MASCULINE IDEOLOGY AND COLLEGE MEN'S REACTIONS TO A SEXUAL ASSAULT PREVENTION PROGRAM

A Dissertation

by

KELLY ALEXANDRA CAVER

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2012

Major Subject: Counseling Psychology

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Approved by:

Chair of Committee,	Timothy Elliott
Committee Members,	Lizette Ojeda
	William Rae
	Rebecca Schlegel
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ABSTRACT

Masculine Ideology and College Men's Reactions to a
Sexual Assault Prevention Program. (August 2012)
Kelly Alexandra Caver, B.S., Texas Christian University;
M.S., Texas A&M University
Chair of Advisory Committee: Dr. Timothy Elliott

Sexual assault in the United States continues to be a major societal problem which often results in serious long-term consequences for the survivors, with perpetrators most commonly being men. Sexual assault prevention programs for college men often lack theories to guide the research and demonstrate mixed results. Previous research has demonstrated that more traditional male gender role identity is linked to sexual assault supportive attitudes and behaviors, suggesting that masculine ideology could be a contributing factor to college men's reactions to a sexual assault prevention program. The purpose of this study was to test a model of how male gender role identity constructs influence college men's' reactions to a sexual assault prevention program through the Elaboration Likelihood Model. Participants were 97 college men, ages 18 to 22. They completed measures of adherence to masculine ideologies, then participated in an hour long sexual assault prevention program focused on bystander prevention, and finally completed measures of central route processing and outcome variables.

Structural equation modeling was used to test a model of how masculine ideologies and central route processing contributed to outcome results. These results indicated that men who adhered to more traditional masculine ideologies were less likely to engage in central route processing, a thoughtful processing of the information provided in the prevention program. Additionally, less adherence to traditional masculinity predicted more behavioral intentions to change as a result of the program and less acceptance of rape myths. More engagement in central route processing also predicted more positive outcomes such as behavioral intentions to change and less rape myth acceptance. Results from hierarchical linear regression analysis indicated that central route processing was more influential on the outcome variables than masculine ideology. Implications for this research include support of sexual assault prevention programs based on the Elaboration Likelihood Model as being potentially effective regardless of the men's existing masculine ideologies.

DEDICATION

To the memory of my grandmothers who left a legacy of compassion and strength.

ACKNOWLEDGEMENTS

It's amazing to realize that I'm finally at this point in my academic and professional journey as a counseling psychologist. I thank God for providing me with all that I've needed to complete this process, including blessing me with many individuals in my life who have shared this journey with me.

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NOMENCLATURE

ELM Elaboration Likelihood Model

GRC Gender Role Conflict

SEM Structural Equation Modeling

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1. INTRODUCTION

The prevalence of sexual assault among US college women remains high, as 20%-25% of college women experienced attempted or completed rape during college (Fisher, Cullen, & Turner, 2000). These sexual assaults often result in serious long-term consequences for the survivor. Survivors often experience long-term health problems and negative emotional impact and engage in negative health behaviors following their assaults (Black, et al., 2011; World Health Organization, 2002). Sexual assault prevention programs on college campuses often focus on educating women about how to prevent sexual assaults, but increasingly more programs offer interventions directed at potential perpetrators – college men.

Research on risk factors of perpetrating sexual violence include being male and being exposed to social norms that support sexual violence (World Health Organization, 2002). Sexual assault prevention programs for men suggest moderate reductions in rape myth belief and other rape-supportive attitudes, but often do not measure or demonstrate positive behavioral change nor demonstrate what appraisal processes contribute to this attitude change (Morrison, Hardison, Matthew, & O'Neil, 2004).

These prevention programs for men demonstrate mixed results and often lack a theoretical framework guiding the research (Morrison, et al., 2004). Most of the intervention models are psychoeducational, though some researchers have used the

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This dissertation follows the style of *Psychology of Men & Masculinity*.

Elaboration Likelihood Model (ELM) for their program research. The ELM is an attitude change model that demonstrates that when individuals change their attitudes as a result of engaging in central route processing, a thoughtful evaluation of material presented, they experience greater attitude and behavior changes and demonstrate greater resistance toward counter-arguments. Central route processing occurs when participants perceive information presented as personally relevant, and then they engage in more thoughts about the message they received and have more positive thoughts towards the message. Central route processing correlated with greater attitude and behavior change following ELM-based sexual assault prevention programs (Foubert & McEwen, 1998; Gilbert, Heesacker, & Gannon, 1991). Studying the ELM has revealed gender differences among participants' cognitive processes as women in a sexual assault prevention program used more central-route processing compared to men (Heppner, Humphrey, Hillenbrand-Gunn, & DeBord, 1995).

Several masculine norms such as the acceptance of violence, desire for power over women, and pressure to have many sexual partners support sexual violence and exposure to these norms is a risk factor for committing a sexual assault. However, men differ in the degree to which they subscribe to masculine gender role stereotypes and beliefs. In one study, men's beliefs and expectations about what men should and should not do (masculine norms) were the most powerful and consistent predictor of their sexual violence supporting beliefs and behaviors (Good, Heppner, Hillenbrand-Gunn, & Wang, 1995). Sexually aggressive males evidenced significantly higher levels of "hostile masculinity" (Malamuth, Sockloskie, Koss, & Tanaka, 1991; Malamuth &

Thornhill, 1994), homophobia (Lisak, Hopper, & Song, 1996), and hypermasculinity (Mosher & Anderson, 1986). Male gender role conflict has been significantly correlated with sexually aggressive behaviors and likelihood of forcing sex, hostility toward women, and rape myth acceptance (Rando, Rogers, & Brittan-Powell, 1998; Serna, 2004). Masculine norms are societal expectations for what constitutes masculinity in one's public or private life and conformity to masculine norms is the degree to which individual's attitudes, behaviors, and cognitions conform to messages of masculine norms (Mahalik et al., 2003). Gender Role Conflict is another consequence of masculine norms which occurs when rigid or restrictive male gender roles have negative consequences that result in restriction or violation of others or self (O'Neil, Helm, Gable, David, & Wrightsman, 1986).

The purpose of this study is to examine how differences in masculinity predict college men's appraisal processes during a sexual assault prevention program and how these thought processes contribute to behavioral change.

2. LITERATURE REVIEW

This literature review will begin with a description of sexual assault, its effects on victims, and characteristics of perpetrators. Second, research of sexual assault prevention with college men will be summarized. Third, the Elaboration Likelihood Model of attitude change and its implications for sexual assault prevention will be explained. The next section will review aspects of male gender role identity and their relationships to sexual violence. Finally, this review will conclude with an explanation of the rational of the study and its hypotheses.

Sexual Assault

Sexual assault is "any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including but not limited to home and work" (World Health Organization, 2002, p. 149). One form of sexual assault is rape, "physically forced or otherwise coerced penetration – even if slight – of the vulva or anus, using a penis, other body parts or an object" (World Health Organization, 2002, p. 149). The attempt of such acts of violence is considered attempted rape. In the United States, 18.3% of women have experienced rape or attempted rape in their lifetimes and 44.6% of women have experienced other forms of sexual violence (Black, et al., 2011). US college women are a particularly vulnerable population as approximately 20-25% of US college women experience attempted to completed rape during college (Fisher, et al., 2000). While adult men can also be victims of sexual assault, the majority of sexual assault survivors

are women. Sexual assault is an act of violence that can result in severe physical and mental health consequences. Survivors of sexual assault can experience a negative emotional impact, resulting in feelings of anxiety, anger, and fear (World Health Organization, 2002). Survivors are at an increased risk of experiencing serious long-term health problems and psychological disorders, including chronic pain, headaches, stomach problems, difficulty sleeping, sexually transmitted diseases, eating disorders, and depression (Black, et al., 2011; World Health Organization, 2002). Women who have experienced rape, stalking, or intimate partner violence also report diabetes and asthma more than women who have not experienced those types of violence (Black, et al., 2011). Women who have been sexually assaulted are more likely to attempt or complete suicide. Survivors are more likely to engage in negative health behaviors, including smoking, alcohol abuse, drug use, and risky sexual activity. Sexual assault survivors often find their interpersonal relationships damaged as they can experience difficulty trusting others after an assault (World Health Organization, 2002).

The majority of sexual assault perpetrators are men. Men who have attitudes and beliefs that are supportive of sexual violence, hostility toward women, and preference for impersonal sex are at increased risk of committing rape (World Health Organization, 2002). Exposure to societal norms that support sexual violence increase the likelihood that men will have attitudes supportive of sexual violence and will commit rape. These societal norms may be learned through association with sexually aggressive peers, or family members and communities that support such attitudes.

Sexual Assault Prevention Programs for College Men

Due to the observation of attitudes increasing men's risk of committing an act of sexual violence, sexual assault prevention programs with men have typically focused on attitude change as the main goal to decrease the likelihood that men who attend the programs will commit sexual assault. These programs use a variety of interventions with the goal of dispelling rape supportive attitudes by increasing participant's knowledge about facts of sexual assault, increasing empathy for survivors, and creating a sense of responsibility to intervene as bystanders to prevent sexual assault. Table 1 shows information from 29 research studies on sexual assault prevention with college men that were included in Morrison et al.'s review (2004).

According to this review, research on sexual assault prevention programs with college men demonstrate mixed results of effectiveness. Overall, sexual assault prevention programs for men suggest moderate reductions in rape-supportive attitudes, but often do not demonstrate positive behavioral change nor demonstrate the cognitive processes that contribute to this attitude change (Morrison, et al., 2004). Most studies look at immediate changes, but those that examine long-term change through follow up research demonstrate mixed results, with some programs resulting in more enduring attitude and behavioral changes and others demonstrating rebound to pre-program levels (Morrison, et al., 2004).

Table 1. Sexual Assault Prevention Research with College Aged Men

Study	Population	Study Design	Theory/Model	Dependent Variables	Overall Results	Specific Results
Anderson et al. 1998	College men and women	Randomized comparison	Prior research linking attitudes to likelihood of rape	Rape Myth Acceptance Scale (RMAS); Attitudes Toward Rape Scale Revised (ATR-R)	Mixed	Rape-supportive attitudes decreased, but no effects at follow-up
Black, Weisz, Coats, & Patterson, 2000	College and community men and women	Nonequivalent comparison	Peer educational and theatrical	Revised Rape Myth Acceptance Scale	Positive	Mean scores changed significantly from pre to post-test
Earle, 1996	College men	Nonequivalent comparison	Not reported	Attitudes Toward Rape Scale (ATR); Attitudes Towards Women Scale Simplified (ATW-S)	Mixed	2 of the 3 treatments groups demonstrated significant differences to comparison group scores on subscales of the DVS
Dallager & Rosen, 1993	College men and women	Nonequivalent comparison	Prior research linking attitudes to likelihood of rape	Rape Myth Acceptance (RMAS) and Acceptance of Interpersonal Violence (AIV)	Mixed	Significant differences between intervention and comparison group on RMAS, but not on AIV
Fonow, Richardson, & Wemmerus, 1992	College men and women	Randomized comparison	Prior research on attitudes	Rape-myth scale (RMAS), adversarial sexual belief scale (ASB) and gender-role conservatism scale; rape-blame scale	Mixed	Decreased rape-myth scores

Table 1 continued

Study	Population	Study Design	Theory/Model	Dependent Variables	Overall Results	Specific Results
Forst, Lightfoot, & Burrichter, 1996	College men and women	Experimental	Modifying attitudes can result in modifying behaviors	Adversarial Sexual Beliefs (ASB) and Rape Myth Acceptance (RMAS)	Mixed	Decreased in RMAS scores, but not ASB, after the intervention when a victim of forced sex or a perpetrator was known by participant
Foubert, 2000	College men	Experimental	Not reported	Rape Myth Acceptance Scale (RMAS); Behavioral Intent to Rape; Sexual Experiences Survey (SES)	Mixed	Decreased RMAS and likelihood of raping at a 7-month follow-up; but no effects on perpetration
Foubert & Marriott, 1997	College men	Nonequivalent comparison	Not reported	Rape Myth Acceptance Scale (RMAS)	Mixed	Decreased RMAS, but rose moderately at 2-month follow-up; 59% of participants reported that they were less likely to do something sexual with a woman that she did not want.
Foubert & McEwen, 1998	College men	Randomized comparison	Elaboration Likelihood Model	Rape Myth Acceptance Scale (RMAS); Behavioral Intent to Rape; State Measure of Central route processing	Mixed	Decreased RMAS and Behavioral Intent to Rape, Lower scores were associated with higher Central route processing

Table 1 continued

Study	Population	Study Design	Theory/Model	Dependent Variables	Overall Results	Specific Results
Frazier, Valtinson, & Candell, 1994	College men and women	Nonequivalent comparison	Behavioral modeling	Attitudes toward sexual behavior (Vignette, then 15 items); Gender role beliefs; Attitudes toward dating behavior	Mixed	Significant differences between intervention and comparison group on all 3 measures, but changes no longer significant at 1-month follow-up.
Gidycz, et al., 2001	College men and women	Nonequivalent comparison	Not reported but based on social learning model	Rape Myth Acceptance Scale (RMAS); Rape Empathy Scale (RES); Attitudes Toward Women Scale (ATWS); Sexual Experiences Survey (SES)	Mixed	Decreased RMAS for intervention group at follow-up, but no significant differences on SES

Table 1 continued

Study	Population	Study Design	Theory/Model	Dependent Variables	Overall Results	Specific Results
Gilbert, Heesacker, & Gannon, 1991	College men only	Experimental	Elaboration Likelihood Model	Acceptance of Interpersonal Violence, Adversarial Sexual Beliefs (ASB), Rape Myth Acceptance Scale (RMAS), Sex Role Stereotyping; follow-up measuring willingness to listen to the appeal to volunteer, supportive statements of the project, and the number of hours volunteered; Need for Cognition Scale; Questions measuring ability to think about the topic of the persuasive communication and the favorability of subjects' thoughts; Sexual Experience Survey (SES); The Likelihood of Rape or Force Index	Mixed	Improved attitudes improved for treatment group compared to control group; at follow-up treatment subjects were more willing to listen to appeal and made more favorable comments but no difference in group willingness to volunteer more time for women's safety project.
Harrison, Downes, & Williams, 1991	College men and women	Nonequivalent comparison	Prior research linking attitudes to rape likelihood	Questionnaire developed for this study based on Attitudes toward Date Rape (ATR)	Mixed	Men's improvement from pretest to post-test on the victim-blaming and denial scale of the revised ATR

