	151.00	151.00	151.00	151.00	151.00

Significance key: (a) $p \leq .05$ (b) $p \leq .01$ (c) $p \leq .001$

Perceived Informational Gathering Capacity

The first set of hypotheses (H1a and H1b) predicts a positive relationship between students' perception of their capacity to gather information and students' levels of information seeking and systematic processing.

No significant relationship was found in the data between gathering capacity and information seeking ($\beta = -.06, ns$) or gathering capacity and systematic processing ($\beta = -.01, ns$). Perceived informational gathering capacity (mean=14.84, s.d.=2.15) had a higher mean and had a lower variance than anticipated from prior studies. This means that most female undergraduates at Marquette University are grouped around a high mean score of capacity, and therefore the majority reports feeling able to gather appropriate and useful information on the risk of sexual aggression on college campuses. The lack of much variance will likely interfere with correlations involving perceived informational gathering capacity.

Information Insufficiency

The second grouping of hypotheses (H2a, H2b, H2c and H2d) forecasts that the size of the "gap" between students' current knowledge and perceived informational needs would be positively associated with information seeking and systematic processing, while also being negatively associated with avoidance and heuristic processing. (Sufficiency threshold represents this information insufficiency "gap" in the multiple regression analyses.) The relationship between information insufficiency and information seeking ($\beta = .07, ns$) was not

significant, which does not support H2a. The relationship between information insufficiency and systematic processing ($\beta = .09, ns$), and between information insufficiency and heuristic processing ($\beta = -.11, ns$) were also insignificant, which means that H2b and H2d were also not supported. H2c, the proposed negative relationship between information insufficiency and avoidance, however, was supported ($\beta = -.15, p \leq 0.05$).

The findings suggest that a larger information gap meant students were less likely to avoid information on this topic. Rather than become active seekers, this cognitive motivation does seem to make the students more likely to accept information when it presents itself rather than consciously avoid gaining new knowledge. It is possible that the lack of much, if any, correlation here is due to the minor knowledge gap reported by the students sampled. The minimal difference between the average scores for current knowledge (mean = 68.50, s.d. = 18.62) and sufficiency threshold (mean = 73.59, s.d. = 17.96) means that the typical female undergraduate student at Marquette University perceives for herself a minimal cognitive need for additional information on the topic. A significant number of students, then, did not perceive that they needed to know any additional information and likely had little or no cognitive drive to gain additional knowledge. Relationships predicted from information insufficiency will be impacted by this outcome. The minimal difference between current knowledge and sufficiency threshold may be attributed to the recent launch of an informational campaign at Marquette University to educate and empower students, or due to media coverage of several cases of alleged assault involving Marquette students in 2011.

Affective Response

The third hypothesis (H3) suggests that negative affective responses, like worry and anger, will be positively associated with information insufficiency. This was not found to be the case, as the relationship was not significant ($\beta = -.06, ns$). Similar to the findings with the prior set of variables, this relationship was possibly stifled by the lack of a sizable informational need in the population.

Informational Subjective Norms

The fourth hypothesis (H4) anticipates that informational subjective norms will be positively associated with information insufficiency. In other words, students who perceive more pressure from significant others, like friends and parents, are more likely to believe that they need to learn additional information about a risk. This hypothesis was not supported for norms regarding friends ($\beta = .03, ns$) or parents ($\beta = .04, ns$). It is possible that this lack of a relationship may be a byproduct of the low reported information insufficiency among students.

Perceived Hazard Characteristics

The final three hypotheses (H5, H6 and H7) predict relationships between the personal hazard characteristic variables (risk judgment, institutional trust and efficacy) and emotional response. Table 2 shows the results of the multiple regression run to investigate these relationships.

Table 2: The Relationship of Negative Affective Response to Personal Hazard Characteristics	
	<i>Dependent variable</i>
	Negative Affective Response
	beta(sig.)
Individual Characteristics	
Ethnicity	0.03
Age	.20b
Alcohol per week	-0.12
Relevant Hazard Experience	.17a
R2 change	.17c
Perceived Hazard Characteristics	
Personal Efficacy (stranger)	0.07
Personal Efficacy (acquaintance)	-0.12
Risk judgment (date)	.20a
Risk judgment (party)	.18a
Institutional Trust (MU)	-0.08
R2 change	.12c
Multiple R	.54c
Adjusted R2	0.24
Overall ANOVA	F(9,142)=6.40
N=	151.00
Significance key: (a) $p < .05$ (b) $p < .01$ (c) $p < .001$	

H5, which predicts that risk judgment will be positively associated with affective response, was supported for the scenarios of dates (beta = .20, $p \leq 0.05$) and parties (beta = .18, $p \leq 0.05$). Students who perceived that the risk was more probable and more serious reported more negative emotional reactions. H6, which says that institutional trust will be negatively associated with affective response, was not supported (beta = -.08, *ns*). Students who reported high levels of trust in Marquette as an institution did not report less severe emotional reactions to the risk of sexual aggression. H7 predicts a negative association between personal efficacy and affective response. No significant relationship was found regarding students'

efficacy towards managing harm from strangers (beta = .07, *ns*) or towards managing harm from acquaintances (beta = -.12, *ns*).

