Preventing Sexual Assault: Applying the Theory of Motivated Information Management

THESIS

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By

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Abstract

A substantial amount of the research concerning the prevention of sexual assault has focused on the effectiveness of media campaigns. Conversely, though empirical evidence is limited, interpersonal discussion has the potential to be an effective strategy for preventing sexual assault. To explore the factors that may facilitate the discussion of sexual assault, the theory of motivated information management was used (W.A. Afifi & Weiner, 2004). Additionally, perceived threat was considered to improve the use of the theory in health-related contexts. Analyses were based on 248 undergraduate participants. Results were mixed in regards to the applicability of the theory to the context of sexual assault; however, there are key findings for the improvement of public health campaigns.
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Fields of Study

Major Field: Communication
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Chapter 1: Introduction

Although many scholars note the lack of consensus in defining rape or sexual assault (Alexander, Larosa, & Alexander, 2009), the deleterious effects of victimization are well-documented (Campbell, Dworkin, & Cabral, 2009; French, 2003; Holcomb, Holcomb, & Driscoll, 2011). According to the Bureau of Justice Statistics, nearly a quarter of a million sexual assaults against women were reported in 2008 in the United States and one in five women attending college will be victims of sexual assault (Department of Justice, 2005). Further complicating the issue of sexual assault is the lack of dialogue concerning the topic. This lack of conversation can lead to the perpetuation of rape myths, which Burt (1980) defined as “prejudicial, stereotyped or false beliefs about rape, rape victims, and rapists” (p. 217). At the very least, limited dialogue contributes to men and women alike holding conflicting understandings of what behaviors constitute sexual assault, which can impact a victim’s willingness to report an assault. A Department of Justice report (2010) confirms these concerns, indicating that underreporting maybe linked to the victim’s inability to recognize the assault as a criminal act. In turn, more research is needed to better understand how individuals decide to manage information about sexual assault.

To better understand how individuals choose to use interpersonal discussion as an information management strategy, the theory of motivated information management (TMIM) will be used. TMIM uses both efficacy and outcome assessments, which refer to an individual’s ability to engage in conversation as well as the evaluation of a particular information
management strategy to predict whether an individual seeks, avoids, or cognitively reappraises information (W.A. Afifi & Weiner, 2004). TMIM is a particularly useful theory for this topic, as TMIM seeks to understand how interpersonal discussion is chosen as a management strategy.

Much of the literature focused on the prevention of sexual assault centers on mass media campaigns; however, examining the interpersonal discussion of sexual assault could offer new insights into understanding sexual assault while improving campaign effectiveness. To a degree, interpersonal discussion makes evading the topic of sexual assault more difficult, a key strength when compared to media campaigns. As Chaffee (1982) notes, though, interpersonal discussion is not inherently more persuasive than other information channels, the taboo nature of sexual assault may limit the effectiveness of mass media campaigns in combating such an issue. In turn, a greater understanding of the potential impact of interpersonal discussion on the prevention of sexual assault is needed.

Primarily, this study seeks to assess the predictive power of the TMIM and to better understand how individuals may decide to engage in interpersonal discussion as an information management strategy in the context of sexual assault. This study will also examine the effectiveness of including perceived threat (Witte, 1992) within the TMIM framework. The inclusion of perceived threat may then improve the application of the TMIM to health contexts and improve the predictive power of the theory. Ultimately, examining interpersonal discussion concerning sexual assault and incorporating perceived threat may better inform education efforts as well as campaign messages.
Chapter 2: Literature Review

Background and Need

For the present study, sexual assault is any unwanted sexual contact or any sexual act committed without consent and can include unwanted or inappropriate touching as well as rape. Every two minutes someone is sexually assaulted in the United States (RAINN, 2007). Victims of sexual assault are three times more likely to develop depression and six times more likely to develop post-traumatic stress disorder (PTSD; WHO, 2002), with nearly one-third of victims developing PTSD during their lifetime (Clum, Calhoun, & Kimerling, 2000). Victims are also three to four times more likely to attempt suicide, particularly if the assault occurred before the age of sixteen (Davidson, Hughes, George, & Blazer, 1996), and more likely to abuse alcohol and illicit drugs as a means of coping (RAINN, 2007; WHO, 2002). Sexual assault continues to be an important health concern and health communication researchers could offer greater insight into improving the effectiveness of persuasive messages and campaigns to potentially reduce the occurrence of sexual assault.

To best combat this health concern, scholars need to shift their focus from the prevalence of sexual assault to its prevention (Bachar & Koss, 2001). Mass media messages have often focused on women taking preventative behaviors against sexual assault, such as enrolling in self-defense classes (Söchting et al., 2004). Potter, Moynihan, Stapleton, and Banyard (2009), though, note that such approaches place greater emphasis on stranger rape rather than acquaintance or date rape. Moreover, with the exception of long-term education programs, many
campaigns have produced little change in the frequency of sexual assault and have not positively altered perceptions of sexual assault victims (Lonsway et al., 1998). As Campbell and Wasco (2005) note, though, it is not yet clear what type of materials or other campaign characteristics lead to consistent and maintainable attitude and behavioral changes.

**Importance of Discussing Sexual Assault**

Communication research has often focused on the importance of talk when examining topics related to sexual health such as negotiating condom use and discussing sexual history and concerns about sexually transmitted infections (STIs) with partners (Afifi et al., 2006; Edgar & Fitzpatrick, 1993; Moyer-Guse, Mahood, & Brookes, 2011; Powell & Segrin, 2004; Troth & Peterson, 2000). Unfortunately, there is limited research concerning conversations or talk about sexual assault, but existing empirical evidence suggests that interpersonal discussion can be an effective means of educating men and women about sexual assault, particularly when combined with mass media messages. Morrison (2005) examined the effects of indirect fear appeals in persuading men to discuss enrolling in self-defense classes with women. After exposure, 22% of men expressed intent to discuss sexual assault and self-defense classes with women. Although the conclusions that can be drawn from one study are limited, Morrison (2005) illustrated that the effectiveness of a mass media campaign can be augmented by encouraging discussion; however, the study did not explore what motivated participants to have conversations about sexual assault.