Table 1 continued

Study	Population	Study Design	Theory/Model	Dependent Variables	Overall Results	Specific Results
Heppner, Good, et al., 1995	College men and women	Pre-test/post-test	Elaboration Likelihood Model	Rape Myth Acceptance Scale (RMAS); Adversarial Sexual Beliefs Scale (ASB); Speaker Rating Form (SRF) - a slightly modified version of the Counselor Rating Form (CRF); Thought Listing (TL); Assessment of Central Route Change Mechanisms (ACRCM); Guided Inquiry (GI)	Mixed	Decreased RMAS at post-test but rebound at follow-up, Decreased ASB at follow-up, on the ACRCM, women rated themselves as more motivated to hear message and found it more personally relevant; on TL, women used more central route processing
Heppner, Humphrey, et.al., 1995	College men and women	Randomized comparison	Elaboration Likelihood Model	Rape Myth Acceptance Scale (RMAS); The Comprehension of Consent/Coercion Measure (CCC); ELM Questionnaire (ELMQ); Thought Listing (TL); The Socially Desirable Response Set-5 (SDRS-5); Speaker Rating Form; Six behavioral indicators were used (2 during telephone call; 4 at 5-month follow-up)	Mixed	Decreased RMAS for men in didactic-video group compared to control group at follow-up; men in interactive drama scored highest on CCC; men and women in interactive drama reported more central route processing; participants in interactive drama were more likely to volunteer for a rape project at follow-up

Table 1 continued

Study	Population	Study Design	Theory/Model	Dependent Variables	Overall Results	Specific Results
Heppner, et al. 1999	College men, racially diverse	Randomized comparison	Elaboration Likelihood Model; Eagly and Chaiken's model of attitude change	Rape Myth Acceptance Scale (RMAS); The Scale for the Identification of Acquaintance Rape Attitude (SIARA); Sexual Violence Subscale of the Severity of Violence Against Women Scale (SVAWS-SV); Sexual Experiences Survey (SES); Behavioral Indices of Change (BIC); Elaboration Likelihood Model Questionnaire (ELMQ)	Mixed	All participants showed low-high-low pattern across three time periods and participants assigned to either treatment were more likely to be in improving cluster; both experimental groups showed decrease in rape supportive attitudes; black participants in culturally relevant experimental group scored significantly higher on Cognitive Involvement scale of ELMQ.
Lanier, Elliot, Martin, & Kapadia, 1998	College men and women	Randomized comparison	Social Learning Theory	College Date Rape Attitudes Survey (CDRAS)	Mixed	Improved CDRAS compared to control group

Table 1 continued

Study	Population	Study Design	Theory/Model	Dependent Variables	Overall Results	Specific Results
Lenihan, Rawlins, Eberly, Buckley, & Masters, 1992	College men and women	Randomized comparison	Not reported	Rape Supportive Attitudes Survey (RSAS) with 4 scales: Adversarial Sexual Beliefs (ASB), The Sexual Conservatism (SC), Acceptance of Interpersonal Violence (AIV), and Rape Myth Acceptance (RMAS)	Mixed	Men from all groups did not report significant improvement
Lenihan & Rawlins, 1994	College men and women; including fraternity members	Nonequivalent comparison	Not reported	Rape Supportive Attitudes Survey (RSAS) with 4 scales: Adversarial Sexual Beliefs (ASB), The Sexual Conservatism (SC), Acceptance of Interpersonal Violence (AIV), and Rape Myth Acceptance (RMAS)	Mixed	Decreased ASB scores for men, but not as "dramatically" lowered as the women's scores.

Table 1 continued

Study	Population	Study Design	Theory/Model	Dependent Variables	Overall Results	Specific Results
Linz, Fuson, & Donnerstein, 1990	College men only	Experimental	Dissonance Theory and Attribution Theory	Rape Myth Acceptance Scale (RMAS) and Acceptance of Interpersonal Violence (AIV) Scale; Sexual Experiences Survey (SES); Multiple Affect Adjective Check List (MAACL); Mass Media Consumption Questionnaire; Film Evaluation Questionnaire; Critical Viewing Items; Rape Trial Evaluation	Mixed	Decreased RMAS scores but not significant; increased ratings of evaluating a perpetrator as being more responsible and victims as less responsible
Lonsway et al. 1998	College men and women	Nonequivalent comparison	Feminist Framework	Illinois Rape Myth Acceptance Scale (IRMA); Adversarial Heterosexual Beliefs Scale (AHBS); Attitudes Toward Feminism Scale; Qualitative assessment	Mixed	Decreased IRMA scores post-test and at 2 year follow-up; Decreased AHBS scores post-test but not maintained at 2-year follow-up; men demonstrated improved behavioral intentions but there was evidence that men were not responding accurately

Table 1 continued

Study	Population	Study Design	Theory/Model	Dependent Variables	Overall Results	Specific Results
Lonsway & Kothari, 2000	College men and women	Nonequivalent comparison	Not reported	Questions of knowledge regarding sexual assault; Illinois Rape Myth Acceptance Scale-Short Form (IRMA-SF); Case Judgments; Victim Evaluation Questionnaire Revised; Telephone Interview of behavioral intentions	Mixed	Decreased IRMA-SF scores for intervention group; significant group differences on 1 of the 2 behavior intention questions
Nelson & Torgler, 1990	College men and women	Nonequivalent comparison	Not reported	Attitude Toward Women Scale (AWS) - short version; Forcible Date Rape Scale (SDRS)	Positive	All three groups' scores were lower on post-test, strategy used did not demonstrate significant change
Pinzone-Glover, Gidycz, & Jacobs, 1998	College men and women	Randomized comparison	Not reported	Rape Myth Acceptance Scale (RMAS); Rape Empathy Scale (RES); Attitudes Toward Women Scale (AWS) short form; Acquaintance-Rape Scenarios	Mixed	Improvement in RES and AWS and recognizing rape in scenarios, but no significant RMAS improvement.

Table 1 continued

Study	Population	Study Design	Theory/Model	Dependent Variables	Overall Results	Specific Results
Rosenthal, Heesacker, & Neimeyer, 1995	College men and women	Nonequivalent comparison	Elaboration Likelihood Model	Sex Role Stereotyping Scale (SRS), Rape Myth Acceptance (RMAS), Adversarial Sexual Beliefs (ASB), and Acceptance of Interpersonal Violence (AIV); Date Rape Vignette; Phone Appeal	Mixed	Treatment group showed differences from control group participants across the measures of rape-relevant attitudes; Treatment group was significantly more likely to volunteer than the control group
Schewe & O'Donohue, 1993	College men only, including "high-risk" men	Experimental	Finkelhor (1984) theory on how sexual offenses occur	Likelihood of Sexually Abusing (LSA); Likelihood of Raping Scale; Rape Empathy Scale (RES); Acceptance of Interpersonal Violence (AIV); Adversarial Sexual Beliefs (ASB); 24 item Mood Scale; Items assessing perceived credibility and potential helpfulness; Conformity measure; Self-reported differential arousal to forced versus consenting sex	Mixed	Empathy group scored significantly better than the facts and no-treatment group on the LSA, Likelihood of Raping, and Likelihood of Sexually Harassing scales, the AIV scale, and the ASB scale; however, on some of the DVs, the high-risk no treatment group changed as much as the other interventions

Table 1 continued

Study	Population	Study Design	Theory/Model	Dependent Variables	Overall Results	Specific Results
Schewe & O'Donohue, 1996	College men only, including "high-risk" men	Experimental	Bandura's theory of aggressive behaviors	Acceptance of Interpersonal Violence (AIV), Adversarial Sexual Beliefs (ASB), and Rape Myth Acceptance Scale (RMAS): Attraction to Sexual Aggression Scale (ASA); Marlowe-Crowne Social Desirability Scale-Short Form (MC); Affective Adjective Checklist; Rape Conformity Assessment (RCA); Behavioral exercise at follow-up	Mixed	Improved ASB, RMAS, and AIV scores for the RSC group; Improved AIV scores for the VE/OE group; Subjects in the VE/OE condition used significantly more empathy-based and consequence-based arguments on RCA; Subjects in the RSC condition used more rape-myth information and communication-based arguments
Schultz, Scherman, & Marshall, 2000	College men and women	Experimental	Prior research linking attitudes to likelihood of rape	The College Date Rape Attitude and Behavior Survey - Modified (CDRABS-M); Rape Myth Acceptance Scale (RMAS)	Mixed	Improved CDRABS-M Attitude scores for the treatment group; no significant differences on RMAS or CDRABS-M Behavioral Intent scale.

Table 1 continued

Study	Population	Study Design	Theory/Model	Dependent Variables	Overall Results	Specific Results
Schwartz & Wilson, 1993	College men and women	Nonequivalent comparison	Not reported	10-item test of rape myths; Questions about the number of friends that told them that they had been sexually assaulted during the experimental term and "rate your level of personal concern about sexual assault."	Positive	Significant improvement on test of rape myths; men in treatment group expressed significantly more concern about sexual assault

Most sexual assault prevention research measures only attitude change to determine the effectiveness of an intervention. Less than a third of the studies reviewed (9 of 29) in Table 1 measure reported behaviors or behavioral intentions as dependent variables. Three of the studies used the Sexual Experiences Survey (SES) to measure perpetration of sexual assault, either prior to or during the intervention or at a follow-up time period (Koss & Gidycz, 1985). Two of the studies using the SES did not find significant effect as a result of the intervention (Foubert & McEwen, 1998; Gidycz et al., 2001), and a third study found low internal consistency of the SES (Heppner, Neville, Smith, Jr, & Gershuny, 1999), suggesting that this instrument may not be useful in sexual assault prevention research. Some studies utilized a form of the Behavior Indices of Change (BIC) questionnaire asking each participant if he would engage in forced sex if he believed that he would not be caught or punished and found a significant decrease related to the intervention (Foubert & McEwen, 1998; Heppner, et al., 1999; Malamuth, 1981). Other studies telephoned participants as a follow-up and asked them about their willingness to volunteer time or give money to support a rape prevention program, which demonstrated mixed results (Gilbert, et al., 1991; Heppner, Humphrey, et al., 1995; Lonsway & Kothari, 2000). Since the purpose of sexual assault prevention programs is to eliminate sexual assaults from occurring, then examining behavioral changes and intentions to change is important.

As can be seen in Table 1, most research on sexual assault prevention is not based upon a solid theoretical model. Most of the researched interventions are based on a psychoeducational approach, of providing knowledge to decrease sexual assault

supportive attitudes and behaviors. The most researched attitude change model in sexual assault prevention is the Elaboration Likelihood Model (ELM) (Morrison, et al., 2004). The first sexual assault intervention study using the ELM demonstrated that measurements of motivation, ability to understand material, and favorable thoughts toward the material presented were correlated with attitude change, demonstrating that central route processing facilitates attitude change as the result of a sexual assault prevention intervention (Gilbert, et al., 1991). An additional study that expanded upon this work by assessing a larger, more diverse sample of both men and women, examining the amount of issue relevant thinking, and conducting a 2 month follow up demonstrated the ELM to be an effective model of attitude change in sexual assault prevention (Heppner, Good, et al., 1995). This study demonstrated that women engaged in more central route processing, including issue relevant thinking and fewer negative responses toward the program. An additional study used a longer ELM-based program, consisting of three 90 minute long sessions targeting cognitive, affective, and behavioral changes, and examined whether personal relevance could be increased through providing more culturally relevant information and speakers. This study again confirmed the use of the ELM in sexual assault prevention and demonstrated that blacks in the cultural-based intervention group were more likely to score higher on Cognitive Involvement Scale, suggesting that culturally relevant messages encourage more central route processing (Heppner, et al., 1999). A recent study using the ELM to develop a video-based sexual assault prevention program that incorporated bystander intervention education for an audience of white college men demonstrated that central route

processing was correlated with greater empathy toward rape survivors and less rape myth acceptance (Stephens & George, 2009).

Another ELM based sexual assault prevention program, the Men's Program, was assessed among a group of mostly white fraternity men and demonstrated that more central route processing was negatively correlated with rape myth acceptance and behavioral intention to rape (Foubert & McEwen, 1998). The Men's Program has demonstrated effectiveness in changing attitudes and behaviors toward rape among different populations of college men, including student athletes and men of color (Foubert & Cowell, 2004; Foubert & Cremedy, 2007; Foubert & Perry, 2007). Additional quantitative research demonstrated that the men who participated in this program continued to have decreased rape myth acceptance and intentions to rape 7 months later (Foubert, 2000), and qualitative research indicated that men who had participated in the Men's Program two academic years prior reported positive attitudinal and behavioral changes (Foubert, Godin, & Tatum, 2010). Recent research demonstrated that compared to a control group, the men who participated in the Men's Program reported increased willingness to help victims of sexual assault and intervene to prevent sexual violence through bystander interventions (Langhinrichsen-Rohling, & Foubert, 2011).

These studies demonstrated that the more motivated the participant is to learn about the issue and the more relevant they believe it to be, the more likely they are to change their sexual assault supportive attitudes and behaviors. Other research indicates that all-male, peer-educated, and interactive prevention programs could be more

effective for attitude change in men that co-ed or less-interactive programs (Foubert & McEwen, 1998).

Bystander Education Interventions

A recent development in the field of sexual assault prevention is an increased focus on bystander education interventions. Instead of targeting potential victims or perpetrators, bystander intervention programs have the goal to empower individuals to notice the signs of potential perpetration and intervene to prevent sexual violence. Addressing men as empowered bystanders instead of potential perpetrators could help reduce defensiveness and make the program message more relevant to men. One co-ed bystander education intervention resulted in improved knowledge of sexual assault, decreased rape myth acceptance, and increased bystander behaviors for college men 2 months after the program, with increased knowledge and attitude change persisting at a 4 month follow-up (Banyard, Moynihan, & Plante, 2007). Another prevention program that included a bystander prevention component demonstrated that college men who engaged in the program reported fewer sexually aggressive behaviors at a 4 month follow-up than those in a control group, though this difference was not maintained at a 7 month follow-up (Gidycz, Orchowski, & Berkowitz, 2011). The interACT Sexual Assault Prevention program, which trains participants in bystander prevention through an interactive theatre performance using real-life scenarios, demonstrated a significant increase in men's self-reported likelihood of engaging in bystander prevention behaviors at the posttest and 3 month follow-up, especially for men who initially reported a lower likelihood to engage in the bystander invention behaviors (Ahrens, Rich, & Ullman,

2011). College men and women who participated in the Green Dot bystander invention training, which consists of a 50 minute motivational speech and a longer, more interactive training, reported engaging in and observing more bystander behaviors than students who had not participated (Coker, et al., 2011).