Only H5, which predicted that students' judgments of risk seriousness and likelihood would lead to more negative emotions, was supported. The model's adjusted r^2 of 0.24, however, shows that 24% of the variance in the scale of negative emotional response was accounted for by the control variables and perceived hazard characteristics variables.

Affective Response

Table 2 also shows two other relationships with control variables and students' negative emotional response levels that emerged in the analysis. Age was positively associated with affective response (beta = .20, $p \leq 0.01$). Older, more experienced students reported higher levels of anger and worry about the risk of sexual aggression. Along the same lines, relevant hazard experience was also positively associated with affective response (beta = .17, $p \leq 0.05$). Those that reported experiencing more sexual aggression also reported greater levels of negative emotions toward the risk.

Direct Relationships of Other Variables

RQ1 asks about the various factors that might affect how female undergraduates seek and process information related to the risk of sexual aggression on college campuses. A variety of factors contributed to only two hypothesized relationships being supported. These factors will be discussed more

thoroughly in the next section. Predictors of seeking and processing behaviors that were not hypothesized, however, did materialize in the analysis and enrich the findings.

RISP researchers have recently begun to explore the finding that anger and worry, as well as informational subjective norms, can have both indirect and direct effects on the primary dependent variables in the RISP model (Griffin, Dunwoody & Yang, in press). The data show a relationship between negative affective response and seeking and processing. Analysis also found a relationship between perceived social pressures from peers and seeking and processing. Normative influences from parents did not indicate any significant relationships.

Analysis revealed a positive association between negative affective response and information seeking ($\beta = .29, p \leq 0.001$) and systematic processing ($\beta = .29, p \leq 0.01$). Negative affective response was also negatively associated with avoidance ($\beta = -.24, p \leq 0.01$). Higher levels of worry and anger led students to be more likely to actively seek and systematically process information. The same elevated emotional states also led students to be less likely to avoid new information. Heuristic processing was unrelated to affective responses. Negative affective response explained 8 percent of the variance in information seeking (R^2 change = .08, $p \leq 0.001$), 6 percent of the variance in avoidance (R^2 change = .06, $p \leq 0.01$), 8 percent of the variance in systematic processing (R^2 change = .08, $p \leq 0.001$) and 4 percent of the variance in heuristic processing (R^2 change = .04, $p \leq 0.05$), which had a significant R^2 change despite the association not achieving statistical significance.

In addition to negative affective response, informational subjective norms perceived from friends had several significant direct relationships in the analysis. While normative pressure from friends was not associated with information seeking, it was negatively associated with avoidance ($\beta = -.22, p \leq 0.05$) and heuristic processing ($\beta = -.25, p \leq 0.05$). The more pressure students felt from their friends to know about the risk of sexual aggression, the less likely the students were to avoid the topic and process topical information superficially. The perceived social expectations of parents, on the other hand, did not budge students at all in the analysis. It became clear that these students' peers are their key persuasive group. Informational subjective norms as a whole, parents and friends, explained 3 percent of the variance in heuristic processing (R^2 change = .03, $p \leq 0.05$).

Finally, several control variables also had direct relationships in certain cases. Weekly alcohol consumption was positively associated with avoidance of information about the risk of sexual aggression ($\beta = .19, p \leq 0.05$). Students who reported drinking more regularly were more likely to avoid information related to sexual aggression on college campuses. Relevant hazard experience was positively associated with information seeking ($\beta = .18, p \leq 0.05$) and systematic processing ($\beta = .18, p \leq 0.05$), and also negatively associated with avoidance ($\beta = -.17, p \leq 0.05$). Students who had experienced more sexually aggressive behaviors were more likely to seek information and process it deeply. These students were also less likely to purposely avoid information on the topic.

Optimistic Bias

While it is beyond the scope of this project to examine the relationship between optimistic bias and risk perception, it is possible to determine if optimistic bias was present in the student's responses as measured by questions typical to a RISP model study. Optimistic bias is, in this case, a student's view of a larger danger for others than for herself concerning the risk of sexual violence. There will be an optimistic bias in this study if students consistently ranked higher likelihood of the risk happening to others than to themselves, measured in questions 32 through 35. This was indeed the case, as the means for both scenarios of parties and dates are higher for others than for the students themselves. For dates, students reported an average likelihood score of 4.84 (s.d. = 2.64) for themselves and 8.58 (s.d. = 1.80) for their peers. For parties, students reported an average likelihood score of 5.95 (s.d. = 2.65) for themselves and 7.35 (s.d. = 2.25) for their peers. Given that this was a ten-point scale, students felt it was highly likely that other undergraduate female students would encounter unwanted sexual advances, especially at parties. While still at medium levels, students reported lower scores for their own levels of risk than they did for their peers.

Total Variance Accounted For

The regression models produced significant multiple- R correlation coefficients for four of the five dependent variables (information insufficiency was the outlier) in the assessments: information seeking ($R = .56$, $p \leq 0.001$), avoidance ($R = .57$, $p \leq 0.001$), systematic processing ($R = .49$, $p \leq 0.001$) and heuristic

processing ($R = .50, p \leq 0.001$). The RISP model explained 24 percent of the variance in information seeking (Adj. $R^2 = .24, F(16,35) = 3.9, p \leq 0.001$), 25 percent of the variance in avoidance (Adj. $R^2 = .25, F(16,35) = 4.15, p \leq 0.001$), 15 percent of the variance in systematic processing (Adj. $R^2 = .15, F(16,35) = 2.69, p \leq 0.001$) and 16 percent of the variance in heuristic processing (Adj. $R^2 = .16, F(16,35) = 2.76, p \leq 0.001$).