Because Morrison (2005) focused on the occurrence of conversation rather than the factors which could facilitate interpersonal discussion, a closer examination of interpersonal discussion as an information management strategy is needed. Burnett et al.’s (2009) study, which used focus groups to examine date rape on college campuses, offers some insight into why examining conversations about sexual assault is difficult. Notably, the participants indicated that
there was not clear a definition or meaning for date rape, noting an inherent ambiguity about sexual assault that makes the topic difficult to identify and discuss prior to and after an assault. In turn, in the absence of conversation and clear definitions, participants indicated a reliance on rape myths to help manage the ambiguity.

As noted earlier, rape myths refer to a set of attitudes and beliefs which serve to justify or condone a sexual assault by denying the occurrence of an assault or by blaming the victim (i.e., presuming the victim was responsible for soliciting the attack; Burt, 1980; Lonsway & Fitzgerald, 1994). Bieneck and Krahe (2011) compared perceptions in the attribution of guilt for robbery and rape, finding that more blame was ascribed to the victim for rape and the perceived level of guilt increased in instances where the victim knew the attacker. Girard and Senn (2008) found that after reading vignettes featuring a woman’s voluntary drug use prior to a sexual assault, participants indicated a reduction in perceptions of perpetrator responsibility and increased blaming of the victim. Although such research does not explicitly deal with conversations about sexual assault, rape myth acceptance underscores the importance of studying conversations about sexual assault because without discussion to challenge the myths, these beliefs are normalized. It is thus imperative to study conversations about sexual assaults as well as why individuals are motivated to engage in such discussions.

Though willingness to converse about sexual assault remains relatively unexplored, empirical work has indicated that engaging in conversation about sexual assault can be beneficial for victims. Botta and Pingree (1997) examined how interpersonal communication impacted women’s ability to acknowledge that they had been raped or assaulted. Researchers found that knowing someone who had been assaulted and seeking information about acquaintance rape from friends significantly predicted acknowledgement of rape. Acknowledgement of an assault
has then been found to have positive psychological effects for survivors (Botta & Pingree, 1997; Clements & Olge, 2009). In turn, to better understand such conversations, it is necessary to begin exploring the conditions which facilitate the occurrence of these discussions. The TMIM then offers a useful theoretical means to begin exploring these pre-conversation attributes.

**Theory of Motivated Information Management**

The theory of motivated information management (TMIM) was offered by W.A. Afifi and Weiner (2004) and delineates how information seeking is shaped by and through interpersonal interactions. TMIM builds on previous theories of efficacy (Bandura, 1997), uncertainty management (Berger, 1979; Berger & Calabrese, 1975; Brashers, 2001), and models of information seeking (Johnson & Meischke, 1993). In understanding uncertainty, TMIM has key strengths including an emphasis on the importance of dyadic or interpersonal channels of information. Additionally, TMIM further explicates the decision making process by including multiple efficacy components, which concentrate on an individual’s perceptions concerning the effectiveness of a particular information management strategy as well as perceptions concerning his or her ability to use a specific information strategy. Finally, TMIM acknowledges the role and characteristics of the provider of information in the interaction (W.A. Afifi & T.D. Afifi, 2009; W.A. Afifi, Dillow, & Morse, 2004; W.A. Afifi & Weiner, 2006a). The import of interpersonal interactions within the TMIM framework makes the theory particularly applicable to the topic of sexual assault as interpersonal discussion may lead to greater behavior change (Morrison, 2005) than just exposure to a media campaign.

Active information seeking passes through three sequential phases within the TMIM: interpretation, evaluation, and decision. The interpretation phase involves the individual becoming aware of an undesired amount of uncertainty which subsequently generates anxiety.
Awareness of the undesired level of uncertainty then leads to the evaluation phase. The evaluation phase features the individual forming perceptions about the effectiveness of a particular strategy for managing information as well as assessing his or her ability to effectively communicate the information. Taken together, these perceptions lead to the final phase: decision. The decision phase involves choosing between how to best manage information by seeking, avoiding, or reappraising information. Each phase will be described in greater detail below.

**Interpretation.** Within the framework of the TMIM, uncertainty is not the primary mechanism which leads individuals to seek information. Instead, the awareness of an uncertainty discrepancy generates anxiety which, in turn, leads to the evaluation of potential information management strategies. Anxiety is then the result of an individual perceiving difference between the level of his or her actual uncertainty and the desired amount of uncertainty about a given topic (W.A. Afifi & Weiner, 2006). It is the experience and awareness of this anxiety that ultimately shifts individuals from the interpretation phase to the evaluation phase (W. A. Afifi et al., 2006).

The uncertainty discrepancy is a particularly useful concept for understanding how individuals may manage information about sexual assault. Women can recognize the potential for and prevalence of sexual assault and have a higher level of unwanted uncertainty as a result; conversely, even if women are aware of the frequency of sexual assault, there is the potential that some women may have a lower level of desired uncertainty and a smaller uncertainty discrepancy because they do not perceive themselves as potential victims of sexual assault (White & Humphrey, 1991) or others may even perceive themselves as invulnerable to sexual assault (Brown, Messman-Moore, Miller, & Stasser, 2005; Morrison, 2005). Either instance is likely to lead to an uncertainty discrepancy with some women perceiving a greater discrepancy
and others perceiving little or no discrepancy between the uncertainty they feel and the level of uncertainty they want.

**H1:** An uncertainty discrepancy will be positively associated with feelings of anxiety about the discussion of sexual assault.

