The Structure of Silence: Applying the Theory of Planned Behavior to College Students’ Communication about Sexuality and Sexual Assault

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This dissertation titled

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ABSTRACT

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The Structure of Silence: Applying the Theory of Planned Behavior to College Students’ Communication about Sexuality and Sexual Assault

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Sexual assault on college campuses is a serious issue. University administrators and policy makers have sought to address this issue through the implementation of bystander interventions. Bystander interventions aim to equip students with the knowledge and skills to intervene in potential sexual assault situations. In order to intervene, students must perceive they have the skills and abilities to do so. Because the ability to communicate about sexuality and sexual assault could be a skill or ability in some situations, it is important to understand the processes that undergird these communicative behaviors. Unfortunately, the quantitative research in the areas of sexual communication and sexual assault communication is limited. As such, these dissertation studies aim to utilize the theory of planned behavior (TPB) to explicate the background, emotional and rational constructs which predict college students’ intentions to engage in interpersonal sexual communication (ISC) and interpersonal sexual assault communication (ISAC). This dissertation advances sexual communication and theory of planned behavior research by conceptualizing ISC and ISAC, testing the models of ISC and ISAC and identifying the role of relevant background variables and self-conscious emotions in the TPB.
The following dissertation presents two studies. The first study identified the role of self-conscious emotions in TPB models assessing ISC and confirmed the inclusion of gender as a background variable. The findings of the first study informed the model for the second study. The second study identified and tested a model of ISAC and confirmed the relevance of gender and past ISC as background variables. The results of both studies suggest that although the TPB is a useful approach to explicating the rational processes which predict intentions to engage in ISC and ISAC, experiencing self-conscious emotions when engaging in ISC and ISAC result in less favorable attitudes, decreased subjective norms, and diminished perceived behavioral control of intentions to engage in both ISC and ISAC. As such, the experience of self-conscious emotions has a silencing effect as it, through TPB variables, diminishes one’s intention to engage in ISC and ISAC behavior. Self-conscious emotions also mediate the effect of gender (i.e., masculinity and femininity) on first-level TPB variables (attitudes, subjective norms and perceived behavioral control) in both ISC and ISAC models suggesting that emotions are the experiential filter between stable background variables and rational processes associated with ISC and ISAC behavior. Finally, study two demonstrated that past ISC behavior positively predicts attitudes, subjective norms, perceived behavioral control and behavioral intention to engage in ISAC.
DEDICATION

To the women, men, girls and boys who are silenced and those who disturb the silence.
ACKNOWLEDGMENTS

Once we accept as basic truth that rape is not a crime of irrational, impulsive, uncontrollable lust, but a deliberate, hostile, violent act of degradation and possession ... we must look towards those elements in our culture that promote and propagandize these attitudes, which offer men, and in particular young, impressionable adolescent males... the ideological and psychological encouragement to commit their acts of aggression.

- Susan Brownmiller (1975, p. 391)

Although some might not pinpoint Brownmiller’s words as the beginning of the anti-rape movement in the U.S., they, without a doubt, marked the beginning of my passion for researching the attitudes related to sexual assault. So as I reflect to write the acknowledgements at the end of this dissertation project, as is often the case with reflection at the “end,” I find myself thinking more of the “beginning”. I recall the beginning quite clearly- I was sitting in my Introduction to Women’s Studies night class with Dr. Phyllis Gorman when feminist and gender studies provided me a lens through which to beginning to understand not only my experiences with gendered and sexual violence, but also the experiences of other womyn throughout herstory. Although I didn’t realize it at the time, the moments of awareness I experienced in this course would spark an educational journey that not only inspired the completion of my undergraduate, Master’s, and doctoral degrees, but also, through my activism, the opportunity to meet and work with an amazing diversity of individuals. Each has inspired, through
collaboration and also disagreement, my work on gendered and sexual violence. To list names is to also risk omitting someone, so firstly, I acknowledge all of those who, named or unnamed, contributed to my success in any way, large or small.

Thinking again of those early days, my feminist and academic mentors played a pivotal role in helping me believe that a then, single mother with an undergraduate degree from a regional campus could continue on to graduate school. I have never forgotten the encouragement and inspiration provided by Dr. Pamela Kaylor, Dr. Phyllis Gorman, Dr. Candice Thomas-Maddox, and Dr. Scott Minar. More recently, I owe an enormous debt of gratitude to my peer mentor and cohort members Dr. Jessica Furgerson, Dr. Justin Rudnick, Dr. Stevie Munz, Justin (Gus) Foote, and the late Father Peter Raposo. Through late night work sessions, endless group texts, and unending inside jokes, they kept me sane and reminded me, particularly Father Peter, what, in life and in death, truly matters.

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through graduate school and the dissertation process. Dr. Beck and I share both the
pleasure and burden of holding ourselves to high standards in our roles as professionals,
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friendship, has taught me to come to terms with my limits while aspiring to nothing less
than greatness.

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CHAPTER 1: PROBLEM STATEMENT

Sexual assault on college campuses is a serious issue. Women between the ages of 18 and 22 are at increased risk for victimization compared to women of other ages (Black et al., 2011). Within this demographic, female college students are at higher risk for sexual assault than their non-college student peers (Fisher, Cullen, & Turner, 2000). At least one in five college women will experience an attempted or completed rape at some point during her time at college. Of these assaults, 90% will be perpetrated by individuals known to the victim. Only 12% of these incidents will be reported to law enforcement (Krebs, Lindquist, Warner, Fisher & Martin, 2007).

Male college students are also at risk for sexual victimization. Although the vast majority of empirical research investigates female victimization (Monks, Tomaka, Palacios, & Thompson, 2010), some estimate that approximately 5% to 10% of rapes in the United States are perpetrated against male victims (National Crime Victimization Survey, 1996; Scarce, 1997), whereas others estimate these rates to be as high as 21% (Larimer, Lydum, Anderson, & Turner, 1999) and 39% (Forman, 1982). Regardless, college males appear to be victimized at a slightly higher rate than the general population, with 73% reporting having experiences consistent with sexual victimization (Peterson, Voller, Polusny, & Murdoch, 2011).

Despite their risk, college students hold many mythical beliefs about issues related to sexual assault. Myths are “false or apocryphal beliefs that are widely held; they explain some important cultural phenomenon; and they serve to justify existing cultural arrangements” (Lonsway & Fitzgerald, 1994, p. 134). Greater acceptance of myths related to sexual assault has been shown to be related to the proclivity to rape and the
occurrence of sexual aggression (Desai, Edwards, Gidycz, 2008; Lonsway & Fitzgerald, 1994). Multiple studies have demonstrated college students’ propensity to hold erroneous, stereotyped beliefs regarding sexual assault (Aronowitz, Lambert, & Davidoff, 2012; Buddie & Miller, 2001; Edwards, Turchik, Dardis, Reynolds, & Gidycz, 2011; Payne, Lonsway, & Fitzgerald, 1994). Prevalence of sexual assault on campus coupled with college students’ propensity to hold false beliefs about sexual assault creates an urgent need for research targeting this subset of the population. In addition to understanding how individual factors such as myths support cultures supportive of sexual violence, understanding the communicative features of campus cultures is important to understanding how to combat issues of sexual violence on campus.

One explanation for the continued prevalence of sexual assault on college campuses is that campuses foster rape cultures. Rape cultures are environments which both support beliefs that increase the risk for sexual violence and foster attitudes which are conducive to rape (Buchwald, Fletcher, & Roth, 1993; Sanday, 2007). Factors which contribute to rape cultures on college campuses include strong men’s athletic programs, which value physical dominance (Forbes, Adams-Curtis, Pakalka, & White, 2006), fraternity and sorority culture, which couples alcohol consumption with sexual activity (Bleecker & Murnen, 2005), and myths about rape (Bleecker & Murnen, 2005), which undermine the legitimacy of defining rape as anything other than violent sexual assault by strangers. Such findings suggest that, in addition to individual factors, the peer and social factors which shape campus cultures are important to understand in the context of sexual assault on campus.
Although there is a long history of interventions delivered to college students aiming to influence rape related attitudes and behaviors (Gidycz, Rich & Marioni, 2002), scholars and practitioners have begun to focus on how peer-to-peer communication might be utilized in sexual assault prevention efforts. For example, bystander approaches to sexual assault prevention advocate that witnesses intervene in an actual or potential assault situation. Bystander approaches are gaining prominence on college campuses not only because of a growing amount of scholarship demonstrating the effectiveness of bystander programs, but also in light of recent federal regulations (Potter & Banyard, 2011). In March 2014, the Campus Sexual Violence Elimination (SaVE) Act was signed into law; this Act mandates that institutions of higher education receiving federal funds provide primary and ongoing sexual assault educational programming, including education on bystander intervention (Kingkade, 2014).

Scholars have uncovered a situational model of bystander intervention, but general cognitive processes might also influence intervention behavior. Although there are many approaches to interventions which deploy bystander engagement (Potter & Banyard, 2011), all tools utilize Latané and Darley’s (1970) model of what antecedents make individuals more likely to engage in bystander interventions. In the case of sexual assault, individuals must identify situations which there is a risk for sexual assault, feel responsible to take action, perceive that advantages of intervening outweigh the disadvantages, have the confidence in one’s ability to help, and possess the skills to do so (Burn, 2009).

Possessing the skills to intervene in a potential sexual assault, in many cases, would include the ability to communicate about sexual assault and sexuality issues. For
example, a bystander intervening in a situation where a potential victim appears too intoxicated to consent to sexual activity would likely have to discuss issues such as sexual desire (e.g., “s/he isn’t interested in having sex with you”) or sexual assault (e.g., “you cannot consent to sex when you’re this drunk”). Thus, it is possible that one’s perceived ability to communicate about sexuality and sexual assault could influence an individual’s intention to intervene. Much could be learned about decisions to intervene by examining more general opportunities and barriers to communicating about sexual assault specifically and communication about sexuality more generally. Thus, the purpose of these dissertation studies is to identify the antecedents of college students’ sexual and sexual assault communication in interpersonal contexts in an effort to provide a foundation through which to improve education related to bystander interventions in sexual assault.

Sexual Assault on Campus

Over the last few decades, the issue of sexual assault on college campuses has become a rising concern for administrators, policy makers, and activists alike. Brought to the forefront of advocacy efforts in the 1970s, the anti-rape movement gained traction on college campuses in the 1990s through legislation such as Title IX and the Clery Act, and has gained new vigor in response to group lawsuits, social media, and several high profile cases related to universities mishandling sexual assault cases (Heldman & Dirks, 2014). In fact, in 2013, the Department of Education received an unprecedented number of complaints about the mishandling of sexual assault cases, and, in 2014 alone, 55 universities were under federal investigation for issues related to sexual violence (Anderson, 2014). These complaints have been levied based on previous legislation, but
new legislation and directives forwarded by the Obama administration have further increased the salience of issue of sexual assault on campus. On January 22, 2014, President Barack Obama announced the formation of a White House Task Force to Protect Students from Sexual Assault, marking the first time a president has made sexual assault on campus a national priority (Heldman & Dirks, 2014). In addition, on March 7, 2014, the Campus Sexual Violence Elimination (SaVE) Act went into effect. This Act, in addition to establishing disciplinary standards and sexual assault policies, mandates sexual assault prevention programs for faculty, students, and staff.