V. Discussion

Female undergraduate students at Marquette University did not report findings that indicate a significant relationship between the perceived need for additional information and active information seeking and systematic information processing. The only significant finding for this set of predictions was a weak, negative relationship between the need for more information and avoidance behaviors. This does resonate with the model, as it predicts that students who feel they need more knowledge are less likely to avoid information about this risk when they encounter it. A possible explanation for this set of results is the lack of variance in students' reported need for knowledge. The mean for the knowledge gap variable was approximately five points, meaning that many students reported that they believed they knew enough or almost enough information to deal adequately with the risk of sexual aggression. This may be due to information saturation from Marquette's recent educational campaign or the mass media's coverage of several high-profile alleged sexual assaults at Marquette. Both may have played a role in narrowing the knowledge gap typically found in studies with the RISP model.

The mass media reported heavily in 2011 on the stories of the alleged sexual assault of two women, which developed an elevated profile because several student athletes were among the alleged perpetrators (Morrisey, 2012). National news media picked up these stories, which were covered locally by the *Chicago Tribune* and the *Milwaukee Journal Sentinel* (Morrisey, 2012). While not connected to the media attention, students also had a fair probability of being exposed to information

on this topic by a significant new campaign Marquette subsequently launched in the fall semester of 2011 (Morrisey, 2012).

Lynn O'Brien, counselor and sexual violence prevention coordinator at Marquette University, told the *Marquette Tribune* that this campaign was not a reaction to media pressure, but rather the culmination of a long planning and development process to address concerns about the sexual violence regulations in Title IX legislation that the U.S. Office of Civil Rights delivered to college administrators across the United States (Morrisey, 2012). According to *Marquette magazine* (2012), a number of the changes in the new policies included: a push for students and faculty to wear teal during Sexual Violence Awareness Week in September; the addition of a full-time victim advocate to the health care staff on campus; sexual misconduct awareness and prevention training delivered to every first-year student; and, bystander intervention training delivered to 1,500 students including athletes, fraternities, sororities and other student leaders. Also, Marquette University (2012) launched a new website designed to provide information to seekers and to victims about the resources available to students on and around Marquette's campus. Between this far-reaching campaign and the media coverage in the spring of 2011, it is quite likely that this information-rich environment limited the discovery of linkages between a cognitive drive for additional information and three of the four seeking and processing variables.

Affective Response and Informational Subjective Norms

While the link between information insufficiency and seeking and processing was not supported in this study, the results did demonstrate a few alternative predictors of seeking and processing behaviors. Other recent studies utilizing RISP have discovered that negative affective response and informational subjective norms can have a direct effect on seeking and processing behaviors (Griffin, Dunwoody & Yang, in press). While a cognitive motivation among the students for more information was negligible, the data shows a connection between levels of worry and anger and seeking and processing, and also between perceived social pressures from peers and seeking and processing (felt social pressure from parents did not reveal any significant findings).

Negative affective response was positively associated with information seeking (beta = .29, $p \leq 0.001$) and systematic processing (beta = 0.29, $p \leq 0.01$), and negatively associated with avoidance (beta = -.24, $p \leq 0.01$). The more worry and anger a student felt, then, the more likely they were to actively seek and systematically process information, and the less likely they were to avoid new information.

In addition, perceived peer pressure from friends was negatively associated with avoidance (beta = -.22, $p \leq 0.05$) and heuristic processing (beta = -.25, $p \leq 0.05$). The more students believed their friends expected them to know about the risk of sexual aggression, the less likely they were to avoid the topic and process information on the topic superficially.

These findings show that negative emotions and peer pressure could be targets for campaigns about the risk of sexual aggression on college campuses. Fear appeals as a strategy have an ambivalent reputation among health communication professionals, but Witte and Allen (2000) found that strong fear appeals can encourage behavior modification if clear recommendations are also communicated. Additionally, administrators could focus on boosting perceived social pressures among peer groups. This could be done through campaigns emphasizing word-of-mouth and social media communication with friends about sexual violence risks and self-protection behaviors. Another possibility would be creating an online training that students could post a link to after finishing to encourage their friends to participate, or perhaps providing the opportunity to earn a social media badge to be displayed on platforms like Facebook and Twitter. These campaigns would take advantage of the direct connection that recent RISP research, including this study, has found between felt social pressures and information seeking and processing behaviors (Griffin, Dunwoody & Yang, in press).

Perceived Informational Gathering Capacity

H1 predicted that perceived informational gathering capacity would be positively associated with information seeking and systematic processing, assertions that were not supported by analysis. The population of study may explain this, as undergraduate students at a well-regarded institution of higher learning are more capable information gatherers than the general public. The variables used to compute the perceived informational gathering capacity scale had

little variance, as the vast majority of students reported that they were confident in their ability to locate good information, make sense of it and separate fact from fiction. Only one respondent, for example, did not feel efficacious regarding her capability to make sense of information about the risk of sexual assault and aggression on college campuses. This confidence, like the lack of information insufficiency discussed earlier, is quite possibly a product of an environment composed of individuals with advanced education and technological skills. A study of the general population on the risk of sexual violence may find more variance in terms of perceived information gathering capacity.