**Evaluation.** The evaluation phase focuses on the assessment of potential information management strategies. Information in this phase is considered based on assessment of the expected outcomes of a particular strategy as well as assessments concerning personal ability to seek information (e.g., engage in interpersonal discussion about a particular topic of importance). *Outcome* and *efficacy assessments* then mediate the relationship between the anxiety discrepancy and information seeking, whereas the efficacy components also mediate the relationship between outcome expectancies and information seeking (W.A. Afifi & Weiner, 2004). Evaluating a strategy as effective is insufficient in identifying strategies for managing information; an individual must ultimately evaluate his or her personal ability to enact a certain strategy.

W.A. Afifi and Weiner (2004) identify three types of outcome assessments: outcome expectancies, outcome importance, and outcome probabilities. *Outcome expectancy* is a common construct in communication literature, particularly in health communication research, and has been applied to multiple health behaviors such as consuming alcohol (Real & Rimal, 2007), discussion about HIV prevention (DiIorio et al., 2000), and exercise (Williams, Anderson, & Winett, 2005) and it generally refers to perceptions concerning the result of a certain behavior. W.A. Afifi and Weiner (2004) define outcome expectancies as “individual expectations about the possible outcomes of an action” (p. 176).

W.A. Afifi and Weiner (2004) also included *outcome importance* and *outcome probability* in their conceptualization of outcome assessments. Outcome importance refers to the
utility of the information strategy. Douglas (1987) found that low topic importance was associated with lower levels of reported information seeking. Additionally, though Lindsey’s (2005) study concerning bone marrow donation did not directly measure topic importance, participants who perceived greater levels of responsibility for unknown others were more likely to engage in information seeking. Finally, outcome probability underscores the likelihood of the outcome expectancies actually occurring and as with low levels of perceived susceptibility (Bates, Fitzgerald, & Wolinsky, 1994; Denny-Smith, Bairan, & Page, 2006; Lee, Cheung, Kwong, & Lee, 2005), low outcome probability is not likely to lead to information seeking (Afifi & Weiner, 2004).

At the core, outcome assessments assume that individuals consider their expectations for perceived outcomes (Afifi & Weiner, 2004), and the more positive the outcome assessments, the more likely an individual will be to actively seek information. Within the context of sexual assault, an individual’s outcome assessments may lack congruency (Brown et al., 2005). The perceived severity of sexual assault can contribute to individuals perceiving outcome importance; however, perceived invulnerability can contribute to women and men potentially holding lower outcome probabilities (Morrison, 2005; White & Humphrey, 1991). Concurrently, outcome expectancies would then also be lower and direct conversation would be less likely to occur (Burnett et al., 2009). Such reasoning is in line with Witte’s (1992, 1994) work concerning fear appeals. Simply acknowledging that a threat exists in the environment is not likely to alter behavior; an individual would need to perceive the threat as personally relevant.

Whereas outcome assessments focus on assumptions about the potential occurrence or subsequent results of a behavior, efficacy assessments center on the individual’s estimation of his or her ability to behave in a certain way or produce a certain outcome (W.A. Afifi & Weiner,
In accordance with other interpersonal communication theories, including competence (Spitzberg & Cupach, 1984), and behavioral theories (Fishbein & Azjen, 1980, 2010), efficacy is a key component in predicting information management strategies. Efficacy assessments are then determined by the combination of three separate efficacy components: communication, coping, and target efficacy. Each component contributes to the information seeker’s overall perception of his or her ability to identify information management strategies that could alter their uncertainty discrepancy.

Communication efficacy focuses on the extent to which an individual believes he or she can complete a communication task. The utility of communication efficacy is well-documented in health communication literature. Frequently, communication efficacy is linked to acts of self-disclosure, and evidence suggests that communication efficacy is a strong predictor of women seeking information about their partners’ sexual health (Hale & Trumbetta, 1996). Low communication efficacy is often the reason for the failure of large health campaigns offering talk as a solution (e.g., “talk to your children about drugs”; Miller-Day & Dodd, 2004). Because sexual assault remains a taboo topic, an individual’s perception of his or her own communication efficacy may be greatly limited and in turn, the individual may be less likely to engage in conversation or other active methods of managing information. Empirical results indicate that of the efficacy assessments featured in the TMIM, communication efficacy is the only efficacy component that has consistently and significantly influenced information seeking strategies (W.A. Afifi, 2010). Reporting lower perceptions of communication efficacy can contribute to either avoiding discussion of sexual assault or an individual opting for more passive methods of managing information.
Coping efficacy refers to the extent to which individuals believe that they have the emotional, instrumental, and other resources to manage the outcomes they expect from an information management strategy under consideration. Coping efficacy is also a well-documented and supported variable in the health literature. In a study of older adults, Wanzer, Sparks, and Frymeir (2009) found that greater levels of coping efficacy were associated with greater levels of life satisfaction, and T.D. Afifi (2003) has found the construct to be useful for children adjusting to a recent divorce. Given the danger and negative emotions with sexual assault, coping efficacy is particularly relevant (Clements & Ogle, 2009). Personal relevance or experiences with sexual assault may require that an individual potentially have access to or be aware of certain resources to better manage the results of a discussion concerning sexual assault (Brown et al., 2005).

Finally, target efficacy underscores perceptions about the target or the potential recipient of the intended interpersonal discussion. Target efficacy is composed of two parts: target ability and target honesty. Target ability indicates the target’s potential level of access to information, whereas target honestly highlights the willingness of the target to provide complete information. The deleterious effects of sexual assault contribute to target efficacy being a pertinent construct in the study of sexual assault. As with coping efficacy, an individual’s personal experience with sexual assault greatly impacts an individual’s willingness to be honest in conversations about sexual assault (Botta & Pingree, 1997) and these same experiences may limit the individual’s ability to have a discussion concerning sexual assault (Brown et al., 2005; Clements & Ogle, 2009).