Recognizing the need to address assault on college campuses, many researchers have developed sexual assault interventions targeted at individual college students (Morrison, Hardison, Mathew & O’Neil, 2004). Many of these interventions have been shown to influence stereotyped beliefs regarding sexual assault (Black, Weisz, Coats, & Patterson, 2000; Fonow, Richardson, & Wemmerus, 1992), sexual assault awareness (Breitenbecher & Gidycz, 1998; Hanson & Gidycz, 1993), and intent to rape (Foubert, 2000; Foubert & Marriot, 1997). Newer efforts are directed less at changing individuals’ self-protective behaviors, but more at bystander interventions (Potter & Banyard, 2011). Bystander interventions are gaining in prominence not only due to their effectiveness (Gidycz, Orchowski, & Edwards, 2011), but because they are required by SaVE legislation to be included in addition to efforts directed at potential perpetrators and potential victims. The perceived ability to communicate about sexual assault is important in the enactment of many bystander intervention behaviors, but there are often silences surrounding sexual assault issues.
Silence Surrounding Sexual Assault

Sexual assault is often a difficult topic to discuss. Taking a communicative approach to the study of date rape on campus, Burnett and colleagues (2009) utilized focus group data to develop a circular model of date rape. These authors assert that silencing before and after an assault occurs on four levels: the cultural context, the individual context, the situational/interpersonal context, and the immediate context. In the cultural context preceding victimization, cultures that students are involved (i.e., college campuses, surrounding communities, and society a large) silence victims and other individuals in the college community by creating ambiguity about what constitutes date rape. In the individual context preceding victimization, individual thoughts and experiences related to sexual assault contribute to silence. Within this context, psychological (e.g., personality, intent, and mentality) and sociological features (e.g., gender norms, social exchange, or peer group pressure) contribute to how individuals understand date rape. In the situational/interpersonal context, the silences at both the cultural and individual levels preceding victimization inform strategies on how to act in situations where date rape is a possibility. Finally, all preceding contexts inform how individuals understand consent in an actual instance of date rape (i.e., immediate context). Authors assert that “an occurrence of date rape indicates a breakdown in the communication of consent based upon ambiguity and muteness constructed through experiences in each of the previous contexts” (Burnett et al., 2009, p. 476). Although this model goes a long way in explaining the absence of communication related to sexual assault, continued research could contribute to this literature by approaching communication issues related to sexual assault as nested within broader patterns of
communication about sexuality. This is because there are also silences related to conversations about sexuality more generally.

Silence Surrounding Sexuality Issues

For many, sex and sexuality are highly personal topics that are often very difficult to discuss (Martinez, 2011). In parent-child relationships, researchers have documented the difficulty parents experience in communicating with their children about sexual activity (Wilson, Dalberth, Koo, & Gard, 2010). In the healthcare context, scholars have identified factors that inhibit providers’ communication about their patients’ sexuality such as the provider’s embarrassment, religious views, and homophobia (Dyer & das Nair, 2013). Even in cross-sex romantic relationships, sexual activity is often a topic avoided in conversation (Theiss & Estlein, 2013). Such findings would suggest that there are social and emotional factors inhibiting communication about sexuality in interpersonal situations in more global discussions of sexuality.

Understanding higher order factors that inhibit communicating about sexuality could contribute to understanding factors that inhibit communicating about sexual assault specifically. Returning to Burnett and colleagues (2009) model of date rape, both the cultures in which students are immersed and individual factors, both psychological and experiential, contribute to silence surrounding sexual assault. It is possible that these same contexts could influence silences surrounding discussions of sexuality more generally. That is, if college campuses foster cultures of silence around sexuality issues and individuals are silenced relative to discussions of sexuality more generally, due to gender norms and peer group pressure, silences surrounding issues of sexual assault might be explained, in part, by these higher order contexts. As such, we must also
understand the decisions that go into communicating about sexuality generally because these general communication processes may undergird choices about communicating about sexual assault specifically. Research of this nature could contribute to the development of more comprehensive models of communication related to sexual assault and provide bystander interventionists with a framework through which to indirectly influence bystander intervention intentions by reducing the factors which inhibit one’s intentions to engage in sexual communication more generally.

Sexual Communication

Sex and sexuality, as fundamental needs within human existence, are important topics in many types of relationships (Pangman & Seguire, 2000). Individuals in romantic relationships are motivated by diverse factors to engage in sexual relations to accomplish outcomes such as procreation and pleasure; however, sexuality also influences other aspects of human experience beyond pair bonding relationships (Lindgren, Schacht, Pantalone, & Blayney, 2009). Topics related to sexuality are a component of many types of interactions including those in friendships and families. For example, children’s sexual behavior is often a concern for their parents (Somers & Anagurthi, 2014). Likewise, friends often discuss the creation and maintenance of sexual relationships (Holman & Sillars, 2012). Yet, in spite of sexuality being a relevant issue in many interpersonal relationships, little is understood about the attitudes and cognitive processes that influence this particular type of communicative behavior.

In spite of the relevance of communication about sexuality in interpersonal relationships, there is a dearth of research related to communication of sexuality. For instance, the most recent edition of the SAGE Handbook of Interpersonal Communication
does not list sexuality, sex or any other sex oriented words in the index (Manning, 2013). This is a feature that has led some to call for more research related to sexuality (Orbe, Johnson, Kauffman, & Cook-Jackson, 2014). Moreover, looking at the communication literature more broadly, although there are many studies which address health issues related to sexuality, sexual pleasure and sexual identities are not frequently explored (Manning, 2014).

These omissions could be explained in part due to the lack of consistency in the terminology used and that controversial terminology, such as those related to sexuality, tend to be avoided in the literature. For example, studies exploring constructs such as interpersonal attraction and romantic intent (Malachowski & Dillow, 2011; Reeder, 2000, Weger & Emmett, 2009) investigate issues of sexuality, but do not overtly describe it as such. Similarly, although the topic avoidance literature has identified dating and sexual experiences as topics often avoided in relationships (Guerrero & Afifi, 1995a, 1995b), these studies are nested within the broader topic avoidance literature. Also, it is possible that communication scholars avoid socially unacceptable topics such as sexuality, a silence perhaps facilitated by cultural tendencies to avoid discussions of sexuality. Nonetheless, to address this lack of cogency and to further understand sexual communication behavior, it is necessary for communication scholars to overtly identify interpersonal sexuality works as such and take steps toward conceptualizing and operationalizing both sexual and sexual assault communication.

Sexual Assault Communication

Although not overtly identified as such, sexual assault communication is of interest to communication scholars. One common avenue of inquiry relates to
understanding the conditions in which victims choose to disclose their assault (e.g., Pingree & Botta, 1997; Orbuch, Harvey, Davis, & Merbach, 1994). Although important, such scholarship yields little insight into factors that influence communication about sexual assault preceding victimization or among those who do not identify as sexual assault victims. More research related to the factors that influence one’s decision to communicate about sexual assault preceding victimization and among those who do not identify as victims is needed.

Returning to Brummet and colleagues (2009) model of date rape, individuals are silenced preceding victimization and following victimization. Current communication scholarship investigating sexual assault communication (i.e., disclosure patterns) focuses on communication patterns among those after victimization, but does not explore those who have not been victimized or more general communicative behaviors related to sexual assault. Continued research related to sexual assault communication could not only provide further insight into victim’s disclosure patterns, but also could identify factors which inhibit one from engaging in communication during sexual assault situations, a key feature of bystander interventions. To elucidate such factors in the context of conversations about both sexuality and sexual assault necessitates a theoretical framework designed to predict behavior. One such theory is the theory of planned behavior.

Thus, this dissertation utilizes the theory of planned behavior (TPB; Ajzen, 1985, 1991) to explicate the emotional and rational cognitive processes, and relevant background variables, that predict college students’ behavioral intentions to communicate about sexuality, generally, and sexual assault, specifically. To accomplish these goals,
this final dissertation project forwards and tests models of interpersonal sexual communication (ISC) and interpersonal sexual assault communication (ISAC).

Summary and Preview of Chapters

This chapter presented the problem statement for this dissertation. Specifically, relevant literature was reviewed to identify the need for research in the areas of sexual and sexual assault communication and to identify the purpose of these dissertation studies. This chapter also identified a rationale for these studies.

Chapter Two provides a systematic review of the literature and forwards hypothesis and research questions. The chapter describes previous research conducted in the area and describes the relationships between theory of planned behavior, gender, self-conscious emotions and past behavior.

Chapter Three describes the methods utilized to collect, analysis and interpret the data for the first study of this dissertation. This chapter details the sampling methods, participants, procedures, and the preliminary data analysis.

Chapter Four reports the results of study one. The chapter presents two competing models and establishes the model which best elucidates the role of self-conscious emotions in relation to theory of planned behavior variables. A final model of ISC is forwarded.

Chapter Five presents the methods utilized to collect, analyze and interpret the data for the second study of this dissertation. The chapter details the sampling methods, participants, procedures and preliminary data analysis.

Chapter Six reports the results of the second study of this dissertation. The final model of ISAC is forwarded and direct and indirect effects are reported.
Finally, Chapter Seven discusses the findings, addresses the theoretical implications of the project, forwards practical suggestions to those who design/execute bystander intervention programs, describes the limitations of dissertation studies, and identifies avenues of future research.
CHAPTER 2: LITERATURE REVIEW

Sexual communication is still a developing subset of the communication studies discipline (Manning, 2014). Because there is limited research on sexual communication within communication studies, but a rich literature on related topics in psychology and women and gender studies, a turn to these fields provides an opportunity to build more comprehensive frameworks to understand these communicative processes. The purpose of this section is to review the theory of planned behavior literature and to forward important connections among the antecedents of intentions to communicate about sexuality and sexual assault.

Beginnings: Theory of Reasoned Action

Developed by Fishbein in 1967, the theory of reasoned action (TRA) serves as the basis for the theory of planned behavior (TPB). The TRA asserts that individuals evaluate the consequences of their actions before deciding to enact the behavior- an assumption which inspired the name of the theory, the theory of reasoned action.

In forwarding the TRA, Ajzen and Fishbein’s (1980) primary goal was to predict and understand individual behavior; however, intent to engage in a behavior plays a critical role in the theory. Ajzen and Fishbein suggest the simplest way to predict one’s behavior is to assess their intent to engage in the behavior. According to the theory, an individual’s intent is a function of his/her positive or negative evaluation of the behavior and the social pressures he/she perceives to enact (or not enact) a behavior. These factors are termed attitudes and subjective norms respectively. TRA assumes individuals are rational in considering their actions and decisions to engage in behaviors. Although theorists assert that an individual is most likely to intend to perform a behavior when
he/she evaluates it favorably and also perceives that significant others also evaluate the behavior favorably, the weights of attitudes and subjective norms vary based on intent and from individual to individual (Ajzen & Fishbein, 1980). The theory has explained the antecedents of a variety of behaviors (Eagly, 1993), but the theory does not account for perceived behavioral control. This shortcoming motivated Ajzen (1988) to update and extend the model in the theory of planned behavior.

Theory of Planned Behavior

Like the theory of reasoned action, the theory of planned behavior (TPB) is an expectancy-value theory and thus, assumes that human behavior is guided by rational thought processes (Henderson, Hall, Linton, 1979). The TPB forwards that behavioral intention is predicted by attitudes, subjective normative beliefs and perceived behavioral control (Aizen. 1985. 1991). A schematic of the TPB model is presented in Figure 1.
Although both TPB and TRA assume behavior is a result of rational evaluations of a particular behavior, unlike the TRA, the TPB considers volitional control. Volitional control means an individual must have the support, resources, and opportunity to perform a specific behavior (Ajzen, 1991). As such, there are many internal and external factors which can facilitate or impede the enactment of a behavior such as mental and physical abilities, social support, external barriers, and compulsions (Ajzen, 2012). Several studies have demonstrated that the theory of planned behavior is superior to the TRA (Armitage & Conner, 2001; Armitage & Conner, 1999; Hagger, Chatzisarantis, & Biddle, 2002). Ajzen’s (1988) theory of planned behavior posits that one’s attitudes, subjective norms and perceived behavioral control lead to one’s behavioral intention, and one’s behavioral intention and perceived behavioral control leads to one’s actual behavior.