Individual Characteristics and Perceived Hazard Characteristics

The demographic and perceived hazard characteristics variables are not expected to have direct effects on seeking and processing, but in this case there are three demographic variables that managed to have both indirect and direct effects.

Relevant hazard experience became a more prominent variable in the analysis than typically is found in a RISP study. Usually, as a control variable, it has only indirect effects on the dependent variables. This was not the case, however, as the amount of exposure a student had to sexual aggression was positively associated with active seeking (beta = .18, $p \leq 0.05$) and systematic processing (beta = .18, $p \leq 0.05$), and negatively associated with avoidance (beta = -.17, $p \leq 0.05$). This is similar to what is expected regarding the cognitive motivation of information insufficiency, and it shows that students who have experienced sexual aggression are more likely to be active seekers and systematic processors while being less

likely to avoid new information. This may be due to the personal, visceral and immediate nature of this risk as opposed to more psychologically distant risks like smoking and global warming. One thing is sure – this is a serious risk facing undergraduate female students (and males to a more unknown extent). 72% of respondents had experienced inappropriate and aggressive touching or dancing, while 22% of respondents had experienced an attempted sexual assault.

Alcohol consumption also had a direct effect. Weekly alcohol consumption was positively associated with avoidance (beta = 0.19, $p \leq 0.05$). Students who drink more regularly, then, are more likely to avoid information about the risk of sexual aggression. This may be because of information in the public sphere that acknowledges that sexual assaults often involve alcohol consumption, a fact discussed earlier in this paper. Perhaps more regular drinkers are less interested in being reminded of the elevated risks associated with alcohol since it plays a significant role in their lifestyle. Further research could examine the interaction between efficacy and affective response in this group, as they may be avoiding information that would produce negative emotions. This scenario would fit with predictions in Witte's (1992) Extended Parallel Process Model and in RISP.

No perceived hazard characteristics had unexpected direct effects, but the results of the institutional trust variables are important for Marquette University administrators. While Marquette scored at a neutral or slightly higher level in terms of competent sexual misconduct programming and care of school officials about student health and well-being, the story is different in terms of trusting Marquette to protect students from sexual harm. The mean was 2.66 for this variable, and only

26% of respondents said confidently that they trusted Marquette in this capacity. Forty-four percent did not trust Marquette in this capacity and 30% felt neutral on the subject. This is an interesting finding considering the possibility discussed earlier that information saturation from Marquette's programming eliminated the cognitive drive for information on this topic. This result suggests that media coverage of the high-profile cases and the risk also influenced students. Had Marquette's campaign been the only factor in eliminating student's perceived informational needs, it would follow that students would trust more strongly in the university's efforts to protect students from harm. While there is no clear answer to this question of cause and effect without further research, it is clear that Marquette University has some work left to do in convincing its student body to trust in the programs, policies and employees engaged in the task of protecting students from sexual aggression.

Theoretical Implications

While many of the hypotheses were not supported by the data, these results might have been due, at least in part, to the circumstances surrounding of this survey. Information insufficiency, when present, has proven to be an important factor in explaining differences in information seeking and processing behavior. In this case, it is probable that the population of study muted the effects of information insufficiency and perceived informational gathering capacity. It is much less likely that the problem lies with the validity of this model. A study of the general population would be needed to confirm these suspicions.

While the model is well-tested, it is possible that this study adds credence to the notion that affective response and informational subjective norms can have indirect and direct effects on information seeking and processing behaviors (Griffin, Dunwoody & Yang, in press). This study adds to the four RISP studies that have found direct relationships between affect and information seeking, and also to the two investigations that found a direct link between negative emotions and information processing (Griffin, Dunwoody & Yang, in press). The findings regarding informational subjective norms also support efforts to better conceptualize and measure the influence of normative pressures on risk information seeking and processing (Griffin, Dunwoody & Yang, in press). Other research has pointed to this normative pressure as a direct influence, and it is important that we continue to explore this possibility and also investigate whether any personality traits, like self-monitoring, lead individuals to be more or less susceptible to normative pressures regarding risk information gathering (Griffin, Dunwoody & Yang, in press). It is important that future studies keep the potential evolution of the RISP model in mind and report these relationships if found. An accumulation of greater support for these relationships could advance and improve the RISP model's predictive capability.

The third and final implication for the model is that relevant hazard experience was significantly associated with three of the four information seeking and processing behaviors. This control variable is not expected to have any direct effects. It is possible that the nature of this risk as a very personal and violent risk produces an exception to the model. It stands to face validity that personal

experience with this risk would be serious and scarring enough to produce a life-changing response without working through other variables, or characteristics like information insufficiency and perceived informational gathering capacity. Or, this finding could strictly be an aberration. Only additional research on the topic would help us decide if this prompts an exception or not to the RISP model.

Limitations and Future Research

As previously mentioned, external factors contributed to a lack of the hypothesized relationships information insufficiency and perceived information gathering capacity should have had with seeking and processing behaviors. Possible and reasonable explanations for these phenomena have been given, however, these ideas remain speculation and would require comparative research of a general population to confirm with any certainty. Also, the total number of respondents (N=152) was not ideal. A larger body of respondents might have improved scale reliability and the significance of some findings (e.g., felt social pressure from friends to seek and systematically process information, as shown in Table 1, might have been statistically significant with a slightly larger N).