Elaboration Likelihood Model

The Elaboration Likelihood Model (ELM) is an attitude change model developed by Petty and Cacioppo that theorizes that two route to attitude persuasion occur: the central route and the peripheral route (Petty, Barden, & Wheeler, 2009). Central route processing involves engaging in the careful consideration of information being presented, including generating positive and/or negative thoughts toward the persuasion. When these thoughts are new and more positive or negative than previous thoughts, attitude change is more likely to occur. Central route processing is characterized by more message relevant thoughts and is more likely to occur when the information being presented is perceived as personally relevant and the person has the ability to understand the message and to engage in a thoughtful evaluation of it.

The second route to attitude change is peripheral route processing, which occurs when persons lack the motivation or ability to engage in thoughtful consideration as characterized by central route processing. Instead, a person might look to peripheral cues as "mental shortcuts" to determine whether attitude change should occur. Such cues include the perceived "expertness" of the person presenting the persuasive argument, the number of arguments instead of their quality, and the person's own emotional state during the persuasive communication. Attitude change in the short-term

can still occur as the result of peripheral route processing. However, central route processing has been demonstrated to result in greater attitude change that persists over time, is less resistant to change, and is more predictive of behavioral change attitude change that occurs as a result of peripheral route processing.

In addition to presenting two routes to persuasion and different consequences of the routes, the ELM also describes how different variables influence the attitude change process. As stated earlier, central route processing is more likely to occur when the person is motivated and able to think about the message. Variables can affect a person's motivation and ability to thoughtfully consider the message. They may also affect whether a person's thoughts are positive or negative and how much that person relies on the thoughts he or she generated. Variables can also serve as simple cues by the peripheral route process.

The ELM in Public Health Research

The ELM has also been demonstrated to be effective in developing health communications that result in attitude change and behavior change in a wide variety of areas including condom use, exercise, substance abuse, smoking cessation, and road safety (Petty, et al., 2009). This research demonstrates that "tailoring" messages to a particular person or "targeting" messages to a particular group by adjusting the message to characteristics unique to the individual or group can increase the effectiveness of the persuasion to change attitudes and behaviors. For example, if the person holds particular beliefs about why he or she should not change his or her behavior, then arguments that address those beliefs could be more effective in creating attitude and behavioral change.

Theoretically, tailoring and targeting could include any personal characteristic. When addressing a particular group (for example, male college students or fraternity members), then framing the message as for this particular group can be an effective form of matching. According to the ELM, tailoring and targeting are likely effective because they provide a link between the message and the self, increasing the relevance of the argument. Research on matching messages with personal characteristics also suggests that matching increases thinking about the persuasive message, consistent with the ELM tenet that individuals engage in more thought elaboration when a message is judged to be personally relevant.

The ELM in Sexual Assault Prevention Research

As described earlier, the ELM has been the theoretical background in sexual assault prevention research studies, demonstrating that central route processing correlated with greater attitude and behavior change following ELM-based sexual assault prevention programs (Foubert, 2000; Foubert & Cremedy, 2007; Foubert & McEwan, 1998; Gilbert, et al., 1991; Heppner, Good, et al., 1995; Heppner, et al., 1999; Langhinrichsen-Rohling & Foubert, 2011). Gender differences have emerged as women in a sexual assault prevention study listed more thoughts and more issue-relevant thoughts than men, suggesting that they used more central-route processing compared to men (Heppner, Humphrey, et al., 1995). In this study, the men were also four times more likely than women to respond negatively to the question, "What in this presentation helped you change your attitudes about rape?"

A key component of the ELM is that individuals vary in their levels of motivation to think about messages received. Given that that majority of adult victims are women, it appears logical that men may view sexual assault as a "women's issue" that is less relevant to them. However, more sexual assault prevention programs are addressed toward men, arguing that it is a "men's issue" (Foubert & McEwen, 1998; Gilbert, et al., 1991; Heppner, et al., 1999). Men differ in their receptivity to such messages, as one study of long-term change 5 months after a sexual assault prevention program demonstrated that men fell into one of three clusters - improved, deteriorated, or rebounded – without any indication of what accounted for these different responses (Heppner, et al., 1999). One category of individual differences among college men that may contribute to how men receive a message about sexual assault is masculine ideology. To date, no published study of sexual assault prevention with college men has examined the role of masculine ideology in predicting their responses to a sexual assault prevention program.

Masculine Ideology

Men's attitudes and behaviors of sexual assault have been demonstrated to be related to their masculine ideology, making this an important variable to examine in sexual assault prevention research with the ELM. Masculine ideology is the extent to which a person adheres to masculine norms. Masculine norms are society's expectations for what comprises traditional masculinity, for example, expectations that men should have power over women and should have many sexual partners (Mahalik, et al., 2003). Men who adhere closely to societal masculine norms are described as expressing

traditional masculinity or conformity to masculine norms. Adherence to masculine norms of status, toughness, and anti- femininity has been demonstrated to be predictive of sexual assault supporting attitudes of rape myth acceptance and adversarial sexual beliefs and behaviors (Good, Heppner, et al., 1995). The confluence theory of sexual assault perpetration has demonstrated that men's engagement in masculine norms of "hostile masculinity" or impersonal sex are paths that lead to sexual aggression (Malamuth, et al., 1991). Hostile masculinity refers to aggressive attitudes and behaviors. Impersonal sex is the "playboy" masculine norm, suggesting that men should have many sexual partners without becoming emotionally intimate with them. Another study used the Conformity to Masculine Norms Inventory and demonstrated that the subscales of specific norms of Power Over Women, Playboy, and Disdain for Homosexuals were strong predictors of rape myth acceptance and sexual assault behaviors (Locke & Mahalik, 2005).

These masculine norms represent rigid socialized gender role expectations which cause stress to men and others. Gender role conflict (GRC) is a psychological state in which "rigid, sexist, or restrictive gender roles result in personal restriction, devaluation, or violation of others or self" (O'Neil, 2008, p. 362). Gender role conflict may be experienced intrapersonally, from others, and toward others. GRC has been linked to four patterns of expression: Success, Power and Competition (SPC), Restrictive Emotionality (RE), Restrictive Affectionate Behavior Between Men (RABBM), and Conflict Between Work and Family Relations (CBWFR) (O'Neil, 2008) which comprise the subscales of the Gender Role Conflict Scale. SPC, RE, and RABBM significantly

correlate with reports of sexually aggressive behavior, rape myth acceptance, and hostility toward women (Rando, et al., 1998). In another study, Restrictive Emotionality (RE) predicted the increased likelihood of sexual coercion (Senn, Desmarais, Verberg, & Wood, 2000). In a laboratory setting, both higher masculine identity, measured by the CMNI, and gender role stress, measured by the GRCS, predicted greater aggression toward another person (Cohn & Zeichner, 2006).

Rationale for the Study

Given these connections between masculine ideology and sexual assault supportive attitudes and behaviors, masculine ideology is likely a factor that contributes to college men's reactions to a sexual assault prevention program. Masculine ideology is an individual difference that could affect motivation to think about the messages of sexual assault prevention, influencing how much a man engages in central route processing, which would be more likely to lead to attitude change. Men who adhere less to traditional masculine norms that are supportive of negative attitudes toward women are likely to find a sexual assault prevention program more relevant and be more willing to engage in more central route processing through thoughtful elaboration of the persuasion received. This would then influence attitudes and behaviors toward sexual assault prevention. This study is proposed to develop and test a model of how male gender role identity constructs influence college men's' reactions to a sexual assault prevention program through the Elaboration Likelihood Model. Through this model, the following hypotheses will be tested:

Hypothesis 1: Adherence to more traditional masculine norms and higher experiences of gender role conflict will predict less central route processing in reaction to the prevention program.

Hypothesis 2: Adherence to more traditional masculine norms and higher experiences of gender role conflict will predict more rape myth acceptance and fewer behavioral intentions to change.

Hypothesis 3: Less central route processing in reaction to the prevention program will predict more rape myth acceptance and fewer behavioral intentions to change.

3. METHOD

Participants

Participants were 102 undergraduate men who were currently attending Texas A&M University. Five participants (4.9%) did not complete the measures, so their data was excluded from the data analysis. Of the remaining participants (n = 97), the median age was 19 and ages ranged from 18 to 22. Ninety-seven percent of the participants were single, 1% were married, and 1% were divorced. Sixty-seven percent of participants were white, 16.5% were Latino, 8.2% were Asian or Pacific Islander, 6.1% were bi-racial or multi-racial, 1% were black, and 1% were Arab.

Variables

Independent Variables

Masculine ideology was measured as an independent variable prior to participation in the sexual assault prevention program. Two instruments were used to assess masculine ideology, the Conformity to Masculine Norms Inventory – 46 and the Gender Role Conflict Scale.

Conformity to Masculine Norms Inventory - 46 (CMNI-46) (Mahalik, et al., 2003; Parent & Moradi, 2009).

The CMNI is a 94-item instrument designed to measure "attitudes, behaviors, and cognitions reflecting both conformity to, and non-conformity to, eleven masculine normative messages (i.e., Winning, Emotional Control, Risk-Taking, Violence, Power Over Women, Dominance, Playboy, Self-Reliance, Primacy of Work, Disdain for Homosexuals, and Pursuit of Status)" (Mahalik, et al., 2003). Conforming to masculine

norms is defined as meeting societal expectations for what constitutes masculinity in one's public or private life (Mahalik, et al., 2003). In the original development of the measure, the normative sample was 752 mostly White college men, averaging 20 years of age. Internal consistency was found for the CMNI, with a coefficient alpha of .94 for the total score and subscale coefficient alphas ranging from .72 to .91. CMNI subscales Power Over Women, Risk Taking, Violence, Dominance, Playboy, and Disdain for Homosexuals were significantly related to acceptance of rape myths and engaging in sexual aggression (Locke & Mahalik, 2005).

More recently, a confirmatory factor analysis (CFA) was conducted on the CMNI with a sample of 229 university men, mean age 19.95, which resulted in a shortened version – the CMNI-46 (Parent & Moradi, 2009). The CFA revealed 9 distinct factors, removing the Dominance and Pursuit of Status factors from the original CMNI. Items were answered on a 4-point Likert type scale from *0-Strongly Disagree* to *3-Strongly Agree*. Several items were reverse scored. Higher scores on the CMNI-46 reflect more conformity to masculine normative messages.

Total scores of the CMNI-46 could potentially range from 0 to 138. In the current study, these scores ranged from 36 to 99, with a mean of 68.458, a standard deviation of 12.955, and an item mean of 1.4855 (Table 2). Internal consistency measures of coefficient alpha for the total CMNI-46 were .88 in this sample and the 9 subscales alpha's ranged from .77 to .91. The CMNI-46 was be administered to measure the participants' conformity to traditional, US masculine norms. The total CMNI-46

Table 2. Means and Standard Deviations for All Self-Report Variables Used in the SEM

Measure	Total Mean	Item Mean	SD	Minimum	Maximum	Skewness	Kurtosis
CMNI[1]	68.458	1.4855	12.955	36	99	0.056	-0.158
GRCS[2]	107.320	3.4614	22.770	46	161	-0.036	-0.040
Appraisal[3]	28.175	4.6683	2.428	18	30	-1.693	3.192
ELMQ[4]	54.165	4.5245	8.783	30	69	-0.327	-0.428
TL Fav[5]	2.364	-	0.481	1	2.72	-1.157	0.133
SAPBIC[6]	56.85	4.7451	7.960	28	70	-1.105	1.961
IRMA-SF[7]	36.64	2.1661	12.004	18	71	0.653	-0.129
BICIL[8]	1.63	-	0.940	0	4	.349	-.092

[1] Conformity to Masculine Norms Inventory - 46
[2] Gender Role Conflict Scale
[3] Overall Appraisal of Program
[4] Elaboration Likelihood Model Questionnaire
[5] Percentage of Favorable Thoughts
[6] Sexual Assault Prevention Behavioral Intentions to Change Questionnaire
[7] Illinois Rape Myth Acceptance Scale – Short Form
[8] Behavioral Intentions to Change Idea Listing

total score was analyzed in this study. The CMNI-46 and other questionnaires used in this study are located in Appendix A.

Gender Role Conflict Scale (GRCS) (O'Neil, et al., 1986).

The GRCS is a 37-item instrument designed to measure the Gender Role Conflict (GRC) construct (O'Neil, et al., 1986). Gender role conflict is a "psychological state in which socialized gender roles have negative consequences on the person or others" that occurs "when rigid, sexist, or restrictive gender roles result in personal restriction, devaluation, or violation of others or self" (O'Neil, 2008, p. 362). Gender Role Conflict is significantly related to thoughts, attitudes, and behaviors that are abusive and violent toward women (O'Neil, 2008). The GRCS is comprised of 4 factors: Success, Power, Competition (SPC), Restrictive Emotionality (RE), Restrictive Affectionate Behavior Between Men (RABBM), and Conflicts Between Work and Leisure-Family Relations (CBWFR). SPC, RE, and RABBM significantly correlate with reports of sexually aggressive behavior, rape myth acceptance, and hostility toward women (Rando, et al., 1998). For this reason, only the SPC, RE, and RABBM subscales were administered, shortening the instrument to 31-items comprised of statements that participants responded to on a 6-point Likert type scale, from *6-Strongly Agree* to *1-Strongly Disagree.* Higher scores indicate that participants are experiencing more Gender Role Conflict in those areas.

GRCS scores including these three subscales could potentially range from 31 to 186, and the scores in this study ranged from 46 to 161. The mean total score was 107.320, with a standard deviation of 22.770 and an item score mean of 3.4614 (Table

2). Internal consistency reliabilities for each of the three factors are sufficiently high, with .85 for SPC, .82 for RE, and .83 for RABBM. Internal consistency of the total GRCS score ranges from .73 to .91 across diverse, international samples. Internal consistency among samples of American college students ranged from .88 to .90 (Good, Robertson, et al., 1995). The GRCS was used to measure the participants' experience of gender role conflict. In this study, the coefficient alpha was .913 for the total items used.