**Attitude toward the Behavior**

Attitude toward a behavior is an individual’s overall evaluation of how s/he feels toward enacting a particular behavior. Attitudes take into account the strength of the attitude and behavioral beliefs. Behavioral beliefs consist of a set of beliefs about the positive and negative outcomes of performing a behavior and the valence (i.e., good or bad) of each belief outcome. Attitude toward a behavior can be assessed directly or by multiplying behavioral beliefs by their valence. In this dissertation, an individual’s attitude toward ISC and ISAC behavior is typified by an individual’s overall evaluation of engaging in sexual and sexual assault communication with friends and family and is assessed directly. For example, one’s general evaluation of engaging in interpersonal sexual assault communication is assessed by determining the valence (i.e., good/bad,
pleasant/unpleasant, and desirable/undesirable) of communicating about sexual orientation, sexual desire and sexual activity.

**Subjective Norms**

Subjective norms are composed of injunctive and descriptive norms. Injunctive norms are one’s perception that significant individuals, such as friends and family, approve or disapprove of the behavior and the relative weight the individual assigns to the approval or disapproval of these meaningful others. Injunctive norms have two components. First, injunctive norms include normative beliefs which determine whether salient individuals would support or oppose one’s behavior. Second, injunctive norms include motivation to comply. Motivation to comply reflects the extent to which individuals are compelled to act in accordance with the wishes of the salient individuals or groups of individuals. Descriptive norms are one’s perceptions of if significant others, like family and friends, engage in the target behavior themselves. Descriptive norms also include motivation to comply, but encompass the motivation to comply with what others do.

In this dissertation, subjective norms will be composed of one’s normative beliefs (i.e., injunctive norms) related to ISC and ISAC and, like other studies utilizing the TPB to predict communicative behavior (Brann & Sutton, 2009; Neuwirth & Frederick, 2004), will not assess descriptive norms. As such, subjective norms will be typified by one’s perception that friends and family approve or disapprove of communication about sexuality or sexual assault. For example, subjective norms related to sexual assault will be assessed by determining the degree to which individuals perceive their family and friends support them discussing sexual assault.
Perceived Behavioral Control

Perceived behavioral control relates to one’s perception that enacting the behavior is within his/her control and that acting will be effective in attaining the goal (Ajzen, 1988). According to the theory, perceived behavioral control includes not only perceptions of one’s ability to achieve a particular behavior, but also the perceived presence of barriers to the behavior. For example, one can perceive the ability to exercise (self-efficacy), but might not have access to exercise equipment (controllability). Thus, perceived behavioral control can be interpreted two different ways. The first is an internal belief of one’s ability to enact a behavior. The second refers to the external resources required to enact a behavior (Ajzen, 2005). When assessing PBC, some items relate to an individual’s perceived controllability of the behavior and others relate to self-efficacy. In the case of sexual and sexual assault communication, perceived behavioral control is characterized by one’s perception of their ability to engage in sexual and sexual assault communication with relevant others. This only captures the self-efficacy component of PCB, but because there are few external resources required to enact communicative behavior, assessing only self-efficacy is warranted (see Neuwirth & Frederick, 2004 and Warshaw & Davis, 1985).

Behavioral Intention

Behavioral intention refers to an individual’s readiness to enact a particular behavior. Intentions are assumed to capture one’s motivation to engage in a particular behavior and serve to indicate how hard someone is willing to work to enact a certain behavior (Ajzen, 1991). Behavioral intention is considered to be an immediate antecedent
of actual behavior. As such, the greater one’s intention to engage in a behavior is, the
greater the likelihood is of his or her enactment of the actual behavior.

Behavioral intention is composed of attitudes toward a behavior, subjective norms
and perceived behavioral control. Studies which deploy the TPB framework exhibit the
most predicative power when the target behavior is as specific as possible, including time
parameters and the context (Ajzen, 2005). As applied in this dissertation, behavioral
intention is a person’s intent to engage in interpersonal sexual communication (i.e., about
sexual orientation, sexual desire, or sexual activity) and interpersonal sexual assault
communication with a target (family, same sex friend or opposite sex friend) in the next
30 days.

*Behavior*

Behavior refers to an individual’s observable response in a particular situation
with a particular target. Behavior is a function of one’s intention to engage in the
behavior and perceptions of behavioral control. TPB forwards that perceived behavioral
control moderates the effect between intentions and actual behavior. Ajzen (1991)
forwards that the TPB works best when predicting behaviors that are mainly under one’s
volitional control. When individuals enact a behavior that is not completely under their
volitional control, the TPB performs less effectively (Godin & Kok, 1996). Nonetheless,
Ajzen (1991) notes that nearly all behaviors can be positioned on a continuum that
extends from complete lack of control to total control. A person has total control when
there are no practical constraints that inhibit the inaction of the behavior. A person has
complete lack of control when a behavior requires opportunities, resources or skills that
an individual is lacking. As conceptualized in this dissertation, behavior is the self-
reported frequency of communicating with family and friends about sexual activity, sexual orientation, and/or sexual desire in the past two weeks. For example, a student having a discussion about the sexual preferences of a friend with another friend, telling a parent about kissing a new partner, or expressing sexual interest in a prospective partner to a friend are all instances of sexual communication behavior.

Utility of Theory of Planned Behavior

As the TPB is one of the most widely tested models aimed at predicting behavior, there exists a considerable literature that has utilized the TPB. As such, several meta-analyses, spanning nearly three decades, have sought to illustrate the utility of the theory. For example, Ajzen (1991) reviewed 16 studies to examine TPB variables ability to predict behavioral intentions. TBP variables (attitude, subjective norm, and perceived behavioral control) accounted for 18% to 88% of the variance in behavioral intentions, many of which regarding various general behaviors.

Godin and Kok’s (1996) meta-analysis also supports the predictive power of the TPB. In this analysis, researchers looked at 58 studies that explored heath related behaviors and found overall that attitude toward the behavior, subjective norms and perceived behavioral control were positively correlated with behavioral intention (.46, .34 and .46, respectively). Likewise, meta-analysis of 185 independently published research studies related to physical activity and exercise showed that TPB related variables account for approximately 27% of the variance in behavior and 39% of the variance in behavioral intentions (Armitage & Conner, 2001).

More recently, McEachan, Conner, Taylor, and Lawton (2011) conducted a meta-analysis of 206 published research studies utilizing TPB to predict a wide range of
behaviors. They found that TPB variables accounted 19.3% of the variance in behavior and TPB variables of attitude, subjective norms and perceived behavioral control accounted for 44.3% of the variance in behavioral intention. Attitudes were the strongest predictor (β = 0.35), followed by perceived behavioral control (β = 0.34) and subjective norms (β = 0.15). All told, meta-analysis illustrates that TPB is an adequate predictor of intention and behavior explaining 40-49% of the variance in intention and 19-36% of the variance in behavior (Ajzen, 1991; Armitage & Conner, 2001; Godin & Kok, 1996; Hagger et al., 2002; McEachan, et al., 2011, Schulze & Whittmann, 2003; Trafimow, Sheeran, Conner, & Finlay, 2002).

Meta-analysis also shows that TPB is a useful approach to predict intentions among a series of similar behaviors. Parker and colleagues (1992) found that the mean of TPB variables referencing four specific driving violations successfully predicted 60% of the variance in drivers’ intentions to engage in those driving violations individually (i.e., drinking and driving, speeding, close following, and passing other drivers in risky situations). Beck and Ajzen (1991) found that the mean of TPB variables accounted for 81% of the variance in intentions to engage in dishonest behaviors (i.e., cheat, shoplift, and lie). Although the TPB variables accounted for slightly different percentages of variance based on the various types of behavior, such studies suggest the utility of TPB variables in predicting groups of closely related behaviors- a feature that could prove useful when predicting groups of similar communication behaviors.

The TPB has also been a useful approach to studying a variety of behaviors related to sexuality. For example, one particularly fruitful area of inquiry relates to condom use. Meta-analyses of 96 studies using TRA or TPB to predict condom use
suggests that of behavioral intentions, 58% of the variance was explained by attitudes, 39% by subjective norms, and 45% explained by perceived behavioral control (Albarracín, Johnson, Fishbein, & Muellerleile, 2001). Otis, Godin, and Lambert (in press) found TPB variables predict 69% of individuals’ intentions to use condoms. Likewise, Tyson, Covey and Rosenthal's (2014) meta-analysis of TPB articles examining heterosexual health risk behaviors such as condom and contraception illustrate the effectiveness of TPB-based interventions \( (d = 0.127) \) and argue that the TPB is an important framework through which to design interventions related to health risk behaviors.

Communication Behavior and Theory of Planned Behavior

The theory of planned behavior is a useful theoretical framework through which to study communication behavior. Neuwirth and Fredrick (2004) contend that communication is one of the key components of TPB. The authors forward that not only can communication influence beliefs about certain behavior, evaluations, beliefs about reactions of significant others, and an individual’s perceived behavioral control, but that the act of communication is, in and of itself, a behavior (Warshaw & Davis, 1985). As these dissertation studies are concerned with understanding the processes which undergird decisions to engage in ISC and ISAC behavior as a means to offer suggestions to interventionists, the TPB offers a particularly fruitful theoretical framework. That is, by utilizing the TPB to understand ISC and ISAC behavior, these studies can, through the use of common theoretical concepts, offer insight to interventionists into how communication behavior might be utilized to influence general beliefs and perceived behavioral control of intervening in sexual assault situations.
Several scholars have found the TPB to be a useful approach to examining communication related to health behaviors. Using the TPB framework, Brann and Sutton (2009) explored students’ communicative behaviors related to smoking. The authors modeled their study after Neuwirth and Frederick's (2004) work; however, unlike Neuwirth and Frederick, Brann and Sutton (2009) found no correlation neither between students’ subjective norms and behavior intention nor between perceived behavioral control and behavioral intention. The authors attribute their null results to differences in communicating about drinking and smoking; however, an alternative explanation relates to the operationalization of behavioral intention. Brann and Sutton only assessed the intention to discuss smoking with a same sex friend and an acquaintance. Such a result points to considering the communicative nuances between topics, but also that when assessing more general communicative behavior, the outcome variable must include a wide range of potential conversational partners.

Continued examination of the studies aiming to predict communicative behaviors reveals that models utilizing the TPB demonstrate the best predictability when relational variables are considered. In two such studies, authors accounted for relational influence through sampling and assessing communication intention in specific relational contexts. For example, Browne and Chan (2012) predicted 30% of the variance in intentions to engage in communication about mammography, but were only interested in this communicative behavior between mothers and daughters. Similarly, Barsevick and colleagues (2008) predicted intentions to communicate genetic test results, but only within families. However, in the study exhibiting the most predictive power, Hyde and White (2009) predicted 61% of the variance in intentions to discuss organ donation.
decisions, not by including a select few categories of actors, but rather by including all relevant actors (i.e., friends, partners, and close friends). The findings of these investigations would suggest that studies aimed at predicting general communicative behavior should, in addition to considering situational variables relevant to the communicative topic, consider an equally wide sampling of communicative partners.