H2a: Feelings of anxiety concerning sexual assault will be negatively associated with outcome assessments regarding the discussion of sexual assault.
H2b: Feelings of anxiety concerning sexual assault will be negatively associated with efficacy assessments regarding the discussion of sexual assault.

H3: Efficacy assessments will mediate the relationship between outcome expectancies and the intention to engage in interpersonal discussion about sexual assault.

**Decision.** The decision phase is characterized by an individual making his or her choice about a specific information management strategy based upon the assessments formed in the evaluation phase. W.A. Afifi (2010) posits that information seeking strategies form a continuum anchored by passivity on one end and activity on the other, and W.A. Afifi and Weiner (2004) identify three key strategies to manage information: seek relevant information, avoid relevant information, and reappraise available information. Within the context of sexual assault, seeking information may refer to direct conversation about the prevention of sexual assault or discussing an individual’s personal experience with sexual assault. Avoiding conversation can manifest as simply choosing not to begin a conversation or the target of such a conversation being unwilling to engage in the discussion when the topic arises. With seeking and avoiding individuals are reacting to the potential for new information. Reappraisal, though, uses known information to reconfigure assessments so as to reduce the need for uncertainty management (W.A. Afifi & Weiner, 2004).

Empirical evidence suggests that the direct strategy of engaging in interpersonal discussion can lead to women taking preventative measures against sexual assault (Morrison, 2005) or have positive psychological effects for those who have been assaulted (Botta & Pingree, 1997; Clements & Ogle, 2009), making direct conversation an effective means of targeting those who may be victims as well as making topic evasion more difficult. In turn, the following hypothesis is offered (see Figure 1 for a summary of hypotheses):

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H4: Positive efficacy assessments about discussing sexual assault will be positively associated with greater intentions to engage in interpersonal discussion about sexual assault.

Figure 1. Predictions from the Theory of Motivated Information Management

Threat

As noted earlier, though TMIM is a useful theory for examining sexual assault, previous applications of the theory in health contexts (e.g., organ donation and STIs) underlined a potential gap in the theory’s framework (W.A. Afifi, Morgan, Stephenson, Morse, Harrison, Reichert, & Long, 2006; Afifi & Weiner, 2006). Although the theory is applicable to interpersonal contexts, TMIM lacks an important component typical in many health-related contexts: threat. Examining threat in the context of sexual assault, however, can be difficult.
Though sexual assault represents a threat, research indicates that people, particularly women, do not perceive themselves as potential victims of sexual assault (Brown et al., 2009; Morrison, 2005; White & Humphrey, 1991).

Witte (1992) indicates that threat is consistently present in the environment; however, when threat is perceived by an individual, the response is not simply physiological (Beck & Frankel, 1981). TMIM accounts for anxiety, which is conceptualized as predominantly physiological (Afifi & Weiner, 2004). Perceiving threat also triggers physiological responses similar to anxiety, indicating potential overlap between these concepts. Within the framework of the extended parallel process model (EPPM), threat also generates cognitively and affectively-based reactions concerning not only the presence or existence of physical threat, but also personal susceptibility to threat and the severity of that threat (Witte, 1992; Witte & Allen, 2000). Susceptibility refers to an individual’s perception of the threat happening to him or her, whereas severity refers to the perceived intensity of threat. Unlike the TMIM, though, the EPPM postulates that the combination of efficacy and threat generate anxiety rather than anxiety leading to the assessment of threat and efficacy (Witte, 1992).

In addition to potential overlap between anxiety and threat, it is also not clear where threat should be placed within the TMIM framework. Conversely, Witte and Morrison (2000) examined the influence of anxiety on responses to fear appeals, finding that though anxiety had an influence on perceptions of efficacy and threat these perceptions ultimately did not influence attitudes, intentions, and behaviors. These results indicate that there may not be a relationship between anxiety and threat; therefore, greater exploration is needed to better understand the relationship between threat and anxiety.
The inclusion of perceived threat into the framework of the TMIM could then allow for greater predictive power for the TMIM and offer greater insight into information seeking in health contexts. Therefore, the following research question is offered:

RQ: How does threat function within the framework of the TMIM?
Chapter 3: Method

Participants

Because college-aged individuals are more likely to be victims of sexual assault, undergraduate students were the target population. Two hundred and forty eight participants were recruited from undergraduate Communication courses at a large Midwestern university and received course credit for their participation. The sample consisted of 165 females (66.5%) and 83 males (33.5%). Seventy percent of the sample identified as Caucasian and 59% identified as either single and not dating or single and dating, with 60.5% indicating that they knew someone who had been sexually assaulted.

Procedure

Participants completed the survey in a computer lab. Participants took approximately 30 minutes to complete the survey. Before answering measures, the survey instrumented directed participants to consider any individual whom they consider to be a close or important person when the word “friend” was used in the measures.

Measures

The survey consist of measures focused on attitudes associated with sexual assault as well as TMIM measures adapted from Afifi et al.’s (2006c) organ donation study. See Table 1 for a summary of bivariate correlations and summary statistics.

Perceived threat. Perceived threat items were adapted from Witte’s (1994) work and altered to apply to sexual assault. The items will assess perceived severity and susceptibility.
Perceived severity was measured with two items using a fully-labeled five-point Likert scale (1 = not at all possible; 5 = extremely possible). Sample items included: “Sexual assault is one of the worst things that can happen to a person” and “There are few crimes worse than sexual assault.” Perceived susceptibility was measured with two items using a fully-labeled five-point Likert scale (1 = not at all possible; 5 = extremely possible). A sample item was: “How possible is it for you to be a victim of sexual assault?” Four other susceptibility measures, adapted from Morrison (2005), were measured using a fully-labeled five-point Likert scale (1 = strongly disagree; 5 = strongly agree). An example item is: “Other women have a greater chance of being sexually assaulted than I do.” The overall measure of perceived threat reached acceptable reliability (α = .74).