Central route processing was measured with the Thought-listing Form, the Elaboration Likelihood Model Questionnaire, and the Overall Appraisal of the Program form. These measures assessed participant cognitive activity relevant to the program and its content. These measures were administered immediately following the sexual assault prevention program to the participants.

Thought-listing Form (Heppner, Humphrey, et al., 1995).

The thought-listing technique, in which an individual is asked to write down everything that he is or was thinking, can describe the stream of thoughts that he engages in. It has been used to research various clinical topics and has been used as a dependent variable to test the effectiveness of a therapeutic intervention (Cacioppo, Hippel, & Ernst, 1997). This thought-listing technique was used by previous researchers to test an ELM model of sexual assault prevention (Heppner, Good, et al., 1995). This instrument assessed central route processing by examining participant thought process. Higher percentages of relevant thoughts and lower percentages of negative thoughts indicate more central route processing. Participants received the prompt, "For the next three minutes, write down all thoughts that crossed your mind during the program."

Two trained coders were given Thought-Listing Coding Instructions (Appendix B) to code the qualitative information from the Thought-Listing Form (TL). The coders independently coded each thought on three dimensions – 1) Relevance to the program, 2) Favorable toward the program and message (only thoughts identified as relevant were coded on this dimension), and 3) Unfavorable toward the program. The correlations between the two independent sets of coding ranged from $r = .418$ ($p = .000$) for the Relevant Thoughts to $r = .531$ ($p = .000$) for Favorable thoughts. Since this was lower than the 0.80 correlation desired, the coders were provided with a revised set of Thought-Listing coding instructions (Appendix C). The coders together recoded the thoughts on which they initially disagreed and came to a consensus. These three ratings were then converted into percentages for each participant – 1) Percentage of Relevant Thoughts (number of relevant thoughts/total number of thoughts), 2) Percentage of Favorable Thoughts (number of favorable thoughts/total number of thoughts), and 3) Percentage of Unfavorable Thoughts (number of unfavorable thoughts/total number of thoughts).

Most thoughts were coded as Relevant and Favorable; very few participants (n = 4) had any thoughts coded as Unfavorable. Some Relevant thoughts were not rated as Favorable or Unfavorable (i.e. "Just the surprise that so many incidents occur"), but the majority of Relevant thoughts were also coded as Favorable. Some themes among Favorable thoughts included thoughts about previous experiences that related to sexual assault, (i.e. "Most of the presentation, I was thinking about my own actions; and hoping that a party hook-up situation that I thought was consensual didn't end up upsetting the

girl," "Related well because I have stood up for what was right before"), thoughts about future intentions to change, (i.e. "Made me begin to think about other ways I can stop sexual assault," "I was just thinking about what would I do if I were in any of those situations; also what I could do now to help"), thoughts about loved ones that could be at risk for sexual assault, (i.e. "When the pictures first came up of the sister and the niece, my mind shot directly to images of my three sisters; I care about them more than anyone could ever imagine and I don't know what I would do if they had been sexually assaulted"), and thoughts that indicated a positive evaluation of the presentation, speaker or message of sexual assault prevention, ("The speaker definitely knew what he was thinking about and seemed very sincere about the subject," "Relieved that more people are beginning to become aware and stand up for what is right").

Themes of the few Unfavorable thoughts included statements diminishing the importance of sexual assault prevention, (i.e. "I also believe it is a little blown out of proportion"), endorsement of rape myths, (i.e. "If the girl is willing, which most of the time they are, it's not really considered assault"), thoughts that are unfavorable toward the speaker or presentation, ("This guy needs to work on his presentation skills."), and thoughts that indicated a negative evaluation of the presentation context, ("It is hot in this room"). A few thoughts were not coded as Relevant, Favorable, or Unfavorable, ("I wonder how my fantasy baseball team is doing right now?").

Analysis of normality through the examination of skewness and kurtosis (Table 3) demonstrated nonnormality of the percentages of Relevant and Unfavorable thoughts. This was likely a result of the majority of thoughts being coded as Relevant and very

Table 3. Normality Statistics for Percentages of Thought Types on Thought-Listing Technique

	Transformation	
	Skewness	Kurtosis
Thought Type		
	No Transformation	
Relevant	-3.672	13.451
Favorable	-1.494	1.374
Unfavorable	8.046	69.743
	Square Transformation	
Relevant	-3.471	11.621
Favorable	-1.157	.133
Unfavorable	8.615	78.678
	Square Root Transformation	
Relevant	-3.831	14.999
Favorable	-2.460	7.975
Unfavorable	6.332	42.124

few thoughts being coded as Unfavorable. Square and square root transformations were applied to all three percentages and normality was examined for the transformed variables. Based on the normality of the transformations, only the square transformation of Percentage of Favorable Thoughts was selected as a suitable variable in subsequent analyses. This variable ranged from 1 to 2.72, with a mean of 2.364, and a standard deviation of 0.481 (Table 2).

Elaboration Likelihood Model Questionnaire (ELMQ) (Heppner, Humphrey, et al., 1995).

Participants completed the 12 question Elaboration Likelihood Model Questionnaire (ELMQ) designed to measure conditions that are favorable toward central route change. The items measure motivation to thoughtfully evaluate and hear the presentation message, ability to understand and think about the message, and favorable thoughts about the presentation information quality. In the original development of the ELMQ, the measure correlated with behavioral indicators of central route processing and had a coefficient alpha of .83. The population of this original study consisted of 258 undergraduate men and women who were 93% Caucasian. Participants responded to the questions and statements on a 0 to 6 likert-type scale. Several items were reversed scored. Higher scores indicate greater experience of conditions, such as motivation and ability to be thoughtful about the message, that facilitate central route processing. Total scores could range from 0 to 72, and the ELMQ scores in this study ranged from 30 to 69, with a mean of 54.165, a standard deviation of 8.783, and an item mean of 4.5245 (Table 2). In this study, the coefficient alpha of the total ELMQ scale was .77.

Overall Appraisal of Program Form.

Participants were asked to provide their opinion of the sexual assault prevention program overall by responding on a 1 to 5 scale on six semantic-differential attitude items using the terms *bad-good, unfavorable-favorable, harmful-beneficial, boring-interesting, irrelevant-relevant,* and *would not recommend – would recommend.* Total responses provide an assessment of global attitude toward the sexual assault prevention program. Higher responses indicate a more favorable view of the program. This appraisal form is a type of semantic differential scales, previously demonstrated to be effective in attitude research (Osgood, Suci, and Tannenbaum, 1958). This instrument was used to assess the participant's overall attitude toward the sexual assault prevention program, indicating whether their reaction overall was favorable. The Overall Appraisal of the Program Form total scores could potentially range from 6 to 30, and the total scores in this study ranged from 18 to 30. This instrument had a mean of 28.175, a standard deviation of 2.428, and an item mean of 4.6683 (Table 2). Coefficient alpha measure of internal reliability was .866 in this study.

Dependent Variables

Two self-report measures assessed participants' behavioral intentions to change, the open-ended Behavioral Intentions to Change Idea-Listing Form and the forced-response Sexual Assault Prevention Behavioral Intentions to Change Questionnaire. The Illinois Rape Myth Acceptance Scale-Short Form assessed participants' attitudinal beliefs in rape myths and served as a validity check.

Behavioral Intentions to Change Idea-Listing Form (BICIL).

Participants received the prompt, "Please list what, if anything, you intend to do differently as a result of participating in this program." This focused idea-listing technique assessed the participants' self-generated behavioral intentions to change. The Behavioral Intentions to Change Idea-Listing Form (BICIL) was coded by counting the total number of intentions to change that each participant reported. For example, participants who wrote, "I don't need to change anything," were coded as "0" on this piece of data.

Sexual Assault Prevention Behavioral Intentions to Change Questionnaire (SAPBIC).

The SAPBIC is a 12-item author developed assessment designed to allow participants to rate how likely they are to engage in various sexual assault prevention related attitudes and behaviors. The responses are anchored on a 6-point Likert-type scale, from *1-Strongly Disagree* to *6-Strongly Agree*. While previous sexual assault research has utilized Behavior Indices of Change (BIC) to assess how likely participants would be to engage in "forced sex or rape" if they were sure they would not be punished, direct responses about engaging in rape are likely to be influenced by social desirability, even when responses are anonymous (Malamuth, 1981). The SAPBIC was developed to assess behaviors related to sexual assault prevention such as talking to a date about sexual intentions, helping a woman who had been sexually assaulted, and confronting a friend who was saying coercive things about a date. Increased variability on these items is expected from this sample than from questions assessing the likelihood of engaging in

a sexual assault. SAPBIC total scores could potentially range from 12 to 72, and the total scores in this study ranged from 28 to 70. This instrument mean was 56.85, with a standard deviation of 7.960 and an item mean of 4.7451 (Table 2).

Reliability statistics for the SAPBIC indicated high internal consistency in this study ($\alpha = .827$). The SAPBIC and the IRMA-SF were significantly and inversely correlated (-.425, $p < .01$). Higher scores on the SAPBIC were associated with lower scores on the IRMA-SF, which supports the validity of the SAPBIC as a form of convergent evidence. Additionally, the order of the SAPBIC and IRMA-SF were alternated throughout the administration, so that 50 of the 97 participants (51.5%) completed the SAPBIC first followed by the IRMA-SF, and 47 of the participants (48.5%) completed them in the reverse order. An independent samples T test indicated that there was no significant difference in the SAPBIC means between the two groups, suggesting that participants' responses on the SAPBIC were not influenced significantly by completing the IRMA-SF first.

Illinois Rape Myth Acceptance Scale-Short Form (IRMA-SF) (Payne, Lonsway, & Fitzgerald, 1999).

The IRMA-SF is a 20-item self-report instrument that measures adherence to rape myths, which are "attitudes and beliefs that are generally false but are widely and persistently held, and that serve to deny and justify male sexual aggression against women" (Lonsway & Fitzgerald, 1994, p. 134; Payne, et al., 1999). Items are statements of rape myths that subjects indicate their level of agreement with by responding on a 7-point Likert type scale, anchored by 1 (not at all agree) and 7 (very much agree). High

scores indicate a higher endorsement of rape myths. 3 of the items are "filler" items which are statements about rape that are not rape myths, to discourage response sets. Cronbach's alpha statistic of internal validity is .87 and the corrected item-to-total correlations of the IRMA-SF range from .34 to .65. The uncorrected correlation between the 20-item IRMA-SF and the full 45-item IRMA scale is .97 (p value of .001), indicating that the IRMA-SF is a suitable proxy for the full scale. The normative sample to develop the IRMA-SF was comprised of 604 university students, of which 284 were men, with a mean age of 18.9. The IRMA-SF scale measured participants' rape-supportive attitudes. While previous measures have already demonstrated the relation between gender identity and rape-supportive attitudes, the IRMA-SF will also served as a validity test of the author-developed behavioral change measures, as described above. In this study, the coefficient alpha was .865. The total scores of the IRMA-SF could potentially range from 17 to 119, and the total scores in this study ranged from 18 to 71. The IRMA-SF mean was 36.64, with a standard deviation of 12.004 and an item mean of 2.1661 (Table 2).

Procedures

Participants were recruited from the Psychology Undergraduate Subject Pool (n = 101) and Aggie Access Program at Texas A&M University (n = 1). Participants recruited from the Psychology Undergraduate Subject Pool received 3 experimental credits for their participation and are required to obtain 10 experimental credits each semester or complete additional assignments. These participants did not know the nature of the study at the time they signed up to participate, as the experiments are coded as numbers and letters unrelated to the topic. Participants from the Aggie Access Program received extra credit as determined by their instructor and it was advertised as a sexual assault prevention research study, so one participant knew the nature of the study before he signed up to complete. Participants from both programs had additional opportunity to receive credit in their courses if they choose not to participate in this study.

The consent process took place in person. Potential participants were provided with two copies of a consent form (Appendix D), which included a brief written description of the study and explanation of the confidentiality of responses. The experimenter allowed the participants to ask questions about the consent information. Participants then submitted a signed copy of the consent form and were allowed to keep the second copy. All of the potential participants became actual participants as no one declined to participate after learning the nature of the study.

After consent for research participation was obtained, participants completed measures of pre-program variables: Demographic Questionnaire, the Conformity to Masculine Norms Inventory – 46 (Mahalik, et al., 2003), and the Gender Role Conflict

Scale (O'Neil, et al., 1986) (See Appendix A). Participants then completed an hour long sexual assault prevention program, "Outcry," presented by a male university staff member experienced in presenting the program. The staff member was a student development specialist who regularly presented on, planned, and coordinated outreach programming on violence prevention. His education included a Master's of Science in Administration and over 350 hours of professional training in power-based personal violence issues. The presenter also had experience with direct assistance of survivors of sexual assault through crisis response duties and advising of sexual violence peer educators and advocates. The program includes education about statistics and definitions of sexual assault, validation that other sexual assault prevention efforts have blamed men or provided overly simplistic solutions, an emotional appeal to have a personal connection by thinking of people they care about, readings or narratives of men who were affected by sexual assault of their loved ones and attempts to motivate the men to get involved in preventing sexual assault through bystander empowerment and demonstrating that it is a masculine thing to do through stories of men who intervened to prevent violence (Appendix E). Immediately upon completion of the prevention program, participants completed the post program measurements: the Thought-Listing Form (Heppner, Humphrey, et al., 1995), Elaboration Likelihood Model Questionnaire (Heppner, Humphrey, et al., 1995), Overall Appraisal of Program Form, Behavior Intention to Change Idea-Listing Form, Sexual Assault Prevention Behavioral Intentions to Change Questionnaire, and the Illinois Rape Myth Acceptance Scale-Short Form (Payne, et al., 1999). The total time needed to complete this study was approximately 90

minutes. Data has been stored at a secure location on the Texas A&M University campus. The study was run in ten different sessions over a period of three weeks, with the number of participants ranging from 3 to 23 with a median size of 9 in the sessions.