Sexual Communication and Theory of Planned Behavior

The theory of planned behavior is also a useful approach to studying sexual communication. Although few in number, studies have illustrated the ability of TPB variables (attitudes, subjective norms, and perceived behavioral control) to predict communication about sex and/or sexuality related conversations (Alvarez & Villarruel, 2015; Askelson et al., 2011; Chroni, Grigoriou, Hatzigeorgiadis, & Theodorakis, 2013; Goodnight et al., 2014; Rittenour & Booth-Butterfield, 2006; Roberto et al., 2007, Walrave, Heirman, & Hallam, 2014). Beginning with studies investigating conversations about sexual activity, Alvarez and Villarruel (2015) predicted 21% of the variance in Latina women’s intention to engage in sexual communication with their parents and caregivers utilizing both attitudes toward the behavior (32% variance explained) and subjective norms (28% variance). In the healthcare context, Askelson and colleagues (2011) predicted 52% of variance in physicians intentions to discuss sexual activity with adolescent patients utilizing the TPB variables of attitudes (18%), subjective norms (53%) and perceived behavioral control (15%). Regarding sexuality related conversations, Roberto and colleagues (2011) utilized TPB to predict physicians’ intention to encourage parents to get their daughters vaccinated against the human papillomavirus. Authors found that attitudes (β = .47), subjective norms (β = .32) and
perceived behavioral control ($\beta = .11$) all positively predicted behavioral intention to engage in such conversations.

TPB variables have also been useful at predicting conversations conceptually similar or related to sexual desire. Walrave (2014) predicted 80% in adolescents intentions to engage in sexting behavior utilizing TPB variables. Specifically, he found that although attitudes and perceived behavioral control predicted 17% and 9% of the variance in intentions to sext, subjective norms were the most significant predictor, accounting for 69% of variance in intentions. Chroni and colleagues (2013) conducted an experiment utilizing vignettes to ascertain if TPB variables could predict college students intentions to stand up for a female peer who received unwanted verbal and physical sexual contact from a fellow student and from a professor. Among female students, researchers predicted 38% and 48% of variance in intentions to stand up to a peer and professor respectively utilizing attitudes ($\beta = .33$ for peer and $\beta = .19$ for professor), subjective norms ($\beta = .21$ for peer and $\beta = .37$ for professor), and perceived behavioral control ($\beta = .34$ for peer and $\beta = .36$ for professor). Results were similar among male college students, illustrating that attitudes ($\beta = .33$ for peer and $\beta = .19$ for professor), subjective norms ($\beta = .33$ for peer and $\beta = .19$ for professor), and perceived behavioral control ($\beta = .33$ for peer and $\beta = .19$ for professor) were successful in predicting intentions to stand up for a female college student facing unwanted sexual attention from a peer and from a professor. The outcome variable in this study (i.e., standing up for a female college student) is very similar to possible communicative behaviors required in a bystander intervention (e.g., standing up for a male/female student in potential sexual
assault), adding support for the utility of TPB in assessing intentions to engage in sexual communicative behavior.

**Attitudes in Sexual and Sexual Assault Communication**

In general, individuals have a positive attitude toward behaviors which they perceive to have desirable outcomes and a negative attitude toward behaviors they perceive to have undesirable outcomes (Ajzen, 2005). Previous studies illustrate that, in the case of conversations about sexuality related issues and conversations related to unwanted verbal sexual comments and sexual contact, attitudes positively predict behavioral intention. Although previous research investigated more specific communicative behaviors (i.e., communication about sexual activity) in more specific populations (i.e., caregiver-youth communication in South African families), it is plausible that attitudes would also predict more general communicative behavior such as intentions to engage in ISC and ISAC. Thus, the following hypotheses are forwarded:

- **H1a:** Attitudes toward interpersonal sexual communication will be positively associated with intentions to engage in interpersonal sexual communication such that more positive attitudes toward interpersonal sexual communication will result in increased intentions to engage in interpersonal sexual communication.

- **H1b:** Attitudes toward interpersonal sexual assault communication will be positively associated with intentions to engage in interpersonal sexual assault communication such that more positive attitudes toward interpersonal sexual assault communication will result in increased intentions to engage in interpersonal sexual assault communication.
Subjective Norms in Sexual and Sexual Assault Communication

Early adulthood is a life phase that is characterized by significant physical, emotion and social changes. This is particularly true for those attending college. College students are influenced by their peers (Boyd, Corbin, & Fromme, 2014) and parents and caregivers shape attitudes and behaviors related to communicating about sexual activity (Goodnight et al., 2014; Lindgren, Schacht, Pantalone, & Blayney, 2009). It would seem plausible that these same individuals could influence individuals’ intentions to engage in interpersonal sexual communication and interpersonal sexual assault communication.

Therefore, the following hypotheses are forwarded:

• H2a: Subjective norms toward interpersonal sexual communication will be positively associated with intentions to engage in interpersonal sexual communication such that higher subjective norms related to interpersonal sexual communication will result in increased intentions to engage in interpersonal sexual communication.

• H2b: Subjective norms toward interpersonal sexual assault communication will be positively associated with intentions to engage in interpersonal sexual assault communication such that higher subjective norms related to interpersonal sexual assault communication will result in increased intentions to engage in interpersonal sexual assault communication.

Perceived Behavioral Control in Sexual and Sexual Assault Communication

Perceived behavioral control can be interpreted two different ways. The first is an internal belief of one’s ability to enact a behavior. The second refers to the external resources required to enact a behavior (Ajzen, 2005). Because perceived behavioral
control has been relevant in more specific types of sexual discussions and in sexual assault situations, it is plausible the same relationship will exist between PBC and interpersonal sexual communication and interpersonal sexual assault communication. For example, perceived behavioral control has been shown to be a significant predictor in sexting behavior (Walrave, 2014) and physicians’ decisions to discuss sexual activity with adolescent patients (Askelson et al., 2011). Because these topics are conceptually similar to more general discussions of sexuality, the following hypotheses are forwarded:

- **H3a**: Perceived behavioral control toward interpersonal sexual communication will be positively associated with intentions to engage in interpersonal sexual communication such that higher perceived behavioral control related to interpersonal sexual communication will result in increased intentions to engage in interpersonal sexual communication.

- **H3b**: Perceived behavioral control toward interpersonal sexual assault communication will be positively associated with intentions to engage in interpersonal sexual assault communication such that higher perceived behavioral control related to interpersonal sexual assault communication will result in increased intentions to engage in interpersonal sexual assault communication.

In review, TPB forwards that behavioral intentions are predicted by one’s attitudes, subjective norms and perceived behavioral control. Actual behavior is predicted by one’s behavioral intentions and perceived behavioral control. These constructs, however, represent decision making as a solely rational process. Considering only rational constructs might not represent a complete picture of the decision making process, particularly when the behavior in question has strong affective components (Godin &
Kok, 1996). The previously reviewed literature suggests that both sexual and sexual assault communication are behaviors with strong affective components. Thus, to better understand the decision-making process related to these types of communicative behavior, we must consider the role of emotion.

Emotion in the Theory of Planned Behavior

The experience of emotion is an important factor in cognitive processes. In his book entitled The Happiness Hypothesis, social psychologist Jonathan Haidt (2006), proposed that “the mind is divided into parts that sometimes conflict. Like a rider on the back of an elephant, the conscious, reasoning part of the mind has only limited control of what the elephant does” (p. xi). Haidt (2006) goes on to explain that the rider is our conscious reasoning and the elephant (i.e., the other 99 percent of our mental processes) is our emotion and intuition. He forwards that both work in tandem when making judgments and thus, rejects the dichotomy between cognition and emotion. This is because emotions, which were once thought to be dumb and visceral, are filled with cognition. Although some emotions (e.g., fear, disgust, surprise) may be instinctive and prime responses, most judgments are made when emotional responses are organized and analyzed unconsciously. Rather than being visceral, emotions are a cognitive process that translate feeling to experiences (Dijksterhuis & Nordgren, 2006).

TPB does not account for this type of emotional cognition. TPB assumes that an individual’s actions are voluntary, that individuals use the available information in their decision-making, and that people consider the likely consequences of their actions (Ajzen, 1988, p. 117). All of these assumptions are to some degree rational, a feature that is not consistent with Haidt’s understanding of logical processes. Many scholars criticize
TPB for ignoring emotional determinants of behavior (Conner & Armitage, 1998; Gibbons, Gerrard, Blanton, & Russell, 1998; Pligt & Vries, 1998) and the omission of emotional cognitions could help explain why the TPB appears to perform less effectively in the prediction of behaviors with a strong affective or irrational component (Godin & Kok, 1996). Thus, the non-rational features of the decision making processes must be considered (Abelson, Kinder, Peters, & Fiske, 1982; Breckler & Wiggins, 1989; Edwards, 1990; Richard, van der Pligt, & de Vries, 1998; Zajonc, 1980).

The cognitive structure of emotions has been examined using three predominate models- the bipolar model, Marcus & MacKuen’s Two Dimensional Model and the discrete emotions model (Dillard & Peck, 2001). The bipolar model posits that emotions are positioned along a continuing ranging from extremely positive to extremely negative. Marcus and MacKuen’s Two Dimensional Model, however, organizes emotions based on their placement on the dimensions of valence (positive-negative) and activation or arousal (high-low). The discrete emotions model conceptualizes emotions as discrete states in which each emotion has a particular function within the environment (Lazarus, 1991).

A thorough review of the literature surrounding these approaches is beyond the scope of this dissertation; however, this dissertation adopts the discrete emotions approach due to the clarity in which this approach theorizes the relationship between emotion and behavior. That is, discrete emotion models describe the feeling associated with a particular emotion, but also detail the behavioral tendency that is elicited as a result of that feeling. For example, feelings of pride might inspire one to brag of his/her accomplishments, whereas feelings of joy might inspire laughter. In this sense, discrete
emotions that have similar valences such as joy and pride can lead to different behavioral outcomes. Because this dissertation is concerned with how emotions might influence communicative behavior, discrete emotions (e.g., self-conscious emotions) are most consistent with the goals of this dissertation and for use in studies utilizing behavioral theories (e.g., theory of planned behavior).

It is also worth noting that affect, mood, and emotion are distinct constructs with associated theories and measures; however, these constructs are often conflated or confused in the health behavioral literature. Ekkekakis (2013) provides a superb review of the current conceptualizations of affect, mood and emotion and the differences between these constructs (specifically pp. 33-51), unfortunately, much of the TPB-emotion literature is not consistent with these definitions. Thus, all the studies and findings presented in what follows are relevant to hypothesizing the role of emotion in TPB models of sexual and sexual assault communication, but might utilize problematic terminology. To provide clarity, conceptual definitions and examples will be provided wherever possible.

Generally, emotion and affect have been considered in TPB studies predicting health behaviors utilizing two approaches (Conner, McEachan, Taylor, O’Hara, & Lawton, 2015). The first, captures affect through semantic differentials in attitudes (e.g., behavior is “unpleasant-pleasant”) and is often referred to as affective attitudes. The second utilizes anticipated affect. Anticipated affect “refers to the prospect of feeling positive or negative emotions (e.g., exhilaration, regret) after performing or not performing a behavior” (Rivis, Sheeran, & Armitage, 2009, p. 2987). Factor analysis evidence has supported the assertion that attitudes and anticipated affect are independent
constructs (Rapaport & Orbell, 2000; Richard, de Vries, & van der Pligt, 1998; Richard et al., 1996; Sheeran & Orbell, 1999). Richard et al. (1996) forwards that affective attitudes and anticipated affect can be understood as different constructs based on time. Specifically, that anticipated affect refers to an individuals’ expected feelings after completing, or not, the behavior and attitudes and behavioral beliefs are general evaluations or feelings about performing or not performing an action.