The key limitation is that the measuring instrument, like most questionnaires, relies heavily on self-reporting. The privacy of the online experience and anonymity offered hopefully offset some of the social desirability concerns that can come with survey research. It is possible that some respondents were not completely truthful in their accounts. A larger sample would have also helped by minimizing the impact of these individuals. Also, the response rate of

19.6 percent was fairly low. It is possible that students who were more interested in the topic responded, which would make the sample less representative of the female undergraduate student body. This could also have limited variance on certain measures, like information insufficiency. Finally, surveys like this that focus on behaviors are ideally supported by additional experimental research that observes and measures seeking and processing rather than relying on self-reported data.

In addition to the possibility of conducting experimental research to bring additional legitimacy to the RISP model, there are a few more opportunities for future investigation that were uncovered by this study. The recent policies and programs put in place by Marquette University are extremely new. While efforts were made to impact large swaths of the student body, including first-year students and recognized leaders, it is very likely that the measures of institutional trust will change as those programs and policies become more enmeshed into the typical Marquette student experience. One might hypothesize that, as more students engage in these programs and memories of the intense media coverage discussed earlier dim, measured levels of institutional trust regarding Marquette University's protective role will increase among female undergraduate students.

Also, while some basic evidence for the presence of optimistic bias was presented, the linkage to risk perception was beyond the scope of this project. In upcoming research projects, investigations of RISP regarding sexual violence should incorporate these concepts through more sophisticated measurement and analysis. Doing so would give a clearer picture of how these constructs fit in and impact the RISP model for explorations of this personal safety risk.

Additionally, future research should apply the RISP model to a study of the general population, which would allow for comparisons on the important measures of perceived informational gathering capacity and information insufficiency. It would also help uncover whether or not a peer pressure-oriented campaign would apply also to the general population, or if other strategies may be more effective. Finally, more research needs to be done to better understand the direct effects of negative affective response and informational subjective norms on seeking and processing behaviors.

VI. Conclusion

Summary of Key Findings

- Of the predicted relationships between information insufficiency and information seeking and processing behaviors, only avoidance showed a significant association in the analysis.
- Other alternative predictors of information seeking and processing, however, were found. Most notably, negative emotions and peer pressure were significantly related to several of the dependent variables, supporting other RISP researchers findings that these variables may have both indirect and direct influences on the information seeking and processing behaviors (Griffin, Dunwoody & Yang, in press).

Theoretical Contributions

- This study took the RISP model into new territory by focusing on an interpersonal risk of violence.
- Direct relationships found between a number of the seeking and processing scales and the independent variables of negative affective response and informational subjective norms supports recent proposals to modify RISP (Griffin, Dunwoody & Yang, in press). The direct relationship between several of the seeking and processing behaviors and relevant hazard experience should be explored in future studies to see if it is an aberration or an exception due to the interpersonal nature of the risk of sexual violence.

Limitations

- The means for current knowledge and sufficiency threshold were closer than expected. The minimal cognitive motivation, or information insufficiency, in the sample stunted predicted relationships with information seeking and processing behaviors. The same was true of perceived gathering capacity, possibly due to the high academic standing, relative to the general population, of female undergraduates at Marquette.
- Surveying male and female students as required by the privacy policies restricted the size of the ideal sample sought for the study. This sampling issue, combined with the survey's less than ideal response rate, led to a smaller pool of respondents that may have affected analysis.
- The timeline for the project and the online medium of the questionnaire required a shorter questionnaire than usually used to investigate the RISP concepts. A longer form, perhaps in conjunction with a telephone survey, would have given more nuance to a number of concepts.

Future Research Direction

- Researchers should apply the RISP model to a study of sexual violence risk information seeking and processing in the female general population. This will allow researchers to see if cognitive motivation and perceived informational gathering capacity adhere more closely to the model's predictions in a population more varied in educational attainment and technological aptitude.

- In future studies, researchers should explore further the role of alcohol use as an individual characteristic and control variable. The effect of alcohol consumption and optimistic bias on risk perception should be examined.

Practical Implications

- Public health practitioners and university administrations may want to focus social cause marketing and programming efforts on emotional appeals and social media. Even on a campus, like Marquette, in which students feel saturated with information, negative emotions (anger and worry) and perceived peer pressure still managed to influence information seeking and processing behaviors.

VII. BIBLIOGRAPHY

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VIII. Appendices

Appendix A

Questionnaire

Research Participation and Consent Form

Title: Seeking Safety? Information seeking and processing and the risk of sexual aggression

Principal Investigator: Gregory Calhoun (586-530-9706) (e-mail: Gregory.1.calhoun@marquette.edu)

PURPOSE: The purpose of this research study is to understand how women regard information concerning risks related to sexual aggression.

PROCEDURES: If you are a woman, you will be asked to complete a questionnaire about your perception and understanding of the risk of sexually aggressive behavior in college. You will also be asked to provide some basic demographic information.

DURATION: Your participation will consist of one survey completed online taking approximately 15 minutes.