Statistical Analyses

An a priori structural equation modeling (SEM) model was hypothesized to test the hypotheses of the study. To test Hypotheses 1 and 2, the model specified that the CMNI-46 and the GRCS each predict Central Route Processing (a latent variable observed by the TL, ELMQ, and Program Appraisal scores), Behavior Intention to Change (a latent variable observed by the BICIL and SAPBIC scores), and the IRMA-SF. To test Hypothesis 3, the model also specified that Central Route Processing predicts Behavior Intention to Change and the IRMA-SF. As alternative quantitative analyses, it was determined that multiple regressions of each pathway would be calculated using SPSS if the sample is not large enough to conduct SEM or if the modified model does not account for each of the hypotheses.

4. RESULTS

This chapter presents results from the data analysis and describes their relation to each hypothesis. The first section details the results of the structural equation modeling (SEM) analyses, both the originally proposed model and the respecified model. Then, the additional results are organized by the three hypotheses, examining how well the results support each hypothesis. In addition to SEM, analyses also include multiple regression and correlation.

SEM estimation methods assume normality of the variables. Variables with absolute values of skewness above 3 and kurtosis above 10 are considered too extreme to be normally distributed (Kline, 2005). Each observed variable demonstrates sufficient normality for analysis. Mean, Standard Deviation, Minimum, Maximum, Skewness, and Kurtosis statistics for all measures are listed in Table 2. Only one variable (Percentage of Favorable Thoughts) required correction through squaring the values to produce a more normal distribution for the analyses (see Table 3). SEM also requires large sample sizes. Bentler (1995) recommends a sample size of 5 observations per each unknown parameter. As the *a priori* model in Figure 1 includes 20 unknown parameters, a sample size of approximately 100 is needed. As sufficient sample size of 97 was achieved.

Structural Equation Modeling

Using MPlus software, the proposed SEM model was analyzed using the covariance matrix contained in Table 4. As depicted in the *a priori* model in Figure 1, it was hypothesized that Masculine Ideology (a latent variable observed by the CMNI-46 and the GRCS) would predict central route processing (a latent variable observed by the

Table 4. Covariance Table for Structural Equation Model

	1	2	3	4	5	6	7	8
1. CMNI[1]	167.832							
2. GRCS[2]	173.138	518.470						
3. ELMQ[3]	-27.321	-63.460	77.139					
4. TL Fav[4]	-1.128	0.176	1.084	0.231				
5. Appraisal[5]	-2.446	-9.015	11.887	0.424	5.896			
6. BICIL[6]	-0.307	0.787	-0.021	0.110	0.337	0.882		
7. SAPBIC[7]	-33.262	-63.627	38.036	0.995	11.100	0.744	63.361	
8. IRMA-SF[8]	63.352	132.050	-44.111	-1.494	-13.800	-1.158	-40.588	144.086

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

[1] Conformity to Masculine Norms Inventory - 46
[2] Gender Role Conflict Scale
[3] Elaboration Likelihood Model Questionnaire
[4] Percentage of Favorable Thoughts
[5] Overall Appraisal of Program
[6] Behavioral Intentions to Change Idea Listing
[7] Sexual Assault Prevention Behavioral Intentions to Change Questionnaire
[8] Illinois Rape Myth Acceptance Scale – Short Form

Percentage of Favorable Thoughts, the ELMQ, and Program Appraisal scores), and the outcome variables of Behavioral Intentions to Change (observed by the SAPBIC and the BICIL).

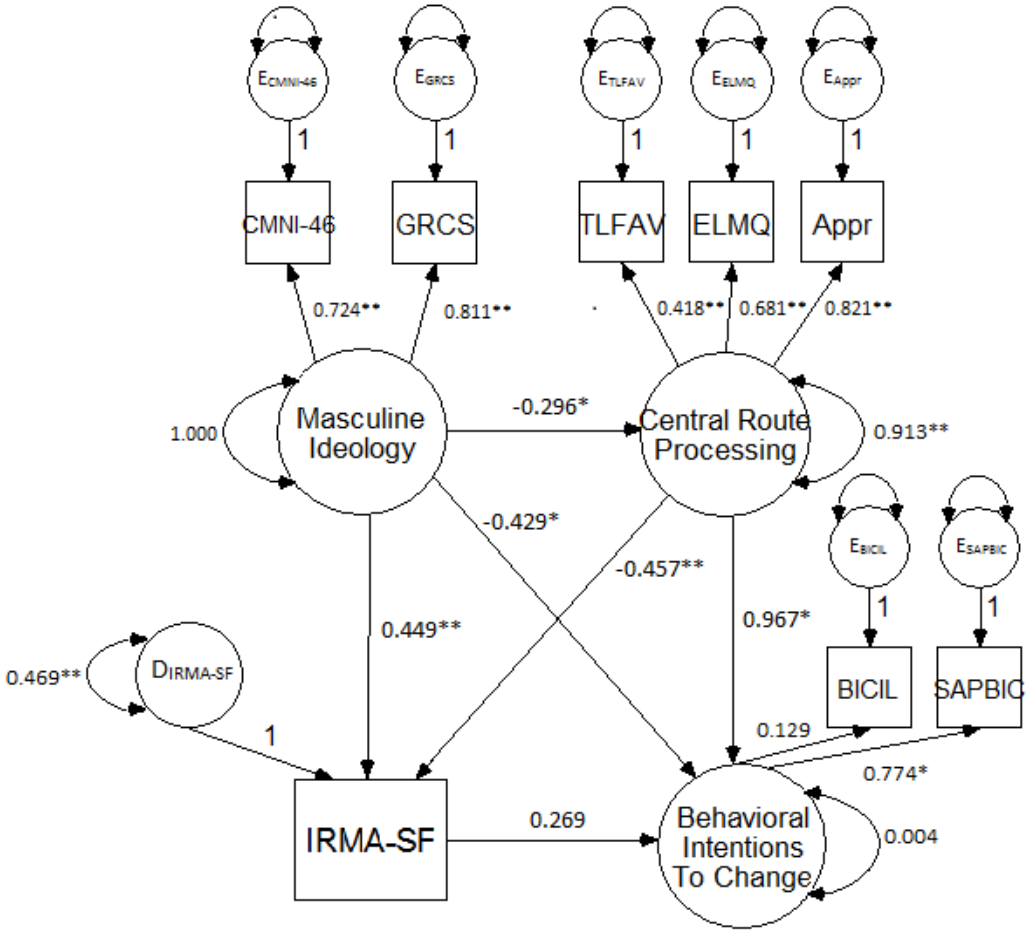

Figure 1. Test of the *A Priori* Model

Although the original model depicted in Figure 1 had sufficient fit indices (CFI = .961, RMSEA = .074, and SRMR = .060), a problem with the measurement model portion of this structural regression model was observed. The Behavioral Intentions to Change Idea Listing observed variable did not significantly load onto the Behavioral Intentions to Change latent variable, indicating that this is not an ideal measure for the variable. Consequently, a model was respecified, guided in part by the original hypotheses and by subtracting pathways and variables to produce a modified model with sufficient indices of model fit. Model respecification is often a necessary step in SEM analyses, as the initial models often do not fit the actual data very well (Kline, 2005). For the respecified model, Behavioral Intentions to Change Idea listing was removed as a variable and Sexual Assault Behavioral Intentions to Change was the sole measure of the Behavioral Intentions to Change variable. Consequently, Behavioral Intentions to Change was changed from a latent to an observed variable.

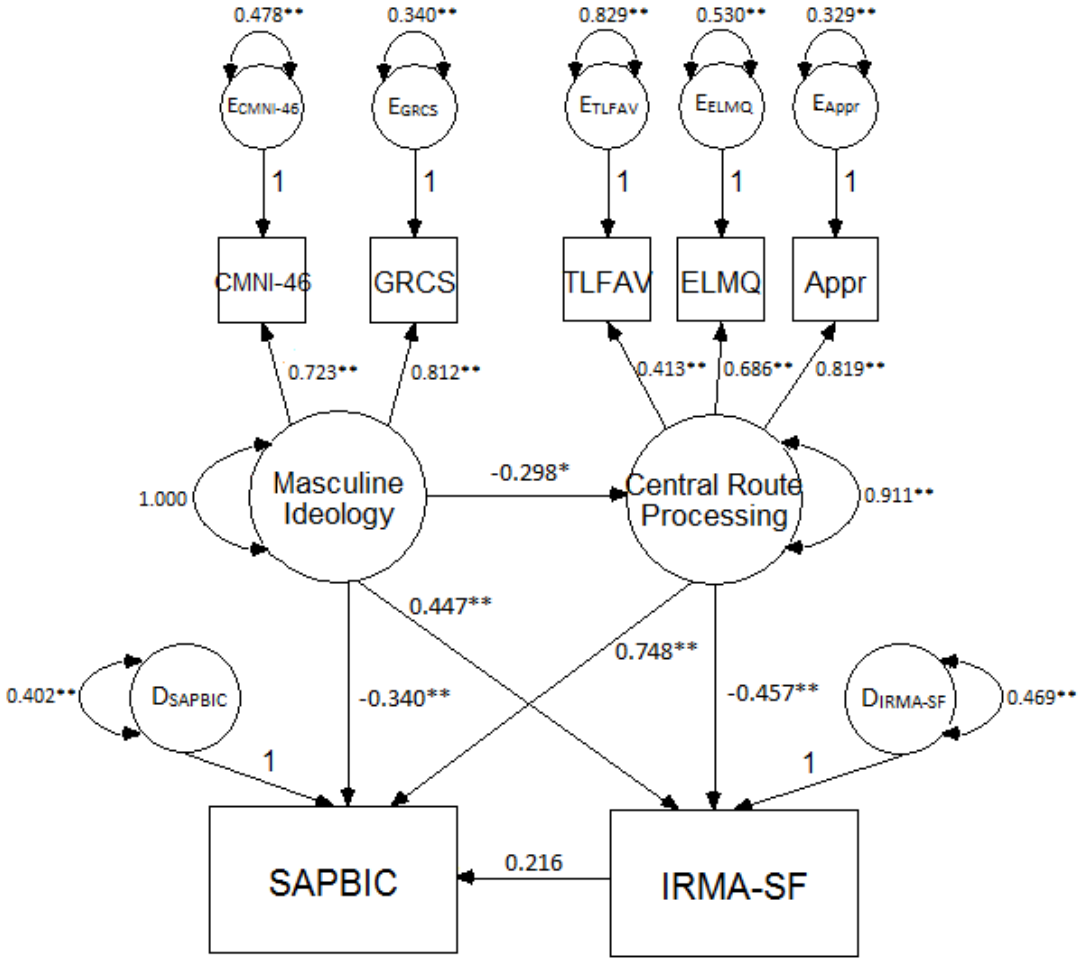

Figure 2. Test of the Respecified Model

Figure 2 depicts the respecified model that was subsequently tested. This modified model is represented with standardized coefficients for both exogenous and endogenous variables. Evidence of good model fit was observed (CFI = .971, RMSEA = .078, and SRMR = .050). Maximum likelihood estimation was used to estimate the parameters, using covariances of the variables reported in Table 4.

This model initially appears to support Hypothesis 1 because it demonstrates that that a greater traditional male ideology was associated with less central route processing of the program ($\beta = .298$, $p < .05$). However, the residual value for central route processing remained high (.911, $p < .001$), indicating that Masculine Ideology accounted for little of the variability in central route processing. A more traditional masculine ideology was associated with less central route processing about the program, though other unmeasured variables account for more of the difference in central route processing than masculine ideology alone.

The model also demonstrated support for Hypothesis 2, as Masculine Ideology had significant effects on the dependent variables. Adherence to traditional masculine ideology directly affected increased acceptance of rape myths ($\beta = .447$, $p < .001$) and decreased behavioral intentions to change as a result of the program ($\beta = -.340$, $p < .001$). This demonstrates that a more traditional masculine ideology was significantly predictive of greater rape myth acceptance and fewer behavioral changes in response to the program.

This model also supported Hypothesis 3. Greater central route processing was significantly associated with decreased rape myth acceptance ($\beta = -.457$, $p < .001$) and increased behavioral intentions to change as a result of the program ($\beta = .748$, $p < .001$). This pattern implies that men who engaged in more central route processing about the program were less likely to agree with rape myths and more likely to demonstrate behavioral intentions to change in response to the program. Although more traditional

masculinity can affect central route processing and the outcome variables, central route processing has its own unique affect on men's reactions to the program.

Post-Hoc Analyses

Since the respecified model does not fully account for each of the proposed hypotheses, evidence for each hypothesis was also examined through correlation and multiple regression analysis using SPSS.

Hypothesis 1: Adherence to more traditional masculine norms and higher experiences of gender role conflict will predict less central route processing in reaction to the prevention program.

The SEM results demonstrated that a greater traditional masculine ideology predicted less central route processing, yet masculine ideology accounted for a relatively small degree of variance in central route processing (see Figure 2). Therefore, the SEM model did not provide strong evidence for this hypothesis. Adherence to traditional masculine norms (CMNI-46 and EMLQ $r = -.240$, $p < .05$) and increased gender role conflict (GRCS and ELMQ $r = -.317$, $p < .01$) were significantly correlated with less central route processing (see Table 5). Both of these correlations were in the expected direction, indicating that more traditional masculine norms and higher experiences of gender role conflict are related to less central route processing as observed by the ELMQ, providing partial support to the first hypothesis. Neither measure of masculine ideology was significantly correlated with the other measures of central route processing (Percentage of Favorable Thoughts, Program Appraisal). Both the SEM model and

Table 5. Correlation Table for Regression Analysis

	1	2	3	4	5	6	7	8
1. CMNI[1]	---							
2. GRCS[2]	.587**	---						
3. ELMQ[3]	-.240*	-.317**	---					
4. TL Fav[4]	-.181	.016	.257*	---				
5. Appraisal[5]	-.078	-.163	.557**	.363**	---			
6. BICIL[6]	-.025	.037	-.003	.244*	.148	---		
7. SAPBIC[7]	-.323**	-.351**	.544**	.260*	.574**	.100	---	
8. IRMA-SF[8]	.407**	.483**	-.418**	-.259*	-.473**	-.103	-.425**	---

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

[1] Conformity to Masculine Norms Inventory - 46
[2] Gender Role Conflict Scale
[3] Elaboration Likelihood Model Questionnaire
[4] Percentage of Favorable Thoughts
[5] Overall Appraisal of Program
[6] Behavioral Intentions to Change Idea Listing
[7] Sexual Assault Prevention Behavioral Intentions to Change Questionnaire
[8] Illinois Rape Myth Acceptance Scale – Short Form

correlations indicated that adherence to traditional masculine ideology was predictive of less central route processing of the program message.