The bodies of work exploring affective components of attitudes and anticipated affective reactions in TPB can be distinguished in three distinct fashions (Conner et al., 2015). Firstly, anticipated affect tends to focus on affect that is expected to follow the performance or nonperformance of a behavior, whereas affective attitudes tend to focus on the affect that is expected to occur while enacting a behavior. Second, research on anticipated affect tends to examine expected negative reactions of not performing a behavior (e.g., regret after not using a condom), whereas affective attitudes tend to focus on the positive affect relating to performing a behavior. Finally, the anticipated affect literature tends to focus on negative, self-conscious emotions whereas the affective attitudes literature focuses on hedonic emotions (e.g., enjoyment, excitement, etc.). Very few studies assess both affective attitudes and anticipated affect (e.g., self-conscious emotions) although meta-analysis has shown both to be important predictors of health behaviors which have independent and combined effects on behavior change (Conner et al., 2015). Thus, studies assessing affective components (i.e., self-conscious emotions) that are negative and occur while enacting a behavior, not as a result of not performing a behavior, are rare.
Although there is evidence that emotions are discrete constructs worthy of consideration in TPB, it is uncertain how well emotion predicts intentions to engage in behavior. Rivis et al. (2009), focusing on the anticipated affect literature assessing self-conscious emotions expected to be experienced as a result of not enacting a behavior, forwards three explanations for this lack of clarity. Firstly, some studies have reported weak or non-significant relationships between anticipated affect and behavioral intentions (O’Connor & Armitage, 2003) whereas others have found moderate to large correlations between anticipated affect and behavioral intention (Richard et al., 1998). Secondly, in studies assessing the behavioral intentions of similar actions (e.g., various types of physical exercise), findings related to the role of anticipated affect have been contradictory. Finally, many studies have controlled for anticipated affect responses; however, most have done so while including other predictors in the same step of the regression. Therefore, the unique variance explained by anticipated affect is not reported. Even less clear is how negative, self-conscious emotions that occur while enacting a behavior will influence behavioral intention.

**Self-Conscious Emotions Related to Sex and Sexual Communication**

Self-conscious emotions are moral emotions that prescribe socially appropriate behavior in social interactions (Goffman, 1967). Self-conscious emotions require self-awareness, emerge later in childhood than basic emotions (e.g., joy, fear, etc.), facilitate the attainment of complex social goals, do not have discrete recognizable facial expressions, and are cognitively complex (Izard, Ackerman, & Schultz, 1999; Lewis, 2003; Tangney & Dearing, 2002; Tracy, Robins, & Tangney, 2007). Shame, guilt, pride and embarrassment are the four generally accepted self-conscious emotions; however,
some researchers include humiliation, empathy, envy, jealousy, and shyness (Lewis, 2008).

As one of the less studied categories of emotions (Tracy et al., 2007), self-conscious emotions affect communicative interactions related to sexual issues. For example, researchers have found issues of embarrassment inhibit health care providers’ discussion of sexuality with their patients (Dyer & das Nair, 2013). Moreover, in a meta-analysis of qualitative studies, embarrassment and discomfort were continually reported by parents as factors that inhibit their communication with children about sexual issues (Wilson et al., 2010). These studies suggest self-conscious emotions are influencing individuals communicative interactions related to sexuality.

Self-conscious emotions have also been shown to be relevant in studies assessing sexual behaviors utilizing TPB. For example, Abraham, Henderson, and Der (2004) surveyed 16-year-old students and found through hierarchical regression that anticipated regret predicted 33% of the variance in intentions to use condoms. Van Empelen Schaalma, Kok, & Jansen (2001) found similar results among Dutch drug users with anticipated regret accounting for 42% of variance in intentions to utilize condoms. These same researchers found similar results in a sample of college students with anticipated regret, worry, and tensions after condom use/non-use accounting for 62% of the variance in contraceptive use in casual sexual relationships (Richard, de Vries, & van der Plight, 1998). More recently, Wang (2013) found that anticipated emotions (i.e., regret and guilt) predicted colleges students’ intentions to use condoms during sexual intercourse.

Scholarship assessing anticipated self-conscious emotions within the TPB framework have shown that anticipated self-conscious emotions mediate the effects of
attitudes, subjective norms, and perceived behavioral control on behavioral intention. Specifically, Hynie, MacDonald, and Marques (2006) found that anticipated self-conscious emotions (i.e., shame and guilt) partially mediated the effect of attitudes about condom use on intentions to use condoms and also subjective norms about condom use on intentions to use condoms. Although condom use behavior and interpersonal sexual communication are different behaviors, it would seem plausible that self-conscious emotions as a result of enacting sexual and sexual assault communication could demonstrate the same relationships with TPB variables.

However, the literature also supports the assertion the self-conscious emotions could act as an antecedent of TPB variables. That is, if self-conscious emotions related to ISC and ISAC function more like affective attitude constructs utilized in previous research, self-conscious emotions could act as an antecedent to the TPB variables of attitudes, subjective norms and perceived behavioral control. Thus, the following research questions are forwarded:

- RQ1a: How, if at all, are self-conscious emotions as a result of ISC related to attitudes, subjective norms, perceived behavioral control, and behavioral intention of ISC?
- RQ1b: How, if at all, are self-conscious emotions as a result of ISC related to attitudes, subjective norms, perceived behavioral control, and behavioral intention of ISAC?

Background Factors in Theory of Planned Behavior

Although the TPB has proven to be a useful approach to predicting both behavioral intentions and actual behavior, the TPB cannot fully predict behavioral
intentions (O’Keefe, 2002). Many scholars advocate for the addition of variables to improve the explanatory power of the model (Armitage & Conner, 1999). Even Ajzen, the theory creator forwards that additional variables can be included if they are shown to better predict intentions and behaviors. Meta-analysis suggests that nearly 40-60% of variance in behaviors can be explained by TPB variables (Albarracin, et al., 1980; Armitage & Conner, 2001; Godin & Kok, 1996; McEachan, et al., 2011; Rivis, Sheeran, & Atmitage, 2009; Schulze & Whittman, 2003; Sheeran & Taylor, 1999; Tyson, Covey, & Rosenthal, 2014); however, adding relevant background variables could increase the predictability of the model. In predicting intentions to engage in ISC, this dissertation considers the background variable of gender. In predicting ISAC, this dissertation considers gender and past ISC behavior. In what follows, gender will be discussed in relation to both ISC and ISAC. Past ISC behavior will be discussed in relation to ISAC.

**Gender**

Although often conflated, sex and gender are concepts worthy of consideration in communication about sexuality. Sex, a biological designation of male or female, is based on anatomy, chromosomes, and hormones; whereas gender (masculinity and femininity) is a social construction, a performance based on gender identity, sexual orientation, and biological sex (Butler, 2006). Butler (2006) rejects the sex and gender distinction because she argues there is no sex that is not always already gender. She forwards that “gender is the repeated stylization of the body, a set of repeated acts within a highly rigid regulatory frame” (Butler, 2006, p. 25). Thus, gender identity is not something someone *is*, but rather is something one *does*. As such, this *doing* dictates everything from attire to language choices and sexual expression.
Sex difference (i.e., male and female) research constitutes the vast majority of work in the sexual communication literature utilizing TPB reviewed here (Lindgren et al., 2009; Walrave, 2014). Gender (i.e., masculinity and femininity) is less frequently assessed (Alvarez & Villarruel, 2015) and is more representative of an individual’s gender identity. Gender identity is “an individual’s specific definition of self, based on that person’s understanding of what it means to be a man or woman” (Andersen & Hysock, 2010, p. 2). Thus, gender represents a personal categorization of how masculine or feminine an individual perceives themselves to be (Bem, 1981). It should be understood that in previous literature, studies assessing sex differences often describe their findings in terms of gender differences; however, in these dissertation studies, gender should be understood to mean masculinity and femininity and will be operationalized as two separate, continuous variables. Sex should be understood to mean male, female and will be operationalized as one, categorical variable.

Regardless, both sex and gender have been shown to be relevant the TPB literature related to issues of sexuality. For example, in discussions of condom use, meta-analysis of TPB articles shows differences based on sex (i.e., male and female). Walrave's (2014) study assessing student’s intentions to send sex related text messages found positive relationships between sex and both attitudes and subjective norms, but no relationship between sex and perceived behavioral control. In this case, sex seems to influence attitudes and subjective norms more than perceived behavioral control because although attitudes and subjective norms might prescribe appropriate behavior for men and women (Bem, 1981; Butler, 2006), it might not determine one’s perceived behavioral control. Likewise, gender has also been shown to influence sexual communication.
Specifically, gender has been shown to influence conversations about sexual health (Alvarez & Villarruel, 2015). These studies provide support for considering sex/gender in TPB models assessing communication outcomes; however, it is unclear whether sex or gender plays a more significant in predicting ISC and ISAC and how sex or gender will be related to TPB variables. Thus, the following research questions are forwarded:

• RQ2a: Does sex or gender predict intentions to engage in ISC? If so, which predicts more variance in intentions to engage in ISC.

• RQ2b: Does sex and/or gender predict intentions to engage in ISAC? If so, which predicts more variance in intentions to engage in ISAC.

• RQ3a: What, if any, is the relationship between masculinity and the theory of planned behavior variables of attitudes, subjective norms, perceived behavioral control of ISC?

• RQ4a: What, if any, is the relationship between femininity and the theory of planned behavior variables of attitudes, subjective norms, perceived behavioral control of ISC?

Gender also is likely to influence attitudes and outcomes related to sexual assault. Many studies demonstrate the relationship between masculinity and likelihood to engage in sexual aggression (Murnen, Wright, & Kaluzny, 2002). For example, Dean and Malamuth (1997) found that hyper masculine attitudes accounted for 21% of the variance in past sexually aggressive behaviors. Koss and Dinero (1988) found similar results with hyper masculinity accounting for 20% of the variance in past sexually aggressive behaviors. As such, it would seem likely that gender might also affect one’s communication related to sexual assault. Nonetheless, due to the limited literature
assessing the relationships between gender and ISAC variables, the following research question is forwarded:

- **RQ3b**: What, if any, is the relationship between masculinity and the theory of planned behavior variables of attitudes, subjective norms, perceived behavioral control of ISAC?
- **RQ4b**: What, if any, is the relationship between femininity and the theory of planned behavior variables of attitudes, subjective norms, perceived behavioral control of ISAC?

### Self-Conscious Emotions and Gender

In addition to being relevant to attitudes, subjective norms and perceived behavioral control, gender is also relevant to the experience of self-conscious emotions. Child development scholars argue that socialization practices dictate what situations elicit self-emotions (Lewis, 2003). As socialization practices differ for girls and boys, it would seem plausible that self-conscious emotions could be organized by sex. Women are often stereotyped as being more emotional than men (Barrett & Bliss-Moreau, 2009; Birnbaum, Nosanchuk, & Croll, 1980; Briton & Hall, 1995; Brody & Hall, 2008); however, this difference is not consistent across all emotions. Men are stereotyped as experiencing more anger whereas women are stereotyped as experiencing more fear, happiness, love, sadness, shyness, awe, and sympathy (Plant, Hyde, Keltner, & Devine, 2000). Looking at self-conscious emotions specifically, men are stereotyped as experiencing more pride and women, more shame, embarrassment, and guilt (Plant et al., 2000); however, these stereotypes vary across racial and ethnic groups. Yet, as these are
just stereotypes, many researchers have sought to determine if the experience of self-conscious emotions are predicted by sex.

Qualitative reviews of sex differences in the general experience of self-conscious emotion suggest that men and women experience authentic pride equally whereas men experience higher rates of hubristic pride and women, higher rates of shame, guilt, and embarrassment (Brody & Hall, 2008; Ferguson & Crowley, 1997; Ferguson & Eyre, 2000; Roberts & Goldenberg, 2007; Tracy & Robins, 2007). However, men and women also vary on their experience of self-conscious emotions in specific domains. For example, in their meta-analysis, Else-Quest, Higgins, Allison, and Morton (2012) found sex differences in self-conscious emotions were moderated by features such as race and ethnicity, age and topic domain (i.e., what the emotion is about) such that topics about sex and condom use moderated the differences between men in women.