**TMIM.** Measures testing the components of the TMIM were adapted from Afifi et al. (2006c) and were altered to apply to sexual assault.

**Uncertainty discrepancy.** The uncertainty discrepancy was measured with four items using a fully-labeled five-point Likert scale (1 = strongly disagree; 5 = strongly agree). Example items include: “I know less than I’d like to know about my friend’s thoughts and feelings about sexual assault” and “I want to know more than I currently know about my friend’s thoughts and feelings about sexual assault” (α = .80).

**Anxiety about uncertainty discrepancy.** The anxiety created by the uncertainty discrepancy was measured with five items using a fully-labeled five-point Likert scale (1 = strongly disagree; 5 = strongly agree). Example items include: “Not knowing exactly how my friend will react to my decision to discuss sexual assault makes me anxious” and “Not having as much information as I’d like about my friend’s attitudes about sexual assault makes me nervous” (α = .81).
**Issue importance.** Issue importance was measured with four items using a fully-labeled five-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). Example items include: “It is important to me to discuss sexual assault with my friend” and “It is important to me to get my friend’s opinion about sexual assault before talking about sexual assault” (α = .78).
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<th>SD</th>
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Table 1. Summary statistics and Bivariate Correlations.
* p < .05
** p < .01
**Outcome expectancies.** Outcome expectancies were measured with five items using a fully-labeled five-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). Example items include: “Talking to my friend about sexual assault would have positive outcomes” and “There are a lot more benefits than there are problems associated with talking to my friend about sexual assault” ($\alpha = .77$).

**Efficacy assessments.** Communication, coping, and target efficacy were measured using a fully-labeled five-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). Communication efficacy was measured with three items and example items include: “I know how to talk to someone about sexual assault” and “I know what I need to say to successfully discuss sexual assault with someone” ($\alpha = .68$). Coping efficacy was measured with three items and example items include: “I would have no problem coping with my friend’s attitudes about my wanting to talk about sexual assault” and “I am certain that I could handle whatever my friend thought about my decision to talk about sexual assault, whether it be positive or negative” ($\alpha = .60$). Though coping efficacy is a key component of the TMIM, the reliability of the measure was inadequate and was subsequently excluded from analyses. Finally, target efficacy was measured with seven items and example items include: “If we talked, my friends would be upfront about what they think of my wanting to discuss sexual assault” and “If we talked, my friend would hide his or her true feelings about my decision to talk about sexual assault” ($\alpha = .77$).

**Interpersonal discussion intentions.** Interpersonal discussion intentions were measured with three items. One item, “How direct would you be in discussing sexual
assault with your friends?” was measured using a fully-labeled five-point Likert scale (1 = not at all; 5 = extremely direct). Two items were measured using a fully-labeled five-point Likert scale (1 = strongly disagree; 5 = strongly agree). The items were: “If I have a talk with my friend about sexual assault, I’ll probably be completely up front about my interest in their attitudes on it” and “If I have a talk with someone about sexual assault, I’ll directly ask them to tell me their attitudes on the issue” (α = .69).

Control Variables

Attitudes toward sexual assault were assessed with the Rape Supportive Attitude Scale (Lottes, 1991). The Rape Supportive Attitude Scale, compromised of twelve items, was designed to measure attitudes that are unsympathetic to rape victims, including an assessment of the acceptance of rape myths. Higher scores indicate greater rape myth acceptance (Bohner, Siebler, & Schmelcher, 2006) and influence subsequent perceptions of the importance and severity of sexual assault; therefore, scores on this scale were used as a covariate in analyses. Items were measured using a fully-labeled five-point Likert scale (1 = strongly disagree; 5 = strongly agree). Example items include: “A man has some justification in forcing a female to have sex with him when she led him to believe she would go to bed with him,” and “The degree of a woman’s resistance should be the major factor in determining if a rape has occurred.”

Additional control variables include sex, perceived threat, perceptions of issue importance, and knowing someone who had been sexually assaulted. Issue importance is included as it satisfies a scope condition for the TMIM and knowing someone who has
been assaulted will likely have influence on variables in the model. Subsequent presentation of the model will omit the control variables.
Chapter 4: Results

**Structural Equation Modeling**

Structural equation modeling was used to test the relationships between the variables. The correlation matrix of the measured variables was analyzed using AMOS. In congruence with previous tests of the TMIM, the two-step approach (Anderson & Gebring, 1988) was used. The two-step approach establishes the reliability of the measurement model before estimating the structural model. In turn, a confirmatory factor analysis (CFA) of the measurement model was performed to examine the relationships among indicators and relevant latent constructs prior to testing the hypotheses.

Both the measurement model and the structural model were estimated using maximum likelihood estimation and model fit was evaluated with the maximum likelihood chi-square statistic. Additionally, the comparative fit index (CFI) and the root mean square error of approximation (RMSEA) were also examined to assess model fit. Values greater than .90 for CFI indicate good fit (Hu & Bentler, 1999), whereas RMSEA estimates less than .05 indicate close model fit, values between .05 and .08 indicate reasonable fit, and values greater than .10 suggest poor fit (Browne & Cudeck, 1993). A full measurement model was examined, which included all the latent factors and their corresponding indicators (uncertainty discrepancy, anxiety, outcome expectancies,
efficacy assessment, and direct talk). The measurement model fit the data well ($\chi^2 [142] = 199.38, p < .05$; RMSEA = .04, 90% C.I. = .026, .053; CFI = .96).