RISKS: The risks associated with participation in this study include being asked some questions that may make you feel uncomfortable. You may skip any questions you do not feel comfortable answering, or withdraw from this study at any time.

BENEFITS: While there are no direct benefits to you, your participation may benefit society by helping the sexual violence and risk communication research communities better understand how college-aged women look for and process new information about the risk of sexual aggression.

CONFIDENTIALITY: All information you reveal in this study will be kept confidential. When the results of the study are published, you will not be identified by name. Results will be analyzed and published only as aggregate data. E-mail addresses of chosen respondents will be tracked only for the purpose of sending reminders; the addresses will be kept confidential.

VOLUNTARY NATURE OF PARTICIPATION: Participating in this study is completely voluntary.

CONTACT INFORMATION: If you have any questions about this research project, you can contact Gregory Calhoun by phone at (586) 530-9706 or by e-mail at Gregory.1.calhoun@marquette.edu. If you have questions or concerns about your

rights as a research participant, you can contact Marquette University's *Office of Research Compliance* at (414) 288-7570 or orc@marquette.edu.

A. By clicking on the "I Agree" button below, you indicate that you have read this consent form, are a female undergraduate fulltime student at Marquette University, and voluntarily consent to participate. Your answers are very important. The anonymous results will be used for a thesis and for papers and publications.

If you decline to participate, please select the "I Decline" button.

B. Screening question:

What is your gender?

Male Female

(If male, end survey and thank respondent for their time.)

For the purposes of this research, an unwanted sexual advance is an unwelcome act made towards another person with the aim of gaining some sort of sexual favor or gratification, which includes verbal persuasion, coercion, groping, unwelcome dancing/grinding and attempted sexual assault.

1. We'd like to know how important this matter is to you. Please use a scale from zero to 10, where zero means no importance at all and 10 means that it is as important as anything could ever be to you. How important is the possibility of experiencing unwanted sexual advances to you?

Not Important 0 1 2 3 4 5 6 7 8 9 10 Very Important

2. We would like you to rate your knowledge about the risks of unwanted sexual advances.

Please use a scale of zero to 100, where zero means knowing nothing and 100 means knowing everything you could possibly know about this topic. Using this scale, how much do you think you currently know about the risk of unwanted sexual advances?

_____ (0-100)

3. Now, using the same 0 to 100 scale, estimate the level of knowledge you think you would need to have to be able to deal adequately with the possible risks from unwanted sexual advances. Recall that 100 represents all that you could possibly know about unwanted sexual advances.

_____ (0-100)

The next questions are about how you get and think about information you run across in the mass media and elsewhere. Given the limit on time in a day, people have to make choices about what information to devote their time and attention to. The following statements are statements that some people have made about how they personally deal with information about the risk of unwanted sexual advances and about prevention techniques.

Please indicate whether you strongly agree, agree, feel neutral, disagree or strongly disagree with these statements.

4. When this topic comes up, I'm likely to tune it out.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

5. When I see or hear information about this topic, I rarely spend much time thinking about it.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral/ Not Applicable	Agree	Strongly Agree

6. When it comes to the risk of unwanted sexual advances, I'm likely to go out of my way to get more information.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

7. What I know about this topic is enough.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

8. After I encounter information on this topic, I am likely to stop and think about it.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

9. When the topic of unwanted sexual advances comes up, I try to learn more about it.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral/ Not Applicable	Agree	Strongly Agree

10. If I need to act on this matter, the more viewpoints I get the better.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

11. Gathering a lot of information about the risks of unwanted sexual advances is a waste of time.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

12. After thinking about this topic, I have a broader understanding.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

13. When it comes to this topic, I'm content to let information come to me in the course of my daily life.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

14. When I encounter information about the risks of unwanted sexual advances, I focus on only a few key points.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

15. If I need to act on this matter, the advice of one expert is enough for me.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

16. Whenever this topic comes up, I go out of my way to avoid learning more about it.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

17. It is important for me to interpret information about the risks of unwanted sexual advances in a way that applies directly to my life.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

18. There is far more information on this topic than I personally need.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

19. When I encounter information on this topic, I read or listen to most of it, even though I may not agree with its perspective.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

How useful do you feel the information on the topic of unwanted sexual advances from these sources would be:

20. Mass Media sources like television, newspaper and radio

Not At All 1 2 3 4 Very

21. Marquette University

Not At All 1 2 3 4 Very

22. Government agencies like the Centers for Disease Control

Not At All 1 2 3 4 Very

23. Not-for-profit advocacy group websites like the National Sexual Violence Resource Center

Not At All 1 2 3 4 Very

24. Family members

Not At All 1 2 3 4 Very

25. Friends

Not At All 1 2 3 4 Very

The following are statements that people have made about their own ability to get and make sense of information from the mass media (e.g. newspapers, tv, radio), government agencies, universities and other sources regarding the risk of unwanted sexual advances. To what extent do you agree with these statements?

26. I would know where to go for more information.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

27. It is hard for me to get useful information about this topic.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

28. I would know how to separate fact from fiction.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

29. I am able to get and make sense of information on this topic.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

30. When the same information appears in many places, I'm more likely to believe it.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

31. I would give more weight to information that includes statistics.

Not Serious 0 1 2 3 4 5 6 7 8 9 10 Very Serious

Now we'd like to know your feelings about the risk of unwanted sexual advances. Please use a scale from zero to 10, where zero means you have "none of this feeling" and 10 means you have "a lot of this feeling." When you think about the possible consequences posed to you by unwanted sexual advances...