Although there is evidence to suggest there are sex differences in relation to the experience of self-conscious emotions generally and in sexuality relevant domains, it is not clear how gender might be related to self-conscious emotions. This is largely due to the fact that literature in this area does not assess gender (i.e., masculinity and femininity). In their meta-analysis assessing sex-differences in the experience of self-conscious emotions, Else-Quest, Higgins, Allison, and Morton (2012) state the following in a footnote:

Although terminology in the field is not standardized, sex differences generally refers to biological differences or psychological differences stemming from biological origins, whereas gender differences generally refers to social-cultural differences, socially constructed differences, or differences in which the origin is
unknown. In this meta-analysis, we are unable to make claims about the causal origins of differences in self-conscious emotional experience between men and women. Thus, insofar as the origin of such differences remains unknown, we use the term gender differences to refer to differences in the emotional experience between men and women (p. 947).

Thus, although it is recognized that socially constructed differences could be a factor, previous literature provides little evidence to forward a hypothesis. Thus, the following research questions are forwarded:

- **RQ5a**: How, if at all, are self-conscious emotions ISC related to masculinity?
- **RQ6a**: How, if at all, are self-conscious emotions ISC related to femininity?
- **RQ5b**: How, if at all, are self-conscious emotions ISAC related to masculinity?
- **RQ6b**: How, if at all, are self-conscious emotions ISAC related to femininity?

*Past ISC Behavior and Behavioral Intention to Engage in ISAC*

Recall that the TPB has been shown to predict 40-49% of the variance in behavioral intention and 23-36% of the variance in behavior (Albarracin, et al., 1980; Armitage & Conner, 2001; Godin & Kok, 1996; McEachan, et al., 2011; Rivis, Sheeran, & Atmitage, 2009; Schulze & Whittman, 2003; Sheeran & Taylor, 1999; Tyson, Covey & Rosenthal, 2014). However, understanding how past behavior influences the predictive power of study models utilizing TPB has been challenging. For example, Hagger et al. (2002) found that past physical activity behavior contributed an additional 19% of variance in the prediction of future physical activity when controlling for other TPB variables. Others have found that past behavior diminished the relationships between TPB variables (Hagger, Chatzisarantis, Biddle, & Orbell, 2001) whereas others have
found past behavior to be the only significant predictor of future behavior (Norman & Smith, 1995). Seeking to clarify the influence of past behavior on future behavior, McEachan and colleagues (2011) conducted a meta-analysis of 206 health related studies and found that past behavior added an additional 10.9% of variance when predicating behavior and an addition 5% of the variance in behavioral intention. In addition, they found that past behavior was the most important predictor of future behavior, but not behavioral intention. Such findings contradict the assumption that the effect of past behavior on future behavior is fully mediated by the other TPB variables (Ajzen, 1991, 2002).

Looking to the behaviors relevant to these dissertation studies, communication about sexuality and communication about sexual assault are similar yet different constructs. As such, because sexual assault communication is a more specific type of communication about sexuality (encompassing ISC elements of sexual activity and sexual desire) it is possible that past interpersonal communication about sexuality could predict attitudes, subjective norms, perceived behavioral control and behavioral intention of interpersonal sexual assault communication. Although I found no studies assessing whether a past general behavior (e.g., exercise) predicted behavioral intention to engage in a similar, more specific behavior (e.g., running), there is evidence to suggest that this relationship could exist. For example, some research that has utilized TPB to predict a series of similar behaviors (e.g., risky driving behavior) has shown correlations between the mean of past behaviors (e.g., mean of past drunk driving, risky overtaking, speeding and close following behaviors) and the means of the TPB variables of specific behavior (Beck & Ajzen, 1991; Parker et al., 1992). If sexual and sexual assault communication
mirror these findings, the underlying beliefs which inform these two similar types of communication behavior could be different, but because communication about sexual assault is a more specific form of communication about sexuality, the past general behavior could predict the attitudes, subjective norms, perceived behavioral control and behavioral intentions of engaging in the specific behavior.

Evidence to support these relationships might also be found in psychological reactance theory (PRT; Brehm, 1966). PRT forwards that individuals experience psychological reactance (i.e., an aversive affective reaction) in response to perceptions that one’s freedom is restricted. When one experiences psychological reactance, they are motivated to engage in behaviors that restore their autonomy (Brehm, 1966, 1972, Brehm & Brehm, 1981, Wicklund, 1974) such as responding in a manner that is opposite the perceived threat or enacting a behavior similar to the threat (Quick & Stephenson, 2008). If individuals experience psychological reactance in response to conversations about sexuality, in an effort to restore their autonomy, they might report increased intentions, attitudes, subjective norms and perceived behavioral control related it ISAC. As such, the following hypothesis is forwarded:

- H4: Past ISC behavior will be positively related to attitudes, subjective norms, perceived behavioral control and intention to engage in ISAC such that when and individual reports increased ISC behavior, their attitudes, subjective norms, perceived behavioral control, and intentions to engaging in ISAC behavior will also increase.
CHAPTER 3: STUDY ONE METHOD

The purpose of this study was to utilize an extended TPB model to predict college students’ intention to engage in interpersonal sexual communication (ISC). Thus, in addition to the traditional TPB variables (i.e., attitudes, subjective norms, and perceived behavioral control related to ISC), background variables (i.e., masculinity and femininity) and self-conscious emotions were utilized to predict intentions to engage in ISC.

Conceptualizing Interpersonal Sexual Communication

Previous literature has offered little in way of clear explication of sexual communication. Somers and Canivez (2003), in their development of the Sexual Communication Scale, offer perhaps one of the most overt conceptualizations in their definition of sexual communication as “communication about sexual matters between adolescents and either or both of their parents” (p. 44). Looking for instances in communication literature, Theiss and Esten do not directly define sexual communication; however, they do imply that sexual communication is discussion about sexual intimacy which they conceptualize as “act of physical union between relationship partners (i.e., passionate kissing, mutual stimulation, and intercourse) that allow them to connect interpersonally and express their passionate feelings and affection for one another” (p. 408). Even less clear are the studies that analyze sexual communication, but do not offer conceptualizations of the construct and often create measures for the purposes of their study without reporting psychometric properties (see Somers & Canivez, 2003 for review).

In spite of the inconsistency of conceptualization, there are trends worth noting in the literature. The Handbook of Sexuality-Related Measures reports six established
measures relevant to the communication of sexuality. Catania, McDermott, and Pollack (1986) defines sexual communication as “the communication processes encompassing sexual relationships” (p. 129) whereas Fisher (1986) defines sexual communication as “the amount of communication about sexuality that has occurred between parents and their adolescent children” (p. 131). McIntyre-Smith & Fisher (2013), in a study aiming to assess female sexual communication with her partner, define sexual communication as “communication with a partner during sexual activity” (p. 134). Similarly, DiClemente and colleagues (2010) researching communication between African-American adolescent women and their partners define sexual communication as the “frequency of communicating about sexual topics with a male partner” (p. 249). Barnes and Olsen (1985) define sexual communication as the “frequency of communication with parents” (p. 142) and Warren (2011) in his exploration of family sex communication, defines it as “a general family orientation to discussion about sex between parents and children” (p. 148). Among these definitions, sexual activity is the primary topic of conversation and the interpersonal context is rather restricted.

Looking across definitions, not only do the aforementioned studies focus on sexual activity and specific interpersonal contexts, but so do all other conceptualizations offered by the handbook. A review of the relevant literature reveals that three concepts (i.e., sexual orientation, sexual activity, and sexual desire) are entailed in a sufficient definition of sexual communication (Fisher, 2011; Foster, 2008; Lovaas & Jenkins, 2007; Manning, 2014; Martinez, 2011).

Specifically, for this dissertation, interpersonal sexual communication is defined as “verbal interpersonal expressions about the sexual activity, sexual orientation, or
sexual interest of oneself or another.” In this definition, sexual activity should be understood as intimate physical activities ranging from touching and hugging to oral, anal and vaginal intercourse; sexual orientation as overt references to sexual preferences (e.g., same sex, opposite sex), and sexual interest as overt references to one’s proclivity for sensuality and eroticaism.

This conceptualization of sexual communication is consistent with the goals of this dissertation. First, because this dissertation seeks to understand patterns of communication about sexuality across a wide range of interpersonal contexts, the present definition is preferable because it accounts for communication occurring across more than one interpersonal context. Moreover, interpersonal sexual communication encompasses not only messages about the sexual communication of self (self-referent), but also sexual communication about others (other-referent). As a social construction, sexuality necessitates conceptions of the self in relation to the other (Lovaas & Jenkins, 2007). As argued by many theorists (Berger & Luckmann, 1967; Mead & Morris, 1972), the development of individual identities is necessitated by a conception of self in relation to other. This definition positions conceptions of sexuality as both communicative and relational. As such, it is necessary to consider that studies related to the prevalence of communication should account for not only communication that references oneself, but also references another’s sexual behavior.

Sample Size Calculation

Because I analyzed data using path analysis, I estimated the sample size using several procedures in order to get a range of acceptable sample sizes. One heuristic in calculating sample size is a ratio of 10 participants for every variable, with an $N$ of at
least 200 (Meyers, Gamst, & Guarino, 2013). However, a larger number of variables allow this ratio to be relaxed (Meyers, et al., 2013). Another heuristic for determining sample size is a minimum sample size of 100 or 200 (Boomsma, 1982, 1985). Others suggest for models where the degrees are freedom are greater than 20, a minimum sample size of 100 is required (Kline, 2011). Accepting Meyers and colleagues (2013) threshold of 200 participants, I recruited 300 participants to account for error in response rates and to ensure that cases dropped due to poor data quality did not influence substantive analysis.

Participants

Participants were a convenience sample of undergraduate students (N = 275) recruited through a research pool. Students were all enrolled in introductory communication courses and received course credit for their participation. A total of 7 cases were removed due to missing responses on nearly all survey questions (see also Missing Data in Preliminary Data Analysis section). The final sample (n = 268) consisted of 47.0% male students (n = 126), 52.6% female students (n = 141) and 1 student who did not indicate sex. The participants ranged in age from 18 to 49 years, with a mean age of 19.76 years (SD = 2.68). One participant did not indicate his/her age. The sample consisted of 41.1% first-year students (n = 111), 31.5% sophomores (n = 84) 15.2% juniors (n = 41), 11.1% seniors (n = 29), and 1.1% other students (n = 3). Participants were predominantly White/Caucasian (85.1%); however, 4.1% were African American/Black, 2.6% were Asian/Pacific Islander, 3.4% were Hispanic/Latino/a, 3.7% were multi-racial or multi-ethnic, and 1.1% were of other ethnic origins.
Design and Procedure

Following IRB approval, the research pool administrator assigned participants at least 18 years of age to the research study. All students were enrolled in introductory communication courses at a mid-sized Midwestern university and were randomly assigned to the various studies being conducted within the research pool. I provided students with instructions via email about how to complete the cross-sectional survey. I also sent study reminders approximately every 2 days during the 4-week data collection period. Participants completed the survey through Qualtrics, an online survey tool. Upon linking to the survey, participants provided their name and course credit information. Following this, participants were redirected to a new questionnaire with study measures such that at no point were participants’ identifiable information linked with their data. Once in the main questionnaire, participants were first presented with informed consent documentation. After agreeing to participate, participants completed study measures of gender, attitudes, subjective norms, perceived behavioral control, behavioral intentions, and self-conscious emotions.