**Hypothesis Testing**

For statistical control, a multivariate regression, which regressed the variables featured in the model on the control variables, was performed and standardized residuals were saved. In turn, the standardized residuals were used to run analyses on the model, so that the variance from the control variables was parcelled out prior to entering variables into the structural model. Once the model was tested, hypotheses were evaluated using the standardized path coefficients, with a $p$-value of .05 or less as an indicator of statistical significance.

The indices of fit indicate that the model did not fit the data well ($\chi^2 [9] = 44.26, p < .001$; RMSEA = .12, 90% C.I. = .09, 0.16, CFI = .87; see Figure 2). All path coefficients in the structural were in the predicted direction. Hypothesis one, indicating a positive relationship between the uncertainty discrepancy and anxiety, was supported ($\beta = .36, p < .001$). Hypothesis two deals with the paths from anxiety to outcome expectancies ($\beta = -.09, p > .05$), which was not significant, and to efficacy assessments ($\beta = -.47, p < .001$), which was significant. Predicting the path between efficacy assessments and direct talk, hypothesis four was supported ($\beta = .56, p < .001$). Overall, the model explained 13% of the variance in anxiety, less than 1% in outcome expectancies, 22% in efficacy assessments, and 32% of willingness to engage in direct talk.
Because outcome expectancies were not significant, they were removed and the structural model was run a second time. After removing outcome expectancies, the model fit was adequate ($\chi^2 [5] = 13.11, p > .0.01; \text{RMSEA} = .08, 90\% \text{ C.I.} = .03, 0.14, \text{CFI} = .97$).

**Mediation**

Hypothesis three predicts that efficacy assessments will mediate the relationship between outcome expectancies and willingness to engage in direct talk. Although previous tests of the TMIM have relied on Baron and Kenny’s (1986) causal steps approach, the present study will not be using this set of criteria to establish mediation. The causal steps approach does not directly estimate the indirect effect. Moreover, the
approach requires multiple hypothesis tests, giving the approach the lowest potential power among methods for testing intervening variable effects (Hayes, in press). Rather, this study will use PROCESS (Hayes, in press). PROCESS allows for the calculation of “path analysis-based moderation and mediation” in addition to the combination of mediation and moderation as a conditional process model. In turn, PROCESS estimates the coefficients of the direct and indirect effects using OLS regression models and allows for bootstrapping, which generates a sampling distribution for the indirect effect. In turn, bias-corrected 95% confidence intervals (CIs) can be obtained (Preacher & Hayes, 2008).

For hypothesis three, the indirect effect is of particular interest and is quantified as the product of the direct effect of outcome expectancies on efficacy assessments and the direct effect of efficacy assessments on intentions to engage in interpersonal discussion about sexual assault while controlling for outcome expectancies. The direct effect of outcome expectancies on efficacy is not statistically significant ($b = .02, t = .24, p > .05$). The direct effect of efficacy assessments, while controlling for outcome expectancies, on intentions to engage about interpersonal discussion is then estimated and is found to be statistically significant ($b = .22, t = 3.53, p < .001$). Concurrently, the product of these two paths is then the indirect effect ($b = .001, 95\% \text{ CI} = -.004, .02$), which is not statistically different from zero and indicates that efficacy assessments do not mediate the relationship between outcome expectancies and direct talk. Therefore, hypothesis three was not supported.

**Research Question**
To evaluate the potential place of threat in the TMIM, the path between efficacy assessments and direct talk was held constant, so that threat could be entered into the model. In turn, figures depicting the model will not include the path between efficacy assessments and direct talk. Unfortunately, it is still not possible to test the reciprocal relationship between anxiety and threat, so the models examined altered the sequential order of anxiety and threat.

The first model featured perceived threat and the uncertainty discrepancy predicting anxiety and anxiety then predicting outcome expectancies and efficacy assessments. See Figure 3. The model did not fit the data well ($\chi^2 [8] = 33.62, p < .001; \text{RMSEA} = .11, 90\% \text{C.I.} = .07, 0.15, \text{CFI} = .87$). Overall, the model explained less than 1% of the variance in perceived threat, 14.6% in anxiety, less than 1% in outcome expectancies, and 20% in efficacy assessments.
The second model featured uncertainty discrepancy and perceived threat predicting anxiety and perceived threat predicting outcome expectancies and efficacy assessments. See Figure 4. Again, the model did not fit the data well ($\chi^2[8] = 71.78$, $p < .001$; RMSEA = .18, 90% C.I. = .14, .22, CFI = .67). The model explained less than 2% of the variance in perceived threat, 13.2% in anxiety, less than 1% in outcome expectancies, and less than 1% in efficacy assessments. Though neither model satisfied the criteria fit, the performance of the first model indicates that perceived threat may be a useful construct to consider when testing the TMIM.
Figure 4. TMIM empirical model with threat predicting outcome expectancies and efficacy assessments. All parameter estimates are standardized.

Note. *p < .05, **p < .001
Chapter 5: Discussion

Sexual assault continues to be an important public health concern, especially for college-aged women. The present study sought to begin investigating the factors that may influence an individual’s willingness to discuss sexual assault. Additionally, the study sought to test the predictive power of the TMIM and whether perceptions of threat fit in the model. The above results contribute to the literature on the TMIM by examining the role of threat in the theoretical framework and the performance of outcome expectancies and efficacy assessments in the context of sexual assault.

Perceived Threat in the TMIM

Overall, threat performed rather poorly within the framework of the TMIM; however, this likely resulted because of the difficulty in measuring perceptions of threat. Within the context of sexual assault, measuring perceived threat is difficult because there is both a ceiling and floor effect. Participants agree that sexual assault is quite severe ($M = 3.86, SD = .74$) yet very few perceive themselves as susceptible to sexual assault ($M = 2.52, SD = .79$), a finding noted in previous research (Humphrey & White, 1991; Morrison, 2005). Prior research has tried to circumvent the difficulty by using a “gruesome” scale. In a study focusing on HIV/AIDS prevention, Witte (1994) used the gruesome scale and had participants rank order diseases in terms of perceived severity and pain; however, the gruesome scale also had low reliability, further demonstrating the
challenge of measuring perceptions of threat. Additionally, because the perceived threat items focused specifically on sexual assault rather than on the discussion of sexual assault, the incongruity between the measures may have contributed to perceived threat’s poor performance.