Hypothesis 2: Adherence to more traditional masculine norms and higher experiences of gender role conflict will predict more rape myth acceptance and fewer behavioral intentions to change.

The modified SEM model indicated that higher Masculine Ideology was predictive of increased rape myth acceptance and decreased behavioral intentions to change, supporting the second hypothesis (see Figure 2). Pearson correlations also supported these results, as adherence to traditional masculine norms (CMNI and IRMA-SF, $r = .407$, $p < .001$) and experience of gender role conflict (GRCS and IRMA-SF, $r = .483$, $p < .001$) were significantly associated with greater rape myth acceptance (see Table 5). Traditional masculine norms (CMNI and SAPBIC, $r = -.323$, $p < .01$) and gender role conflict (GRCS and SAPBIC $r = -.351$, $p < .001$) were also significantly related to fewer behavioral intentions to change. No significant correlations were observed between the masculine ideology variables and the Behavioral Intentions to Change Idea Listing (BICIL). These results indicate that greater adherence to traditional masculine norms and experience of gender role conflict was predictive of fewer behavior intentions to change and more rape myth acceptance, suggesting that men with more traditional masculinity may be more likely to harbor beliefs that condone sexual assault.

Multiple regression (MR) analysis provided mixed evidence for support of the second hypothesis. Masculine ideology accounted for 14.4% of the variance ($R^2 = .144$) in the behavioral intentions to change as measured by the SAPBIC, and gender role

conflict had a significant beta coefficient (β = -.247, $p < .05$; see Table 6). Masculine ideology accounted for 25.7% of the variance ($R^2 = .257$) in rape myth acceptance, with a significant beta coefficient for gender role conflict (β = .372, $p < .01$) for the GRCS (see Table 7). However, these variables were not significantly predictive of behavioral intentions to change, as measured by the BICIL (see Table 8). While these results provide evidence that the experience of gender role conflict is a significant predictor of greater rape myth acceptance and fewer behavioral intentions to change, hierarchical linear regression demonstrates a weaker effect of the masculine ideology variables once the central route processing variables are included.

Hypothesis 3: Less central route processing in reaction to the prevention program will predict more rape myth acceptance and fewer behavioral intentions to change.

Hypothesis 3 was supported by the results of the respecified SEM model that indicated greater central route processing was associated with decreased rape myth acceptance and increased behavioral intentions to change as measured by the SAPBIC (see Figure 2). However, pathways predicting the BICIL in the original model were not significant and therefore it was removed as a variable in the respecified model (see Figure 1). More central route processing was significantly associated with less rape myth acceptance and more behavioral intentions to change (see Table 5). The ELMQ and Program Appraisal were significantly associated with the SAPBIC and inversely with the IRMA-SF. However, only the Percentage of Favorable Thoughts was significantly related to the BICIL ($r = .244$, $p < .05$). Favorable thoughts about the

Table 6. Multiple Regression of Masculine Ideology and the Elaboration Likelihood Model Variables on Sexual Assault Prevention Behavioral Intentions to Change

Variable	*df1*	*df2*	R^2	ΔR^2	ΔF	β
First Equation						
Step One	2	94	.144	.144	7.903	
CMNI[1]						-.178
GRCS[2]						-.247*
Step Two	3	91	.459	.315	17.690	
Appraisal[3]						.400**
ELMQ[4]						.239*
TL Fav[5]						.026
Second Equation						
Step One	3	93	.404	.404	21.005	
Appraisal[3]						.381**
ELMQ[4]						.322**
TL Fav[5]						.039
Step Two	2	91	.459	.055	4.659	
CMNI[1]						-.162
GRCS[2]						-.116

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

[1] Conformity to Masculine Norms Inventory - 46
[2] Gender Role Conflict Scale
[3] Overall Appraisal of Program
[4] Elaboration Likelihood Model Questionnaire
[5] Percentage of Favorable Thoughts

Table 7. Multiple Regression of Masculine Ideology and the Elaboration Likelihood Model Variables on Illinois Rape Myth Acceptance Scale – Short Form

Variable	*df1*	*df2*	R^2	ΔR^2	ΔF	β
First Equation						
Step One	2	94	.257	.257	16.241	
CMNI[1]						.189
GRCS[2]						.372**
Step Two	3	91	.430	.173	9.237	
Appraisal[3]						-.338**
ELMQ[4]						-.067
TL Fav[5]						-.094
Second Equation						
Step One	3	93	.265	.265	11.193	
Appraisal[3]						-.321**
ELMQ[4]						-.217*
TL Fav[5]						-.087
Step Two	2	91	.430	.165	13.178	
CMNI[1]						.165
GRCS[2]						.311**

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

[1] Conformity to Masculine Norms Inventory - 46
[2] Gender Role Conflict Scale
[3] Overall Appraisal of Program
[4] Elaboration Likelihood Model Questionnaire
[5] Percentage of Favorable Thoughts

Table 8. Multiple Regression of Masculine Ideology and the Elaboration Likelihood Model Variables on Behavioral Intentions to Change Idea Listing

Variable	*df1*	*df2*	R^2	ΔR^2	ΔF	β
First Equation						
Step One	2	94	.005	.005	.222	
CMNI[1]						-.071
GRCS[2]						.079
Step Two	3	91	.078	.073	2.404	
Appraisal[3]						.147
ELMQ[4]						-.138
TL Fav[5]						.222
Second Equation						
Step One	3	93	.077	.077	2.598	
Appraisal[3]						.143
ELMQ[4]						-.141
TL Fav[5]						.228*
Step Two	2	91	.078	.000	.022	
CMNI[1]						-.022
GRCS[2]						.026

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

[1] Conformity to Masculine Norms Inventory - 46
[2] Gender Role Conflict Scale
[3] Overall Appraisal of Program
[4] Elaboration Likelihood Model Questionnaire
[5] Percentage of Favorable Thoughts

program were also significantly associated with rape myth acceptance (r = -.259, p < .05) and behavioral intentions to change (r = .260, p < .05).

Multiple regression analysis demonstrated that central route processing accounted for 40.4% of the variance of behavioral intentions to change, as measured by the SAPBIC scores (R^2 = .404). The Program Appraisal and the ELMQ had medium effects on behavioral intentions to change (β = .381, β = .322, respectively, both *p's* < .01, Table 6). Central route processing accounted for 26.5% of the variance of rape myth acceptance (R^2 = .265), and both the Program Appraisal and the ELMQ had a medium effect on rape myth acceptance (β = -.321, β = -.217, respectively, both *p's* < .05, Table 7). Finally, central route processing accounted for 7.7% of the variance on the BICIL (R^2 = .077), and Percentage of Favorable Thoughts had a medium effect on BICIL scores (β = .228, p < .05, Table 8).

Hierarchical linear regression further supports this hypothesis when the masculine ideology variables are included as predictors in the first step and then the ELM variables are added the second step. In the prediction of behavioral intentions to change, as measured by the SAPBIC, adding the ELM variables in the second step increased the R^2 value to .459 ($R^2\Delta$ = .315, p < .01) and the Program Appraisal and the ELMQ have medium effects on behavioral intentions to change (β = .400, β = .239, respectively, both *p's* < .05, Table 6). For rape myth acceptance, adding the ELM variables increased the R^2 value to .430 ($R^2\Delta$ = .173, p < .01) and the Program Appraisal had a medium effect (β = -.338, p < .01, Table 7). However, GRCS also remains a significant predictor of rape myth acceptance even when ELM variables are already

accounted for ($\beta = .311$, $p < .01$, Table 7). For behavioral intentions to change, measured by the Behavioral Intentions to Change Idea Listing, adding the ELM variables to the hierarchical linear regression was insignificant (Table 8). These results indicate that central route processing has an effect on behavioral intentions to change beyond the effects of the masculine ideology variables.

Further ad hoc analyses were conducted to examine the two-way interaction between central route processing and masculine ideology via multiple regression analyses (Aiken & West, 1991). The interaction between these variables was marginally significant for behavioral intentions to change (as measured by the SAPBIC; $p = .055$). As can be seen in the figure, the nature of the interaction suggested that increased central route processing, regardless of whether masculine ideology is high or low, resulted in higher scores on the SAPBIC (Figure 3).

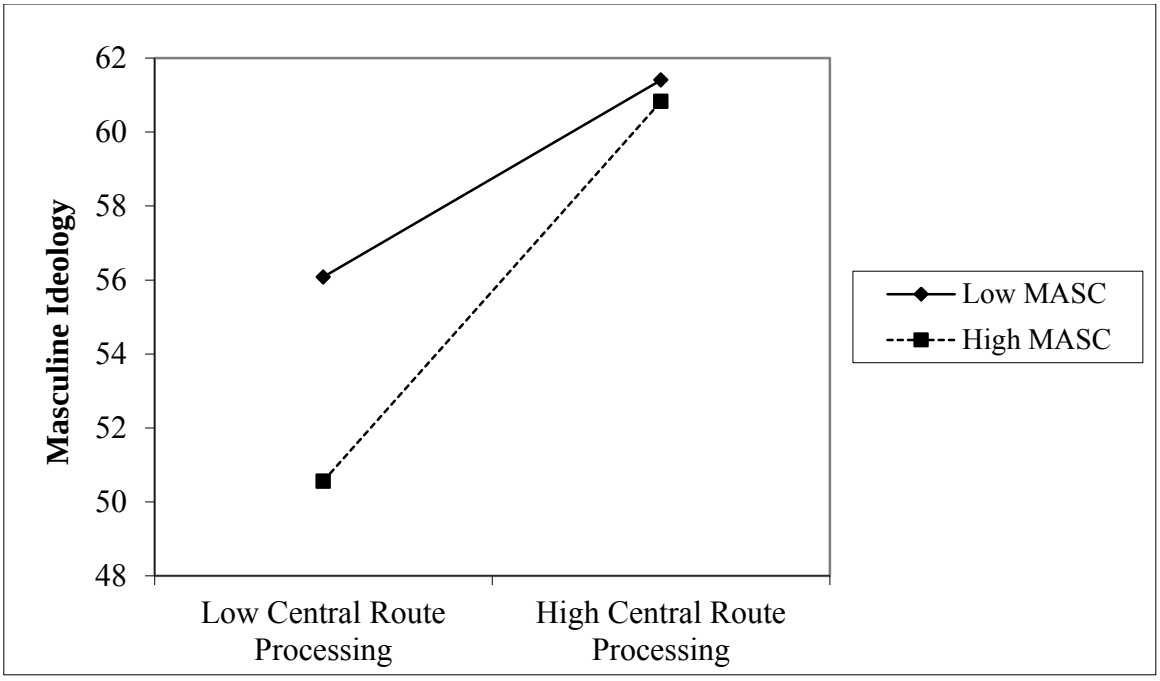

Figure 3. Two-way Interaction Effects of Dependent Variables on Sexual Assault Prevention Behavioral to Change

Even men with greater adherence to traditional masculine ideology reported more behavioral intentions to change when they engaged in more central route processing than the men who had less adherence to traditional masculine ideology before the program but were not as engaged in central route processing.

Summary

In summary, these results imply that men who adhered to a traditional masculine ideology were less likely to engage in thoughtful processing of the sexual assault prevention program, consistent with the first hypothesis. The results also imply that men with more traditional masculine ideology were less likely to endorse behavioral intentions to change and more likely to agree with rape myths, consistent with

Hypothesis 2. The results provided the strongest support for Hypothesis 3, as central route processing predicted more intentions to change behaviors related to sexual assault prevention and less acceptance of rape myths that condone sexual assault. Central route processing appears to be a more influential factor in these outcomes than adherence to traditional masculine ideologies.

5. CONCLUSION

This chapter provides a summary of the results of this study, including how hypotheses were or were not supported. The results' connections to previous research and theories are discussed. Then, limitations of this research are presented. The final section describes implications for future research and practice.

Summary

The purpose of this study is to examine how masculine ideologies and central route processing affect college men's reactions to a sexual assault prevention program. An SEM model was tested and then respecified to create a model with sufficient fit to the data. In the respecified model, a majority of the pathway coefficients were significant in an expected direction. The model supported the first hypothesis because it demonstrated that greater adherence to traditional masculine ideologies and experience of gender role conflict significantly predicted less central route processing in response to the program. However, masculine ideologies accounted for a relatively small amount of the explained variance in central route processing. While participants with more traditional masculine ideologies were less likely to engage in central route processing, this did not account for most of the variance in central route processing. Consistent with the second hypothesis, greater traditional masculine ideologies prior to the presentation predicted more negative outcomes after the presentation. More traditional masculine norms and higher levels of gender role conflict were significantly associated with fewer behavioral intentions to change and to agree to a greater number of rape myths. This is consistent with previous research that masculine ideologies are associated with more

sexual assault supportive opinions and behaviors (Good, Heppner, et al., 1995; Rando, et al., 1998; Serna, 2004).

Finally, central route processing significantly predicted positive outcomes in response to the prevention program, supporting the third hypothesis. The more men demonstrated that they were thoughtful about the information presented and found it relevant, the more likely they were to indicate that they would make positive changes as a result of the presentation and the less likely to agree with rape myths. Ad hoc analyses suggest that central route processing leads to increased behavioral intentions to change regardless of the level of men's adherence to masculine ideology.

Connection to Previous Research

Collectively, these results are congruent with previous research utilizing the ELM to design sexual assault prevention programs (Foubert, 2000; Foubert & Cremedy, 2007; Foubert & McEwen, 1998; Gilbert, et al., 1991; Heppner, Good, et al., 1995; Heppner, et al., 1999; Langhinrichsen-Rohling & Foubert, 2011), confirming the usefulness of the ELM to anticipate and understand men's reactions to prevention programs. While the present study is congruent with previous findings to date, no published study has examined how masculine ideology may impact men's reactions to a sexual assault prevention program from the perspective of the Elaboration Likelihood Model.

Unique to the present study is the evidence that central route processing was more influential in explaining men's behavioral intentions to change and rape myth acceptance than preexisting masculine ideologies. This stands in contrast to previous

research that demonstrated that masculine norms were the most powerful predictor of men's sexual assault supporting behaviors and beliefs (Good, Heppner, et al., 1995). While the design of the present study did not measure change in attitude or behaviors, the results suggest the potential that regardless of college men's acceptance of traditional masculine norms and experiences of gender role conflict, engaging thoughtfully in a prevention program may produce positive results. A primary message in the program was that preventing sexual assault is a masculine thing to do. The goal of the presentation was not to change the masculine characteristics of the participants, but to persuade men that sexual assault prevention behaviors are congruent with a traditional masculine identity. This type of approach is in line with the theories of positive-healthy masculinity within the field of psychology of men (Kiselica & Englar-Carlson, 2010).