Measurement

Femininity and Masculinity

Participants indicated femininity and masculinity by completing a modified Bem sex role inventory (BSRI; 1981) short form. The original instrument presents individuals with 30 characteristics (10 masculine, 10 feminine, and 10 androgynous) for which participants indicate on a scale from 1 (almost never true) to 7 (almost always true) how true each characteristic is of them. Although this instrument is often used as a categorization tool to organize individuals into masculine, feminine, and androgynous
groups using median splits, the current study utilized only the masculinity and femininity items (10 masculine and 10 feminine) with the intent of deploying gender as two separate variables. The scale has been used for this purpose in previous research (Smiler & Epstein, 2010) and the scale exhibits good psychometric qualities (Wheeless & Dierks-Stewart, 1981). Example masculine characteristics include assertive, aggressive and dominant. Feminine characteristics include warm, nurturing, and gentle. Higher scores represent increased identification with masculinity or femininity respectively. Items on subscales were averaged to create composite scores for both masculinity ($M = 5.46, SD = 0.88, \alpha = .81$) and femininity ($M = 5.70, SD = 0.90, \alpha = .91$).

*Attitudes Related to ISC*

Participants indicated their attitudes toward interpersonal sexual communication by answering twenty-seven items developed in accordance with Ajzen (1991). These items measured attitudes toward talking about sexual activity, sexual orientation, and sexual interest with family, same sex, and opposite sex friends. These conversation targets were selected based on previous research which showed them to be most relevant to conversations about sexual activity (Seifert, 2015). In relation to each type of interaction (e.g., conversation about sexual orientation with family), participants rated the three pairs of words- bad/good, unpleasant/pleasant, and undesirable/desirable- on a 7-point Likert-type scale. In spite of the scale items being created for the purposes of this study, items developed utilizing Ajzen stems result in both reliable and valid measures of TPB related variables (Bates, Quick, & Kloss, 2009). Sample items include, “Talking to my family about sexual activity in general is bad/good” and “Talking to my same sex friends about sexual orientation in general is punishing/rewarding.” Higher scores
represent more positive attitudes toward communicating about sexuality. Items were averaged to create a composite measure of attitudes toward interpersonal sexual communication about sexuality (Att_ISC; $M = 4.91, SD = 0.98, \alpha = .94$) composed of items in the sexual activity ($M = 4.66, SD = 1.01, \alpha = .85$), sexual orientation ($M = 4.79, SD = 1.11, \alpha = .91$), and sexual interest ($M = 4.79, SD = 1.18, \alpha = .88$) categories.

Subjective Norms Related to ISC

Participants indicated their subjective norms associated with ISC by completing nine items developed in keeping with Ajzen (1991) stem questions. The items measure subjective norms related to talking about sexual activity, sexual orientation, and sexual interest with family, same sex friends and opposite sex friends. Participants were asked to indicate on a scale from 1 (strongly disagree) to 7 (strongly agree) how much they agreed with each statement. Sample items include, “In general, my family approves of me talking about sexual activity” and “In general, my same sex friends approve of me talking about sexual interest.” Higher scores indicate increased subjective norms regarding conversations about sexuality related issues. Items were averaged to create a composite measure of subjective norms toward interpersonal sexual communication sexuality (SN_ISC; $M = 5.29, SD = 0.94, \alpha = .86$) which included items in the sexual activity ($M = 5.18, SD = 1.03, \alpha = .56$), sexual orientation ($M = 5.55, SD = 1.05, \alpha = .72$), and sexual interest ($M = 5.18, SD = 1.03, \alpha = .62$) categories.

Perceived Behavioral Control

Participants indicated their perceived behavior control associated with ISC by completing eighteen items developed to measure perceived behavioral control of discussing sexual activity, sexual orientation, and sexual interest. Recall that perceived
behavioral control includes aspects of controllability and ability. Because controllability relates to external resources required to engage in a behavior and there are few external resources related to communicative behavior, only self-efficacy (i.e., ability) items were included. Participants were asked to indicate on a scale from 1 (strongly disagree) to 7 (strongly agree) how much they believed each statement to be true of themselves. Sample items include, “I have confidence in my ability to discuss sexual activity with my family” and “I can easily discuss sexual interest with my opposite sex friends.” Higher scores indicate more perceived control over discussing sexual issues. Items were averaged to create a composite measure of perceived behavioral control related to interpersonal sexual communication (PCB_ISC; $M = 5.21$, $SD = 0.99$, $\alpha = .92$) composed of items from sexual activity ($M = 4.99$, $SD = 1.07$, $\alpha = .79$), sexual orientation ($M = 5.59$, $SD = 1.10$, $\alpha = .87$), and sexual interest ($M = 5.05$, $SD = 1.11$, $\alpha = .81$) categories.

**Behavioral Intentions**

Participants indicated their intentions to engage in ISC by completing nine items developed to measure intentions to talk about sexual activity, sexual orientation, and sexual interest with family and friends. In each type of interaction, participants were asked to rate on a scale from 1 (not at all likely) to 7 (very likely) how likely they were to engage in conversations about sexuality issues in the next 30 days. Sample items include “I am likely to talk with my family about sexual interest” and “I am likely to talk with my same sex friends about sexual orientation.” Higher scores indicate increased intentions to engage in conversations related to sexuality. Items were averaged to create a composite score of participants’ intention to engage in interpersonal sexual communication (BI_ISC; $M = 4.03$, $SD = 1.38$, $\alpha = .91$) consisting of items with sexual activity ($M = 50$.
4.13, $SD = 1.41, \alpha = .71$), sexual orientation ($M = 3.93, SD = 1.67, \alpha = .84$), and sexual interest ($M = 4.03, SD = 1.42, \alpha = .74$) topics.

**Self-Conscious Emotions**

Participants indicated their self-conscious emotions related to ISC by completing items created for the purposes of this study representing three self-conscious emotions (ashamed, embarrassed, and humiliated). I created items in keeping with self-conscious emotions as described by Robins, Noftle and Tracy (2007). Example items include, “Talking about sexual activity makes me feel ashamed” and “Talking about sexual orientation is humiliating.” Higher scores represent more self-conscious emotions related to conversations about sexuality issues. Items were averaged to create a composite measure of self-conscious emotions associated with interpersonal sexual communication (SCE_ISC; $M = 2.36, SD = 1.23, \alpha = .95$) utilizing items from topics of sexual activity ($M = 2.67, SD = 1.40, \alpha = .89$), sexual orientation ($M = 2.02, SD = 1.27, \alpha = .93$), and sexual interest ($M = 2.39, SD = 1.36, \alpha = .92$).

**Preliminary Data Analysis**

**Missing Data**

Before conducting substantive analysis, I conducted preliminary analyses to assess missing data. Upon ocular review of cases, seven cases contained nearly all missing data. In reviewing the time stamp and IP address information of these surveys, it was determined that these cases were most likely instances in which participants accidently repeated the study or did so to ensure their credit information was entered correctly. As such, these cases were removed. After removing these cases, there were no
cases missing data. Likewise, no adjustments for any of the other scale measures were conducted because, of the 268 cases, all had less than one percent missing data.

Univariate Outliers

After conducting missing data analysis, cases were screened for univariate outliers. Substantive analysis of these data included regression analysis and structural equation modeling. Due to the sensitivity of regression analysis to outliers (Viswanathan, 2005), it is important to assess these data for such cases. To assess outliers, z-scores were created for all items. Those scores which were < -3.29 or > 3.29 were flagged. There were several cases which had outliers on some items that were not a result of an error in data entry or missing value code. However, because these cases were legitimate members of the population, were few in number, did not occur on a consistent variable, and were not grouped into meaningful patterns, they were not removed.

Item Level Analysis

Following missing data and item level univariate outlier analyses, all items were analyzed for normality. I examined the range, means, standard deviations, and skew and kurtosis of the items. For items measured on a 7-point scale, the standard deviations should be at least equal to one-fifth of the range, which in this case would be 1.20 (Tabachnick & Fidell, 2013). I examined item skew and kurtosis by examining histograms and calculating a t-value for skew and kurtosis for each item. The t-values were obtained by dividing the skew and kurtosis statistics by their standard error statistic. Several items were significantly skewed and demonstrated significant kurtosis; however, no transformations were performed on items. This is because the composite variables which were created by averaging study items did not exhibit significant skew or kurtosis.
or were, in the case of self-conscious emotions, expected to be positively skewed (Tracy, Robins, & Tangney, 2007).

Exploratory and Confirmatory Factor Analyses

Following preliminary data analysis, I conducted exploratory factor analyses using principal axis extraction and oblimin rotation on all study measures. Oblique rotation such as oblimin rotation accounts for the relationships between factors, which tends to be more appropriate for social scientific research (Beavers et al., 2013). To determine if data meet the assumptions of factor analysis, I assessed Kaiser-Meyer-Olkin (KMO) measure of sampling accuracy and Bartlett’s test of sphericity. KMO values greater than .50 are acceptable (Field, 2000) and Bartlett’s sphericity statistic should be significant (Meyers et al., 2013).

After assessing that data met the assumptions for factor analysis, I determined the factor structure by analyzing item loadings and factor Eigen values. Factors are formed by items that cluster together (Meyers et al., 2013). To be retained, items needed to meet the 50/30 criteria for factor loadings. That is, primary factor loadings should be at least .50 with secondary loadings no higher than .30 (Costello & Osborne, 2005). These criteria were selected because item loadings in social scientific research tend to exhibit low to moderate communalities between .40 and .70 (Costello & Osborne, 2005) with minimum cross loadings of .32 (Tabachnick & Fidell, 2013).

After conducting EFAs on all study measures, I examined second-order measures created for the purposes of this dissertation study by conducting a series of confirmatory factor analyses (CFAs). Whereas EFA enables an exploratory approach to identifying construct factors, CFA deductively tests data against an a priori factor structure
determined by the researcher. It is not commonly accepted to conduct both EFA and CFA on the same data set (Tabachnick & Fidell, 2013), but because the items created for the purposes of this study had not undergone either EFA or CFA, I conducted both for descriptive purposes. Moreover, because second-order measures included topic (i.e., sexual activity, sexual interest and sexual orientation) and target (i.e., family, opposite sex friend and same sex friend), it was unclear if target or topic would enact more influence on item groupings making a priori designation of factors for subsequent studies difficult. Thus, EFA and CFA results were used to describe these data, but were used primarily to inform the measurement model of study two of this dissertation.

*Femininity*

The EFA procedure revealed that the ten items on the femininity instrument loaded on a single factor. Both the KMO measure (.92) and Bartlett’s test ($\chi^2 = 1363.13$ (45), $p < .001$) were acceptable, suggesting that the data met the assumptions of factor analysis. Items loaded onto a single factor which had an Eigen value greater than 1.00. Inspection of the factor loadings revealed one item (i.e., loves children) had a primary loading of .49 and did not meet the 50/30 criteria. Because of the age of the scale and that concepts of femininity and masculinity are subject to change over time (Butler, 2006), the item was removed from analysis. Table 1 presents the factor loadings of the femininity items and reliability of retained items.