Despite poor results in the present study, perceived threat may still be an important concept to consider within the framework of the TMIM. In regards to physical threat, Ruiter, Abraham, and Kok (2001) indicate the perceived personal relevance or perceived importance of an issue are integral to both the cognitive and emotional impact of threat information. A key scope condition of the TMIM, perceived issue importance, has implications for how perceptions of threat are managed. In turn, the TMIM has been useful in other health contexts (Afifi et al., 2006a; Afifi et al., 2006c), so continuing to account for perceived threat may improve the application of the TMIM in new health realms.

Though not explored in the present study, future tests of the TMIM may be better served by examining the impact of relationship threat. Relationship threat focuses on circumstances which may damage or undermine a relationship (Solomon & Knobloch, 2004). Similar to physical threat, instances of relationship threat are related to perceptions of issue importance and influence how such circumstances are managed. Relationship threat shapes responses to negative circumstances and how uncertainty in relationships is ultimately managed (Solomon & Knobloch, 2004). Additionally, because relationship threat is dependent upon the existence of an interpersonal relationship, the concept would
complement the TMIM’s reliance on interpersonal communication as a means of information seeking.

**Performance of the TMIM**

As with prior tests of the TMIM, this study produced mixed results concerning the predictive power of the model. Overall, all paths of the model reflected the predicted directions of the model and many of these paths were significant; however, overall model fit was generally inadequate as the indices of fit were too large (Browne & Cudeck, 1993; Hu & Bentler, 1999). Notably, outcome expectancies did not perform well and its subsequent removal from the model measured for the hypothesis testing significantly improved the fit of the structural model.

**Outcome expectancies.** Across tests of the TMIM, outcome expectancies perform well (W.A. Afifi et al., 2004; W.A. Afifi et al., 2006c; W.A. Afifi & T.D. Afifi, 2009); however, the present study and W.A. Afifi et al.’s (2006a) study focused on STIs each featured the poor performance of outcome expectancies. Certainly, the contexts of these two studies differ greatly, and the potential outcomes of discussion about each respective context would also differ; however, both STIs and sexual assault are related to sexual health and the Afifi et al. (2006a) study provides a reasonable point of comparison for the present study. In turn, a closer examination of outcome expectancies is then warranted.

Unlike the STI study in which participants had extremely positive outcome expectancies, participants in this study averaged 3.69 ($SD = .57$) on a five-point scale, indicating that participants had slightly positive outcome expectancies related to
discussing their friend’s thoughts and feelings about sexual assault. This difference, and the subsequent poor performance of outcome expectancies, may have resulted because it was not specified in the survey whether the target had been assaulted. In turn, individuals may have more positive outcome expectancies if they assumed that the target had not been assaulted or simply perceived conversations as preventative; however, if the participant assumed that target had been assaulted, there is the possibility that they had less positive or even negative outcome expectancies in regards to discussing sexual assault.

W.A. Afifi et al. (2006a) also noted that issues related to sexual health are stigmatized; thus, these perceptions may have inhibited the performance of outcome expectancies. If potential conversations were seen as preventative, there is less risk in engaging in information seeking or direct conversations about sexual assault. Conversely, assuming that the target had been assaulted, information seeking or direct conversation may be less likely to occur because of the consequences for a relationship when sexual health is considered (Abel & Fitzgerald, 2006; Coleman & Ingham, 1999). Baxter and Wilmot (1985) also found that individuals avoided the discussion of taboo topics, which were identified as topics related to negative relational communication; therefore, the variability of responses may have negatively impacted the performance of outcome expectancies. Moreover, depending on who the participant considered an important other would also impact the anticipated outcome. For instance, the willingness to engage in discussion about sexual assault may differ if the important other is a friend, a relative, or
a romantic partner and if those particular roles warrant a varying expectation or level of consideration or attention by engaging in direct talk.

**Efficacy assessments.** Both communication and target efficacy were significant within the model, finding that, as with prior research, efficacy assessments are influential in predicting information seeking (W.A. Afifi et al., 2006a; W.A. Afifi et al., 2006b; W.A. Afifi et al., 2006c; W.A. Afifi, 2009). Unfortunately, because there is limited research concerning discussions about sexual assault before and after assaults occur, it is not clear how interpersonal efficacy impacts information seeking. Results from this study support prior research, indicating that interpersonal efficacy can have a positive impact on information seeking about sexual assault (Botta & Pingree, 1997; Morrison, 2005).

Communication efficacy performed the best of the efficacy types, but had a mean of 3.2 ($SD = .71$) on a 5-point scale. Participants indicated that they knew how to have discussions about sexual assault; however, the mean was close to the midpoint, suggesting that communication efficacy merits discussion. In this particular context, communication efficacy is of a great importance because research indicates that individuals who do not have clear scripts or conversational guidelines for discussing sexual assault rely on harmful rape myths (Burnett et al., 2009; Burt, 1980; Humphrey & White, 1991). Burnett et al. (2009) found reliance on rape myths was often the result of the ambiguity in defining sexual assault and date rape. The ambiguity associated with sexual assault can have profound implications for preventing and coping with sexual assault. Ambiguity has also been identified as a key obstacle in prosecuting sexual assault cases and it plays a tremendous role in whether or not victims choose to report assault to
law enforcement (Felson & Pare, 2005; Lafree, Reskin, & Visher, 1985). Cultivating communication efficacy then has clear implications for preventing sexual assault as well as improving public media campaigns.