38. How much worry do you have?

None 0 1 2 3 4 5 6 7 8 9 10 A Lot

39. How much anger do you have?

None 0 1 2 3 4 5 6 7 8 9 10 A Lot

40. How much uncertainty do you have?

None 0 1 2 3 4 5 6 7 8 9 10 A Lot

The following are a list of statement about your parents and friends. Please indicate whether you strongly agree, agree, feel neutral, disagree or strongly disagree with these statements.

41. My parents are concerned about my risk of unwanted sexual advances.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

42. My friends are concerned about their risk of unwanted sexual advances.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

43. My parents think I should stay on top of information about the risks of unwanted sexual advances and about prevention techniques.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

44. My friends think I should stay on top of information about the risks of unwanted sexual advances and about prevention techniques.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

45. Most other women at Marquette stay on top of information about their risks of unwanted sexual advances and about prevention techniques.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

46. Most of my friends stay on top of information about their risks of unwanted sexual advances and about prevention techniques.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

47. In my life, it would be easy for me to avoid experiencing unwanted sexual advances from strangers.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

48. It would be a challenge for me to stop an unwanted sexual advance from someone I know.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

The following are statements that some people have made about colleges and unwanted sexual advances. Please indicate your level of agreement with each statement:

49. Marquette University is doing a competent job of protecting women from unwanted sexual advances.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

50. I trust Marquette University to protect me from unwanted sexual advances.

1 2 3 4 5
 Strongly Disagree Disagree Neutral Agree Strongly Agree

51. Marquette University officials care about the health and safety of people like me.

1 2 3 4 5
 Strongly Disagree Disagree Neutral Agree Strongly Agree

We'd like to know about your personal experiences with unwanted sexual advances. Your answers are completely anonymous.

Have you ever:

52. Experienced an individual attempt to verbally coerce you into a sexual act?

Yes or No

53. Experienced unwelcome touching or dancing?

Yes or No

54. Experienced an attempted sexual assault?

Yes or No

Marquette University provides counseling services free of charge to all students. Please contact them at (414) 288-7172 if you feel in any way unsettled by this topic.

55. How often do you drink alcohol? (circle one choice)

Never <1 time per week 1-2 per week 3-5 times per week Daily

56. How many times in the last month have you drank more than 4 alcoholic beverages on the same day? 0 through 31

57. What is your age?

58. What is your ethnic origin or race?

___Black/African American

___Hispanic

___Asian or Pacific Islander

___American Indian

___White

Other: _____

Appendix B

Descriptive Statistics**Items**

Question	Item	N	Mean	Standard Deviation
1	Perceived Importance	152	7.54	2.90
2	Current Knowledge	152	68.50	18.62
3	Sufficiency Threshold	152	73.59	17.96
4	Avoidance(tune out)	152	2.14	0.86
5	Heuristics(no time)	152	2.47	1.00
6	InfoSeeking(out of way)	152	2.62	0.91
7	Avoidance(know enough)	152	3.15	0.98
8	SysProc(stop & think)	152	3.81	0.81
9	InfoSeeking(learn more)	152	3.17	0.90
10	SysProc(more views)	152	3.87	0.78
11	Avoidance(waste time)	152	1.91	0.72
12	SysProc(broad understanding)	152	3.67	0.63
13	InfoSeeking(reverse)	152	3.56	0.73
14	Heuristics(few points)	152	3.00	0.85
15	Heuristics(1 expert)	152	2.36	0.87
16	Avoidance(out of way)	152	1.84	0.70
17	SysProc(apply 2 life)	152	3.89	0.72
18	Heuristics(2 much info)	152	2.82	0.97
19	SysProc(other views)	152	3.67	0.83
20	rChannelBeliefs(mass media)	152	2.75	0.88
21	rChannelBeliefs(Marquette)	152	2.86	0.81
22	rChannelBeliefs(government)	152	2.92	0.87
23	rChannelBeliefs(non-profit)	152	3.17	0.82
24	rChannelBeliefs(family)	152	3.05	0.83
25	rChannelBeliefs(friends)	152	3.14	0.77
26	plInfoGatherCap(where info)	152	3.64	0.90
27	plInfoGatherCap(hard2getinfo)	152	2.26	0.80
28	plInfoGatherCap(fact fiction)	152	3.56	0.84
29	plInfoGatherCap(make sense)	152	3.91	0.54
30	rChannelBeliefs(many places)	152	3.95	0.74
31	rChannelBeliefs(stats)	152	3.64	0.89
32	RiskPerceptionSelf(date)	152	4.84	2.61
33	RiskPerceptionSelf(party)	152	5.95	2.65
34	RiskPerceptionOthers(date)	152	8.58	1.80
35	RiskPerceptionOthers(party)	152	7.35	2.25
36	RiskSeriousness(date)	152	5.94	2.53
37	RiskSeriousness(party)	152	6.56	2.43
38	Affect(worry)	152	4.99	2.66
39	Affect(anger)	152	5.68	2.95
40	Affect(uncertainty)	152	4.72	2.60
41	DescNorms(parents)	152	3.32	1.17
42	DescNorms(friends)	152	3.18	1.03
43	InjNorms1(parents)	152	3.40	0.88
44	InjNorms1(friends)	152	3.17	0.83
45	InjNorms2(MUwomen)	152	2.62	0.86
46	InjNorms2(friends)	152	2.92	0.88
47	PerceivedEfficacy(stranger)	152	3.33	1.08
48	PerceivedEfficacy(acquaintance)	152	3.30	1.28
49	InstTrust(MUisDoing)	152	2.91	1.13
50	InstTrust(TrustMU)	152	2.66	1.17
51	InstTrust(Muofficials)	152	3.60	1.16
56	Alcohol(BingePerMonth)	152	2.23	3.19
57	Age	152	20.00	1.22