For the past two decades, many studies of the psychology of men assume a deficit model by examining how traditional masculine gender roles are constrictive and harmful and how to develop interventions to remediate these unhealthy qualities. In recent years, scholars have proposed a strengths-based approach to researching masculinity and developing interventions, emphasizing the ways that men's gender role socialization has contributed to healthy aspects of masculinity (Kiselica & Englar-Carlson, 2010). Two positive aspects of masculinity are encouraged by the message of this sexual assault prevention program featured in the present study: male ways of caring and male courage, daring, and risk-taking. Male ways of caring refers to how in healthy communities and families, men are socialized to take action to care for and protect their loved ones. This prevention program emphasized the assumption that these men would

intervene to protect their loved ones from sexual assault and therefore should do the same for others. Male courage, daring, and risk-taking refers to taking worthwhile risks to protect others. The bystander interventions suggested in the program require courage and risk to implement and therefore are masculine things to do through protecting others and demonstrating courage. The fact that the program was not attempting to change the men's masculine norms may explain why central route processing was more influential than masculine ideologies.

In the ELM, a key precursor of central route processing is the belief that the information being presented is personally relevant, which increases motivation to think about the message. In this study's presentation, the speaker began by lowering men's defensiveness by acknowledging that previous sexual assault prevention programs they may have attended may have told them that they were the problem, and this program would assume that the participants were not rapists, which is similar to the approach of the ELM-based Men's Program to assure participants that they will not be blamed for rape (Foubert & McEwen, 1998; Appendix E). The speaker then used various techniques to demonstrate a personal connection to the participants, such as having them imagine people they are close to who could potentially be victims of sexual violence and sharing writings from other men who were emotionally affected by the sexual assault of a loved one. The Men's Program creates empathy through the description of a male on male rape of a police officer. The Men's Program also educates men to be potential helpers of someone who was raped, and this program educates men on how to intervene as bystanders to help prevent rape. The program of the present study provides bystander

empowerment through educating men on specific ways to intervene and motivating men to do so through examples of other men who intervened to prevent violence. These qualities of the program emphasize the message that sexual assault is a men's issue – not because these men are assumed to be potential rapists, but because it affects people the men care for, and therefore affects them, and men have the ability to intervene to protect others. Based on the ELM results, this program was successful in demonstrating that this message was personally relevant to the participants (Table 1).

Recently, Langhinrichsen-Rohling and Foubert (2011) argue that future research in the Men's Program should examine how preexisting characteristics affect program outcomes. The present study indicates that preexisting characteristics can account for significant variance in related to this particular sexual assault prevention program. Less traditionally masculine men may respond more favorably to sexual assault prevention programs, yet central route processing appears more influential than preexisting masculine ideology.

Limitations

Potential limitations of this research, including methodological, sampling, and instrumentation threats, are discussed in this section. One methodological limitation of this study is that only one presenter gave this presentation, Presenter effects cannot be ruled out as an explanation for the results. While previous research has linked masculine ideology to sexual assault opinions and behaviors, no control group existed to examine how these variables interacted in this particular population of college men.

Limitations in sampling include homogeneity of the sample and self-selection of participants. Two thirds of participants were white, all were traditional college aged men aged 18 to 22, and the study was conducted at only one university, in which the majority of students are from the state of Texas and many are socially conservative. It is not known if the results could be generalized to men of different ages, men of color, a different geographic area, or across different campuses. Previous sexual assault prevention research has used samples of primarily white participants (Morrison et al., 2004). Another ELM-based sexual assault prevention study demonstrated that inclusion of culturally relevant information and presenter of the same race as participants resulted in increased central route processing for black participants (Heppner, et al., 1999). Qualitative research on the Men's Program demonstrated that African-American, Latino, and Asian men also report increased attitudinal and behavioral intentions to change as a result of the program (Foubert & Cremedy, 2007). Additionally, selection threat is a possibility as participants self-selected into this study. Fortunately, participants did not know the topic of the study before signing up to participate in it, but the sample does represent a population of college men who were motivated to participate in a study for class credit.

Another possible limitation is instrumentation. Two author-generated measures were used to measure participants' behavioral intentions to change as a result of the program: the Sexual Assault Prevention Behavioral Intentions to Change (SAPBIC) and the Behavioral Intentions to Change Idea Listing (BICIL). These were developed due to a lack of previously established instruments suitable to measure behavioral intentions to

change specific to sexual assault prevention behaviors that were not focused primarily on bystander interventions. Previous research on sexual assault prevention programs has used the Behavior Indices of Change (BIC) which asks explicitly how likely participants would be to rape someone (Morrison, et al., 2004). More recent research has used the Bystander Efficacy Scale (BES) and Bystander Willingness to Help Scale (BWHS) to measure participants' confidence and willingness to engage in bystander interventions to prevent sexual assault (Banyard, Plante, & Moynihan, 2005; Langhinrichsen-Rohling & Foubert, 2011). The SAPBIC demonstrated reliability and validity within this study, but reliability and validity were not established prior to its use in this research. The BICIL was not correlated with any of the analyzed variables except percentage of favorable thoughts toward the program. It is possible that this correlation was due to similarity in instrumentation as both of these measures required participants to write out their own ideas. Another possibility for this sole correlation is that the BICIL could have actually measured something more similar to central route processing as an indicator of how much participants were paying attention to the program. The measure could have also been poorly worded. The BICIL was removed from the respecified SEM model because it did not significantly load onto the behavioral intentions to change latent variable.

This current study used the IRMA-SF to measure acceptance of rape myths. Recent research on sexual assault prevention programs has also utilized the IRMA-SF (Banyard, et al., 2005; Langhinrichsen-Rohling & Foubert, 2011). Earlier ELM-based sexual violence prevention studies used the Burt Rape Myth Acceptance Scale (Foubert,

2000; Foubert & McEwan, 1998; Gilbert, et al., 1991; Heppner, Good, et al., 1995; Heppner, et al., 1999).

Central route processing was measured through the Thought-Listing Form, the Elaboration Likelihood Model Questionnaire, and the Overall Appraisal of Program Form. The Elaboration Likelihood Model Questionnaire has been used in previous sexual violence prevention research (Banyard, et al., 2005; Heppner, Humphrey, et al., 1995; Heppner, et al., 1999); however, researchers have also used the State Measure of Central Route Processing to measure central route processing when assessing the Men's Program (Foubert & McEwen, 1998).

The Thought Listing Form has also been used in previous ELM-based sexual assault prevention research; however, an additional dimension was coded in this study to produce an another variable - the percentage of favorable thoughts toward the program or speaker (Heppner, Good, et al., 1995). All of the thought listing variables demonstrated nonnormality. The variable of percentage of favorable thoughts was only suitable for use in analyses after transformations. The majority of thoughts listed were favorable toward the program and its message; therefore, the nonnormality of the thought listing variables was a result of a lack of variability among the thoughts listed. It is possible that a different set of coding directions or different coders could have produced more variability in the thought listing scores.

Another potential instrumentation threat is that the participants' completion of the CMNI-46 and GRCS immediately before participating in the sexual violence prevention program could have primed their thoughts and feelings while participating in

the program and completing post-program questionnaires. When this program is typically implemented on college campuses, men would not complete questionnaires about masculine values as part of the program.

Other research in sexual assault prevention programs with men has demonstrated positive effects 7 months and 2 years out (Foubert, et al., 2010; Foubert, Newberry, & Tatum, 2007). The present study was only concerned with immediate reactions following the program. Without long-term follow-up we do not know the possible effects of the program over time.

Implications

This study provides implications for future research in the areas of sexual assault prevention, masculine ideologies, and the Elaboration Likelihood Model of attitude change. The research could be replicated with different populations (i.e. different aged men, ethnic minority populations) to determine if the results can be generalized to other populations beyond white young adult college men. Other potential improvements include using more than one presenter to control for presenter effects, and to measure behavioral intentions to change and central route processing with different instruments. Positive masculinity is another variable that could be examined, to explore how the program's emphasis on healthy aspects of masculinity influenced the results.

An experimental change model design could also enhance future research. Though the wording of the SAPBIC and the BICIL in this current study implied that the intended behaviors are "as a result" of participation in the program, the participants' previous engagement in these supportive behaviors was not measured. Therefore, it is

unknown if their endorsement of items indicates a true behavioral intention change. Additionally, the study did not include a follow-up assessment with participants over time, so it is unknown if these endorsed behavioral intentions to change actually resulted in a lasting change in behaviors. Future research could measure these behaviors prior to participation in the prevention program and include a follow-up assessments months or years later. Additionally, an experimental design including randomization and a control group could provide valuable insights to the nature of the effects found in the present study.

The research results support the use of the Elaboration Likelihood Model of attitude change in designing sexual assault prevention programs. The finding that central route processing predicted more positive outcomes than masculine ideologies did implies that men can benefit from sexual assault prevention programs without having to change their attitudes toward masculine ideologies. This places less of a burden on prevention specialists to change gender-role attitudes of men, which may be difficult to change through traditional interventions (Brooks-Harris, Heesacker, & Mejia-Millan, 1996). Instead, interventionists can engage men in the important message of sexual assault prevention through demonstrating that behaviors such as bystander interventions are masculine actions.

Conclusion

In summary, this research demonstrates a model accounting for the effects of masculine ideologies and central route processing on college men's outcomes from a sexual assault prevention program. The results indicate that while masculine ideologies

did significantly predict central route processing, it did not account for much of the variance in central route processing. Both masculine ideologies and central route processing are significantly predictive of outcomes of behavioral intentions to change and rape myth acceptance. However, central route processing contributes more to the positive outcomes than masculine ideologies did. These results are consistent with previous findings that ELM based sexual assault prevention programs were effective.

The finding that the ELM accounted for more change in the outcomes than masculine ideologies offers important implications for future interventions. It suggests that traditionally masculine men can still be reached effectively with ELM-based prevention programs. Emphasis on positive masculine traits within such programs could also help motivate men to see sexual assault prevention efforts as relevant to themselves. Future research could explore the connection between positive masculinity and sexual assault prevention efforts in replications with different populations and experimental designs.

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APPENDIX A

QUESTIONNAIRES

Demographic Questionnaire

1. Age: _____

2. Educational Level: (Check the highest level that fits you.)

____Freshman ____Sophomore ____Junior ____Senior

3. Present Marital Status: ____Married ____Single ____Divorced ____Remarried

4. Race: ____White ____Black ____Latino/Hispanic ____Asian/Asian-American
____ Native American ____ Bi-racial ____ Other, specify _____

Conformity to Masculine Norms Inventory – SF

The following pages contain a series of statements about how people might think, feel or behave.

Thinking about your own actions, feelings and beliefs, please indicate how much **you personally agree or disagree with each statement** by circling SD for "Strongly Disagree", D for "Disagree", A for "Agree", or SA for "Strongly agree" to the left of the statement. There are no right or wrong responses to the statements. You should give the responses that most accurately describe your personal actions, feelings and beliefs. It is best if you respond with your first impression when answering.

1. In general, I will do anything to win	SD	D	A	SA
2. If I could, I would frequently change sexual partners	SD	D	A	SA
3. I hate asking for help	SD	D	A	SA
4. I believe that violence is never justified	SD	D	A	SA
5. Being thought of as gay is not a bad thing	SD	D	A	SA
6. In general, I do not like risky situations	SD	D	A	SA
7. Winning is not my first priority	SD	D	A	SA
8. I enjoy taking risks	SD	D	A	SA
9. I am disgusted by any kind of violence	SD	D	A	SA
10. I ask for help when I need it	SD	D	A	SA
11. My work is the most important part of my life	SD	D	A	SA
12. I would only have sex if I was in a committed relationship	SD	D	A	SA
13. I bring up my feelings when talking to others	SD	D	A	SA
14. I would be furious if someone thought I was gay	SD	D	A	SA
15. I don't mind losing	SD	D	A	SA

16. I take risks	SD	D	A	SA
17. It would not bother me at all if someone thought I was gay	SD	D	A	SA
18. I never share my feelings	SD	D	A	SA
19. Sometimes violent action is necessary	SD	D	A	SA
20. In general, I control the women in my life	SD	D	A	SA
21. I would feel good if I had many sexual partners	SD	D	A	SA
22. It is important for me to win	SD	D	A	SA
23. I don't like giving all my attention to work	SD	D	A	SA
24. It would be awful if people thought I was gay	SD	D	A	SA
25. I like to talk about my feelings	SD	D	A	SA
26. I never ask for help	SD	D	A	SA
27. More often than not, losing does not bother me	SD	D	A	SA
28. I frequently put myself in risky situations	SD	D	A	SA
29. Women should be subservient to men	SD	D	A	SA
30. I am willing to get into a physical fight if necessary	SD	D	A	SA
31. I feel good when work is my first priority	SD	D	A	SA
32. I tend to keep my feelings to myself	SD	D	A	SA
33. Winning is not important to me	SD	D	A	SA
34. Violence is almost never justified	SD	D	A	SA
35. I am happiest when I'm risking danger	SD	D	A	SA
36. It would be enjoyable to date more than one person at a time	SD	D	A	SA

37. I would feel uncomfortable if someone thought I was gay	SD	D	A	SA
38. I am not ashamed to ask for help	SD	D	A	SA
39. Work comes first	SD	D	A	SA
40. I tend to share my feelings	SD	D	A	SA
41. No matter what the situation I would never act violently	SD	D	A	SA
42. Things tend to be better when men are in charge	SD	D	A	SA
43. It bothers me when I have to ask for help	SD	D	A	SA
44. I love it when men are in charge of women	SD	D	A	SA
45. I hate it when people ask me to talk about my feelings	SD	D	A	SA
46. I try to avoid being perceived as gay	SD	D	A	SA

Gender Role Conflict Scale

Instructions: In the space to the left of each sentence below, write the number that most closely represents the degree that you Agree or Disagree with the statement. There is no right or wrong answer to each statement; your own reaction is what is asked for.