Although target efficacy was significant in this study, its overall role remains unclear. Target efficacy encompasses both perceptions of an individual’s knowledge and willingness to be honest; therefore, understanding target efficacy within this context requires a clearer understanding of whether or not the conversation with the target will focus on prevention or prior experience with sexual assault. The potential also exists for the individual to disclose such information to the target, so the perceptions or even preconceptions of the target warrant further investigation. Greater exploration of target efficacy’s role, particularly in understanding the connection between target efficacy and willingness to engage in direct talk, is useful. Moreover, within the context of sexual assault, this connection is of profound import because greater interpersonal interactions can have positive outcomes for victims (Botta & Pingree, 1997; Clements & Ogle, 2009).

**Practical Implications**

Beyond potential theoretical contributions, the results of this study offer important insights for the improvement of public health campaigns concerning sexual assault. The findings reinforce Bachar and Koss’s (2001) call for media campaigns to shift the focus of campaigns from the prevalence of sexual assault to prevention. In particular, the present study indicates that interpersonal discussion may be a method of preventing sexual assault. Participants indicated a willingness to engage in direct talk and that willingness, to a degree, is dependent upon personal assessment of their communication
abilities. In turn, to combat the ambiguity of sexual assault identified by Burnett and colleagues (2009), public health campaigns must offer communication scripts to guide and help individuals have conversations about sexual assault. New scripts could then counter or at the very least be juxtaposed to commonly held rape myths and prevention efforts can then be bolstered with new communication scripts about sexual assault.

Additionally, new scripts can expand how individuals understand sexual assault. Although encouraging men and women to enroll in self-defense classes offers benefits (Heyden et al., 1999) including the ability to prevent sexual assault, only offering physical defense as the primary means of prevention places the responsibility of preventing sexual assault on potential victims. Moreover, most women who have been assaulted know their attacker (RAINN, 2007) and would be less likely to respond physically (Hickman & Muehlenhand, 1997). Though self-defense may cultivate the confidence to fight back, an emphasis on physical defense fails to expand what behaviors may be identified as sexual assault.

A potential means of creating these communication scripts is through the use of entertainment-education. Entertainment-education uses the combination of educational messages within popular media entertainment and has been used to explore ovarian cancer, HIV prevention, condom use, domestic violence, and rape (Sharf & Freimuth, 1993; Singhal & Rogers, 2001). Generally, research has indicated that embedding pro-social messages in entertainment television can influence individuals’ awareness and attitudes (Moyer-Guse, 2008). Moreover, Hether and Murphy (2010) found that rape and sexual assault are among the top ten health issues typically portrayed on television, so it
is clear that the media has influence on how sexual assault is understood. In turn, entertainment-education may then be a means of using media to help model interpersonal discussions concerning sexual assault.

**Limitations and Future Research**

Although the results of this study offer useful insights about intentions to discuss sexual assault as well as an additional test of the TMIM, several limitations exist. First, the study focused on undergraduate students. Though this age group is at greater risk for assault, the sample and the generalizations which can be made are limited. Second, the present study is based on a cross-sectional survey. Additionally, results based on structural equation modeling should be evaluated cautiously as there is potential for relationships to be reciprocal. Third, future studies could focus participants on a particular time point (e.g., before or after an assault), so that the potential conversations are either focused on prevention or coping after an assault as this may clarify results.

Fourth, the present study was not able to use coping efficacy in analyses. Similar to Afifi et al.’s (2006a) STI study, coping efficacy performed the poorest of the three efficacy types and due to the poor reliability of the scale, the concept was not included in analyses. Further review of the items used to measure coping efficacy indicated that the poor reliability for coping efficacy may be related to methodological choices. Though the present study adapted measures from a prior TMIM study, there is the potential that changing the items to match discussions of sexual assault diminished the reliability of coping efficacy. Specifically, when coping efficacy measures were used in prior studies (W.A. Afifi et al., 2006a; W.A. Afifi et al., 2006c) the coping efficacy measure
referenced specific pieces of information (e.g., I have chosen to be an organ donor, I have an STI). Conversely, items used in this study focused on choosing to engage in discussion with an important other rather than discussing a particular piece of information about sexual assault. In turn, participants may have been uncertain about the nature or type of information being referenced in the items. Also, outcome expectancies performed poorly, making it difficult to assess the predictive power of the TMIM for this context.

Finally, future research using the TMIM in stigmatized contexts should account for social distance (Arkar & Eker, 1992; Sari, Arkar, & Alkin, 2005). Corrigan, Edwards, Green, Diwan, and Penn (2001) refer to social distance as discriminant behavior or the likelihood that an individual would avoid those they associated with a particular behavior or condition. When testing the TMIM, social distance would refer to the participant’s perception of an individual associated with the behavior; in the context of sexual assault, participants would be considering victims of sexual assault. Measurements of social distance then act as a measure of perceived stigma (Arkar & Eker, 1992; Caputo & Rouner, 2011; Sari, Arkar, & Alkin, 2005). In turn, inclusion of social distance would likely improve the predictive power of the TMIM in such contexts as it could account for perceptions of stigma and their subsequent impacts on willingness to engage in direct talk.

In short, the results of the present study offer a useful test of the TMIM as well as an examination of factors that may influence discussions of sexual assault. Future research could explore the potential inclusion of relational threat within the TMIM framework. Overall, though, the presented results have implications for public health.
Notably, the results indicate that media campaigns can expand prevention efforts to more than women taking self-defense classes as interpersonal discussion can be a means of preventing sexual assault. Such conversations can be a means of clarifying an understanding of what defines sexual assault, and these discussions could help to challenge harmful rape myths. In turn, men and women can work together to prevent sexual assault.
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