Question	Item	N	Mode	Median
52	RelevantHazardExperience (verbal)	152	1	
53	RelevantHazardExperience (touching or dancing)	152	1	
54	RelevantHazardExperience (attempted assault)	152	0	
55	Alcohol(PerWeek)	152		1
58	Ethnicity	152	5	

Scales

Scale	N	Mean	Standard Deviation	Cronbach's Alpha
RiskJudgment(date)	152	29.46	20.58	NA
RiskJudgment(party)	152	40.41	23.37	NA
Perceived Informational Gathering Capacity	152	14.84	2.15	0.63
Negative Affective Response	152	10.66	5.07	0.77
Institutional Trust	152	9.16	3.07	0.86
Relevant Hazard Experience	152	1.46	1.07	0.67
InfoSubNorms(friends)	152	6.35	1.58	0.62
InfoSubNorms(parents)	152	6.73	1.80	0.68
Avoidance	152	9.03	2.15	0.56
Heuristic Processing	152	8.28	2.03	0.53
Information Seeking	152	5.79	1.58	0.70
Systematic Processing	152	18.91	2.35	0.60
Relevant Channel Beliefs	152	11.70	2.22	0.56

Appendix C

Notices and Reminders

Notice

Survey: Seeking Safety

Dear Student,

You have been randomly selected for potential participation in an important research study being conducted by a graduate student at Marquette University. The researcher values the input of every participant into this project.

PURPOSE: The purpose of this research study is to understand how women regard information concerning risks related to sexual aggression. You will be one of approximately 300 participants in this research study.

PROCEDURES: If you are a woman, you will be asked to complete a questionnaire about your perception and understanding of the risk of sexually aggressive behavior in college. You will also be asked to provide some basic demographic information.

DURATION: Your participation will consist of one survey completed online taking approximately 15 minutes.

RISKS: The risks associated with participation in this study include being asked some questions that may make you feel uncomfortable. To minimize this risk: All answers you provide will be anonymous, that is, they will not be connected to you in any way. Additionally, you may skip any questions you do not feel comfortable answering, or withdraw from this study at any time.

BENEFITS: While there are no direct benefits to you, your participation may benefit society by helping the sexual violence and risk communication research communities better understand how college-aged women look for and process new information about the risk of sexual aggression.

CONFIDENTIALITY: All information you reveal in this study will be kept confidential. All your data will be assigned an arbitrary code number rather than using your name or other information that could identify you as an individual. When the results of the study are published, you will not be identified by name. Results will be analyzed and published only as aggregate data. E-mail addresses of chosen respondents will be tracked only for the purpose of sending reminders; the addresses will be kept confidential. Your research data will be maintained indefinitely and may be used for future research purposes. The data will be stored in a password-protected file and deleted when the researcher determines it will not be used for any future research. Your research records may be inspected by the Marquette University Institutional Review Board or its designees, and (as allowable by law) state and federal agencies.

VOLUNTARY NATURE OF PARTICIPATION: Participating in this study is completely voluntary and you may withdraw from the study and stop participating at any time without penalty or loss of benefits to which you are otherwise entitled. You may choose to skip any questions you do not feel like answering. If you wish to withdraw, simply close the browser window and do not complete the survey. Any data you had submitted prior to withdrawing from the survey will then be deleted.

CONTACT INFORMATION: If you have any questions about this research project, you can contact Gregory Calhoun by phone at (586) 530-9706 or by E-mail at Gregory.1.calhoun@marquette.edu. If you have questions or concerns about your rights as a research participant, you can contact Marquette University's Office of Research Compliance at (414) 288-7570 or orc@marquette.edu.

Please go to the following web address to respond to the survey:

<https://survey.marquette.edu/opinio/seekingsafety> [not actual link]

Reminder 1

Dear Student,

It isn't too late to participate in a Marquette University graduate student's research study whose purpose is to survey undergraduate women about how they regard information concerning risks related to sexual aggression.

Should you decide to participate, you will be asked a series of closed-ended questions about your thoughts, feelings and actions regarding the gathering of information related to the risk of sexual aggression and its prevention. Your name will not be recorded. E-mail addresses are being tracked for the purpose of reminding students about their opportunity to participate, but these addresses will be kept confidential.

Please click on the link below if you would like to participate:

<https://survey.marquette.edu/opinio/seekingsafety> [not actual link]

Reminder 2

This message is to remind you that you have not responded to the survey below. This is the last reminder:

<https://survey.marquette.edu/opinio/seekingsafety> [not actual link]