Strongly Agree					Strongly Disagree
6	5	4	3	2	1

1. ____ Moving up the career ladder is important to me.
2. ____ I have difficulty telling others I care about them.
3. ____ Verbally expressing my love to another man is difficult for me.
4. ____ Making money is part of my idea of being a successful man.
5. ____ Strong emotions are difficult for me to understand.
6. ____ Affection with other men makes me tense.
7. ____ I sometimes define my personal value by my career success.
8. ____ Expressing feelings makes me feel open to attack by other people.
9. ____ Expressing my emotions to other men is risky.
10. ____ I evaluate other people's value by their level of achievement and success.
11. ____Talking about my feelings during sexual relations is difficult for me.
12. ____ I worry about failing and how it affects my doing well as a man.

Strongly Agree					Strongly Disagree
6	5	4	3	2	1

13. ____ I have difficulty expressing my emotional needs to my partner.

14. ____ Men who touch other men make me uncomfortable.

15. ____ Doing well all the time is important to me.

16. ____ I have difficulty expressing my tender feelings.

17. ____ Hugging other men is difficult for me.

18. ____ I often feel that I need to be in charge of those around me.

19. ____ Telling others of my strong feelings is not part of my sexual behavior.

20. ____ Competing with others is the best way to succeed.

21. ____ Winning is a measure of my value and personal worth.

22. ____ I often have trouble finding words that describe how I am feeling.

23. ____ I am sometimes hesitant to show my affection to men because of how others might perceive me.

24. ____ I strive to be more successful than others.

25. ____ I do not like to show my emotions to other people.

26. ____ Telling my partner my feelings about him/her during sex is difficult for me.

Strongly Agree					Strongly Disagree
6	5	4	3	2	1

27. ____I am often concerned about how others evaluate my performance at work or school.

28. ____Being very personal with other men makes me feel uncomfortable.

29. ____Being smarter or physically stronger than other men is important to me.

30. ____ Men who are overly friendly to me make me wonder about their sexual preference (men or women).

31. ____ I like to feel superior to other people.

Thought-Listing Form

For the next three minutes, write down all thoughts that crossed your mind during the program.

Elaboration Likelihood Model Questionnaire

Directions: Please respond to the following questions by circling the number that corresponds to your response.

1. How important was the topic of this program to you personally?
   0 1 2 3 4 5 6
   Not important at all ... very important

2. How motivated were you to listen to the presentation?
   0 1 2 3 4 5 6
   Not motivated at all ... very motivated

3. What the presenter said about this topic held my attention.
   0 1 2 3 4 5 6
   strongly agree ... strongly disagree

4. How difficult to understand was the information presented?
   0 1 2 3 4 5 6
   too simple ... just right ... too difficult

5. During the presentation, I was distracted from thinking about the topic.
   0 1 2 3 4 5 6
   strongly agree ... strongly disagree

6. There was enough time in the presentation to think about the topic.
   0 1 2 3 4 5 6
   strongly agree ... strongly disagree

7. The presenter made good points about the topic.
   0 1 2 3 4 5 6
   strongly agree ... strongly disagree

8. To what extent did you try hard to evaluate the information provided?
   0 1 2 3 4 5 6
   did not try at all ... tried a extent

9. To what extent did you find the presentation well organized and easy to follow?
   0 1 2 3 4 5 6
   not at all organized and easy to follow ... very organized and easy to follow

10. To what extent did you find it difficult to concentrate on the presentation?
    0 1 2 3 4 5 6
    not at all difficult ... very difficult

11. In your estimation, how logical and accurate was the information presented?
    0 1 2 3 4 5 6
    not at all logical and accurate ... very logical and accurate

12. How would you rate the quality of the presenters' information?
    0 1 2 3 4 5 6
    very poor ... excellent

Overall Appraisal of Program Form

Overall, how would you rate this program?

Bad Good

1 2 3 4 5

Unfavorable Favorable

1 2 3 4 5

Harmful Beneficial

1 2 3 4 5

Boring Interesting

1 2 3 4 5

Irrelevant Relevant

1 2 3 4 5

Would not recommend Would Recommend

1 2 3 4 5

Behavior Intention to Change Idea-Listing Form

Please list what, if anything, you intend to do differently as a result of participating in this program.

Sexual Assault Prevention Behavioral Intentions to Change Questionnaire

Directions: In the space to the left of each sentence below, write the number that most closely represents the degree that you Agree or Disagree with the statement. There is no right or wrong answer to each statement; your own reaction is what is asked for.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

1. ____ I feel comfortable discussing sexual assault issues with a female friend.
2. ____I feel comfortable discussing sexual assault issues with a male friend.
3. ____If a buddy of mine were saying things that are coercive about a date, I would recognize that as possible sexual assault.
4. ____If a buddy of mine were saying things that are coercive about a date, I confront him about these issues.
5. ____If I saw an intoxicated girl going somewhere alone with a guy, I would worry that she could be taken advantage of.
6. ____If I saw an intoxicated girl going somewhere alone with a guy, I would step up and make sure she is ok.
7. ____If a girl told me about a sexual assault that she had experienced, I would believe her.
8. ____If a girl told me about a sexual assault that she had experienced, I would want to help her by listening and trying to find resources for her.
9. ____I would consider talking about these topics with a date or partner.
10. ____I intend to communicate my sexual intentions to partners more clearly.
11. ____If I or a date had been drinking heavily, I would wonder if we were able to consent to sexual relations.

12. ____If I or a date had been drinking heavily, I would refrain from sexual relations because our judgment could be impaired.

Illinois Rape Myth Acceptance Scale-Short Form

Directions: In the space to the left of each sentence below, write the number that most closely represents the degree that you DISAGREE or AGREE with the statement. There is no right or wrong answer to each statement; your own reaction is what is asked for.

Not at all much agree						Very agree
1	2	3	4	5	6	7

1. _____If a woman is raped while she is drunk, she is at least somewhat responsible for letting things get out of control.
2. _____Although most women wouldn't admit it, they generally find being physically forced into sex a real ''turn-on.''
3. _____If a woman is willing to ''make out'' with a guy, then it's no big deal if he goes a little further and has sex.
4. _____Many women secretly desire to be raped.
5. _____Most rapists are not caught by the police.
6. _____If a woman doesn't physically fight back, you can't really say that it was rape.
7. _____Men from nice middle-class homes almost never rape.
8. _____Rape accusations are often used as a way of getting back at men.
9. _____All women should have access to self-defense classes.
10. _____It is usually only women who dress suggestively that are raped.
11. _____If the rapist doesn't have a weapon, you really can't call it a rape.
12. _____Rape is unlikely to happen in the woman's own familiar neighborhood.
13. _____Women tend to exaggerate how much rape affects them.

Not at all agree						Very much agree
1	2	3	4	5	6	7

14. _____A lot of women lead a man on and then they cry rape.

15. _____It is preferable that a female police officer conduct the questioning when a woman reports a rape.

16. _____A woman who ‘‘teases’’ men deserves anything that might happen.

17. _____When women are raped, it’s often because the way they said ‘‘no’’ was
    i. ambiguous.

18. _____Men don’t usually intend to force sex on a woman, but sometimes they get too sexually carried away.

19. _____A woman who dresses in skimpy clothes should not be surprised if a man tries to force her to have sex.

20. _____Rape happens when a man’s sex drive gets out of control.

APPENDIX B

THOUGHT-LISTING CODING INSTRUCTIONS

Remove the thoughts from the envelope. The thoughts are numbered on the back. Record the ID # (found outside the envelope) and thought number (found on the back of the thought) on the spreadsheet. One by one, in order, code each thought on the following dimensions –

1. Relevant to the program – identify whether each thought is relevant to the content and message of the program (i.e. specific to the program content, sexual assault in general, bystander intervention, behavioral intentions to change). Record the thought as relevant (1) or not relevant (0).

2. Of the relevant thoughts only – identify whether is thought is positive and supportive of the message, demonstrating that the participant was reflective about the message and supportive of the purpose of the presentation. Record the thought as positive and supportive (1) or not positive (0).

3. Negative thoughts – identify whether each thought is negative (derogatory, unpleasant, or unfavorable) *toward* the presentation and the context of the presentation (i.e. "It's hot in here." "This was boring." "I didn't like the speaker."). Negative thoughts that are not directed toward the presentation or the context should not be included in this (i.e. "Rapists are jerks.") Record the thought as negative toward the presentation or context (1) or not negative (0).

Place the thoughts back into the same envelope, paying careful attention to keep them organized, and continue with the next envelope.

Thanks so much for your help and support!

APPENDIX C

THOUGHT-LISTING CODING INSTRUCTIONS REVISED

Remove the thoughts from the envelope. The thoughts are numbered on the back. Record the ID # (found outside the envelope) and thought number (found on the back of the thought) on the spreadsheet. One by one, in order, code each thought on the following dimensions -

1. Relevant to the program – identify whether each thought is relevant to the content and message of the program. This includes both issue-relevant thoughts (thoughts related to sexual assault in general, i.e. "My girlfriend was sexually assaulted," or "I hope this never happens to someone I care about.") and message-relevant thoughts (those that were clearly sparked by or represent reactions to the specific message arguments presented, i.e. "Wow, this happens a lot," or "There is a lot that bystanders can do."). Record the thought as relevant (1) or not relevant (0).

2. Of the relevant thoughts only – identify whether is thought is "favorable" – statements that are positive toward or supportive of the message of the program. These statements should demonstrate that the participant was reflective about the message and supportive of the purpose of the presentation. These include statements in favor of the message that mention specific desirable attributes or positive associations, statements that support the validity or value of the message of the presentation, and statements of positive affect about the speaker or presentation. Examples include, "Guys should step up more to prevent sexual assault," "I never realized this was such a serious problem," and "This speaker is really good." Please refer to the "Message of Outcry" to determine if the thought demonstrates support of the message. Record the thought as favorable toward the presentation and message (1) or not (0).

3. Unfavorable thoughts – statements that mention specific undesirable attributes or negative associations about the presentation and the context of the presentation, challenges to the validity of the presentation message, and statements of negative affect about the presentation, speaker, or context of the presentation. Examples include, "It's hot in here," "This was boring," "I didn't like the speaker," "Rape doesn't happen that often," or "It's not really rape if it wasn't forced." Negative thoughts that are not directed toward the presentation or the context should not be

included in this (i.e. “Rapists are jerks.”) Record the thought as unfavorable toward the presentation or context (1) or not negative (0).

Place the thoughts back into the same envelope, paying careful attention to keep them organized, and continue with the next envelope.

Thanks so much for your help and support!

APPENDIX D

CONSENT FORM

CONSENT FORM
Masculinity and College Men's Reactions to a Sexual Assault Prevention Program

Introduction
The purpose of this form is to provide you information that may affect your decision as to whether or not to participate in this research study. If you decide to participate in this study, this form will also be used to record your consent.

You have been asked to participate in a research project studying men's reactions to a sexual assault prevention program. The purpose of this study is to examine how personal characteristics of men can influence their thinking, attitudes, and intentions related to this type of program. You were selected to be a possible participant because you are an undergraduate man in the Aggie Access program/Psychology Subject Pool.

What will I be asked to do?
If you agree to participate in this study, you will be asked to listen to a presentation on sexual assault prevention and complete surveys of your attitudes and behavior intentions before and after the presentation. This study will take 90 minutes to complete.

What are the risks involved in this study?
The risks associated in this study are minimal, and are not greater than risks ordinarily encountered in daily life. If you experience distress due to the topic, you may contact the Student Counseling Service at https://scs.tamu.edu or **979-845-4427,** the Women's Resource Center at http://wrc.tamu.edu/ or **979-845-8784,** Student Assistance Services at http://studentaffairs.tamu.edu/SAS or **979-845-3113,** and/or the Sexual Assault Resource Center at http://www.sarcbv.org or **979-731-1000**.

What are the possible benefits of this study?
The possible benefits of participation are for you to gain education on sexual assault prevention. Potential benefits to society include gaining information from this study that could be used to develop improved sexual assault prevention efforts.

Do I have to participate?
No. Your participation is voluntary. You may decide not to participate or to withdraw at any time without your current or future relations with Texas A&M University being affected.

Will I be compensated?
You will receive class points through participation credit. You will receive 3 Credits through your participation. Credit will only be given for completing the entire study. Alternative tasks such as other studies or activities approved by your instructor are available for you to obtain class points if

you do not want to participate in this particular study. Your instructor will assign class points to after your participation in this study.

Who will know about my participation in this research study?
This study is confidential. The records of this study will be kept private and your identifying information will not be connected to your responses. No identifiers linking you to this study will be included in any sort of report that might be published. Research records will be stored securely and only Kelly Caver, M.S. and Timothy Elliott, Ph.D. will have access to the records.

Whom do I contact with questions about the research?
If you have questions regarding this study, you may contact Kelly Caver at kelly.caver@tamu.edu or Timothy Elliott at (979) 862-3095 or timothyrelliott@tamu.edu.

Whom do I contact about my rights as a research participant?
This research study has been reviewed by the Human Subjects' Protection Program and/or the Institutional Review Board at Texas A&M University. For research-related problems or questions regarding your rights as a research participant, you can contact these offices at (979)458-4067 or irb@tamu.edu.

Signature
Please be sure you have read the above information, asked questions and received answers to your satisfaction. You will be given a copy of the consent form for your records. By signing this document, you consent to participate in this study.

Signature of Participant: _____ **Date:** _____

Printed Name: _____

Signature of Person Obtaining Consent: _____ **Date:** _____

Printed Name: _____

APPENDIX E

MESSAGE OF OUTCRY SEXUAL ASSAULT PREVENTION PROGRAM

Ryan Kubec

With the Outcry program our goals are to validate students' reluctance to learning about sexual assault programs. Many programs they have seen in the past will have told them they are the problem and not been very helpful. We also want to show them the issue through a different lens. Typically, sexual assault is thought of as being a "women's issue;" we hope to show them that it can be a guys issue also. We try to do this with education on statistics and also helping them draw a personal connection to the issue by thinking of people they are close with. We lastly want to motivate them to get involved. This is the most challenging because it requires [an] emotional reaction and some passion to inspire them to take the issue personally and make a commitment to act and step in when they see situations that could result in someone being hurt. We do this through bystander empowerment and discussion options. We hope that after seeing this program, their stereotype of what type of person can be involved in ending sexual assault is challenged. We also [hope] that participants take the issue more personally and try to show that preventing sexual assault can be a masculine thing to do.

VITA

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