Table 1

*Factor Loadings for Femininity*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sympathetic</td>
<td>0.82</td>
</tr>
<tr>
<td>Warm</td>
<td>0.80</td>
</tr>
<tr>
<td>Compassionate</td>
<td>0.77</td>
</tr>
<tr>
<td>Gentle</td>
<td>0.74</td>
</tr>
<tr>
<td>Sensitive to others</td>
<td>0.73</td>
</tr>
<tr>
<td>Affectionate</td>
<td>0.71</td>
</tr>
<tr>
<td>Tender</td>
<td>0.71</td>
</tr>
<tr>
<td>Eager to soothe hurt feelings</td>
<td>0.67</td>
</tr>
<tr>
<td>Understanding</td>
<td>0.64</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>5.08</td>
</tr>
<tr>
<td>% of Variance</td>
<td>50.81%</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
<td>.91</td>
</tr>
</tbody>
</table>

*Note:* Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

*Masculinity*

The EFA procedure revealed that the ten items on the masculinity instrument loaded on two factors. Both the KMO measure (.85) and Bartlett’s test ($\chi^2 = 822.86$ (45), $p < .001$) were acceptable, suggesting that the data met the assumptions of factor analysis. Both factors had Eigen values greater than 1.00. Inspection of the item loadings suggests one of the factors consisted of items that tend to be associated with violence or aggressiveness. The initial factor loadings are presented in Table 2.
Table 2

*Initial Factor Loadings for Masculinity*

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willing to take a stand</td>
<td>.80</td>
</tr>
<tr>
<td>Have leadership abilities</td>
<td>.79</td>
</tr>
<tr>
<td>Strong personality</td>
<td>.71</td>
</tr>
<tr>
<td>Independent</td>
<td>.64</td>
</tr>
<tr>
<td>Assertive</td>
<td>.63</td>
</tr>
<tr>
<td>Defend my own beliefs</td>
<td>.61</td>
</tr>
<tr>
<td>Willing to take risks</td>
<td>.50</td>
</tr>
<tr>
<td>Forceful*</td>
<td></td>
</tr>
<tr>
<td>Aggressive*</td>
<td>.28</td>
</tr>
<tr>
<td>Dominant*</td>
<td>.46</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>4.00</td>
</tr>
<tr>
<td>% of Variance</td>
<td>39.95%</td>
</tr>
</tbody>
</table>

*Note:* Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

* Items flagged for removal

In light of these findings, I conducted a subsequent factor analysis removing masculinity items which, on their face, seem to be more representative of violence. Because of the age of the scale and that concepts of femininity and masculinity are subject to change over time (Butler, 2006), the items were deleted. The subsequent and final EFA produced an acceptable one-factor solution. Both the KMO (.84) and Bartlett’s test ($\chi^2 = 510.92$ (21), $p < .001$) were acceptable. The factor exhibited an Eigen value greater than 1.00. All of the final items meet the 50/30 loading criteria and the scales exhibited suitable reliability scores. The final factor loadings for the masculinity instrument are presented in Table 3.
Table 3

*Final Factor Loadings for Masculinity*

<table>
<thead>
<tr>
<th>Factor 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Willing to take a stand</td>
<td>.79</td>
</tr>
<tr>
<td>Have leadership abilities</td>
<td>.79</td>
</tr>
<tr>
<td>Strong personality</td>
<td>.75</td>
</tr>
<tr>
<td>Assertive</td>
<td>.69</td>
</tr>
<tr>
<td>Independent</td>
<td>.60</td>
</tr>
<tr>
<td>Defend my own beliefs</td>
<td>.55</td>
</tr>
<tr>
<td>Willing to take risks</td>
<td>.55</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>3.26</td>
</tr>
<tr>
<td>% of Variance</td>
<td>46.55%</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
<td>.80</td>
</tr>
</tbody>
</table>

*Note:* Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

*Attitudes - Sexual Activity*

The EFA procedure revealed that the nine items created for the attitudes toward interpersonal communication about sexual activity loaded on three factors. The KMO (.77) and Bartlett’s test ($\chi^2 = 1949.32$ (36), $p < .001$) were acceptable, indicating the data met the assumptions of factor analysis. All three factors exhibited Eigen values greater than 1.00. Analysis of the pattern matrix demonstrated clear factor loadings on the three factors based on conversation target (i.e., family, same sex friends, opposite sex friends). Given the theoretical considerations which informed instrument construction, this pattern is expected. Table 4 presents the factor loadings of the factor analysis.
### Table 4

**Factor Loadings for Attitudes - Sexual Activity**

<table>
<thead>
<tr>
<th>Factor Code</th>
<th>Description</th>
<th>Opposite Sex Friends</th>
<th>Family</th>
<th>Same Sex Friends</th>
</tr>
</thead>
<tbody>
<tr>
<td>attsaof2</td>
<td>Talking to my opposite sex friends about sexual activity in general is</td>
<td>.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>unpleasant/pleasant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>attsaof3</td>
<td>Talking to my opposite sex friends about sexual activity in general is</td>
<td>.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>undesirable/desirable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>attsaof1</td>
<td>Talking to my opposite sex friends about sexual activity in general is bad</td>
<td>.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>good</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>attsafr2</td>
<td>Talking to my family about sexual activity in general is</td>
<td>.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>unpleasant/pleasant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>attsafr3</td>
<td>Talking to my family about sexual activity in general is</td>
<td>.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>undesirable/desirable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>attsafr1</td>
<td>Talking to my family about sexual activity in general is bad/good</td>
<td>.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>attsafr1</td>
<td>Talking to my family about sexual activity in general is bad/good</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>attsasf1</td>
<td>Talking to my same sex friends about sexual activity in general is bad/good</td>
<td>.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>attsasf3</td>
<td>Talking to my same sex friends about sexual activity in general is</td>
<td>.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>undesirable/desirable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>attsasf2</td>
<td>Talking to my same sex friends about sexual activity in general is</td>
<td>.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>unpleasant/pleasant</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Eigenvalue  4.06  2.05  1.01  
% of Variance 85.89%  
Cronbach’s Alpha .85

**Note:** Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

After conducting the EFA, I conducted a CFA to confirm the hypothesized structure of the attitudes related to sexual activity construct (illustrated in Figure 2).
Figure 2: Initial CFA model of attitudes - sexual activity.

Note: AttSAF = attitudes about sexual activity conversations with family; AttSAOF = attitudes about sexual activity conversations with opposite sex friends; AttSASF = attitudes about sexual activity conversations with same sex friends; AttSA = attitude toward conversations about sexual activity.

The initial model exhibited moderate fit, $\chi^2(24) = 87.01$, $p < .01$, RMSEA = .10, NNFI = 0.95, CFI = 0.97. Examination of the modification indices suggested that model fit could be much improved by correlating the residual error variances of the items by semantic group (i.e., bad/good, unpleasant/pleasant, undesirable/desirable). Thus, as these similarities in response set can explain shared method variance (Cole, Ciesla, & Steiger, 2007), I correlated the residual error terms of items by semantic differential response set. This final model exhibited close model fit, $\chi^2(15) = 25.60$, $p = .04$, RMSEA = .05, NNFI
= 0.99, CFI = 0.99, and the modification indices did not suggest any necessary alterations to the model. This modified and final model is represented in Figure 3.

![Diagram of the final CFA model of attitudes - sexual activity.](image)

**Figure 3.** Final CFA model of attitudes - sexual activity.

*Note:* All parameter estimates are standardized and * p < .01. AttSAF = attitudes about sexual activity conversations with family; AttSAOF = attitudes about sexual activity conversations with opposite sex friends; AttSASF = attitudes about sexual activity conversations with same sex friends; AttSA = attitude toward conversations about sexual activity.

**Attitudes - Sexual Interest**

The EFA procedure revealed that the nine items created for the attitudes toward interpersonal communication about sexual interest load on three factors. Data met the assumptions of factor analysis with acceptable KMO (.74) and Bartlett’s test (χ² =
2424.06 (36), $p < .001$). All three factors exhibited Eigen values greater than 1.00 and analysis of the pattern matrix demonstrated clear factor loadings on the three factors based on conversation target (i.e., family, same sex friends, opposite sex friends). Table 5 presents the factor loadings of the factor analysis.

Table 5

**Factor Loadings for Attitudes - Sexual Interest**

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
<th>Same Sex Friends</th>
<th>Family</th>
<th>Opposite Sex Friends</th>
</tr>
</thead>
<tbody>
<tr>
<td>attsisf2</td>
<td>Talking to my same sex friends about sexual interest in general is unpleasant/pleasant</td>
<td>.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>attsisf3</td>
<td>Talking to my same sex friends about sexual interest in general is undesirable/desirable</td>
<td></td>
<td>.93</td>
<td></td>
</tr>
<tr>
<td>attsisf1</td>
<td>Talking to my same sex friends about sexual interest in general is bad/good</td>
<td></td>
<td></td>
<td>.90</td>
</tr>
<tr>
<td>attsif2</td>
<td>Talking to my family about sexual interest in general is unpleasant/pleasant</td>
<td></td>
<td></td>
<td>.98</td>
</tr>
<tr>
<td>attsif3</td>
<td>Talking to my family about sexual interest in general is undesirable/desirable</td>
<td></td>
<td></td>
<td>.91</td>
</tr>
<tr>
<td>attsif1</td>
<td>Talking to my family about sexual interest in general is bad/good</td>
<td></td>
<td></td>
<td>.83</td>
</tr>
<tr>
<td>attsiof3</td>
<td>Talking to my opposite sex friends about sexual interest in general is undesirable/desirable</td>
<td></td>
<td></td>
<td>- .89</td>
</tr>
<tr>
<td>attsiof1</td>
<td>Talking to my opposite sex friends about sexual interest in general is bad/good</td>
<td></td>
<td></td>
<td>- .93</td>
</tr>
<tr>
<td>attsiof2</td>
<td>Talking to my opposite sex friends about sexual interest in general is unpleasant/pleasant</td>
<td></td>
<td></td>
<td>- .95</td>
</tr>
</tbody>
</table>

Eigenvalue | 4.46 | 2.02 | 1.08
% of Variance | 89.23% | 88

Note: Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.
After conducting the EFA, I conducted a CFA to confirm the hypothesized structure of the attitudes related to sexual interest construct. Based on the findings of the attitudes about sexual activity construct and to maintain consistency, I correlated the residual error terms of items from each semantic differential response set (i.e., good/bad, pleasant/unpleasant, desirable/undesirable). This final model exhibited close model fit, \( \chi^2(15) = 14.24, p = .51, \) RMSEA = .00, NNFI = .94, CFI = 1.00, and the modification indices did not suggest any necessary alterations to the model. This model is represented in Figure 4.

Figure 4. Final CFA model of attitudes - sexual interest.

Note: All regression weights are standardized and \( p < .01. \) AttSIF = attitudes about sexual interest conversations with family; AttSIOF = attitudes about sexual interest conversations with opposite sex friends; AttSISF = attitudes about sexual interest conversations with same sex friends; AttSI = attitude toward conversations about sexual interest.
Attitudes - Sexual Orientation

The EFA procedure revealed that the nine items created for the attitudes toward interpersonal communication about sexual orientation load on two factors. Data met the assumptions of factor analysis with acceptable KMO (.80) and Bartlett’s test ($\chi^2 = 2234.66$ (36), $p < .001$). Both factors exhibited Eigen values greater than 1.00. Analysis of the pattern matrix demonstrated factor loadings influenced by conversation target, but not as clearly distinguished as attitudes about sexual activity and interest. Specifically, opposite sex friend items appear to be slightly cross loaded with family items. Because previous attitude constructs loaded onto three factors and the factor loadings were approaching acceptable levels, I conducted another EFA, but forced the analysis to extract three factors. The results of this analysis revealed that the items loaded onto three factors. Data met the assumptions of factor analysis with acceptable KMO (.80) and Bartlett’s test ($\chi^2 = 2226.17$ (36), $p < .001$). The three factors extracted had Eigen values above or approaching 1.00. Table 6 presents the factor loadings of the factor analysis.
Table 6

Factor Loadings for Attitudes - Sexual Orientation

<table>
<thead>
<tr>
<th></th>
<th>Same Sex Friends</th>
<th>Opposite Sex Friends</th>
</tr>
</thead>
<tbody>
<tr>
<td>attsosf2</td>
<td>.92</td>
<td></td>
</tr>
<tr>
<td>attsosf1</td>
<td>.91</td>
<td></td>
</tr>
<tr>
<td>attsosf3</td>
<td>.87</td>
<td></td>
</tr>
<tr>
<td>attsof2</td>
<td></td>
<td>.97</td>
</tr>
<tr>
<td>attsof1</td>
<td></td>
<td>.90</td>
</tr>
<tr>
<td>attsof3</td>
<td></td>
<td>.79</td>
</tr>
<tr>
<td>attsoof1</td>
<td></td>
<td>-.84</td>
</tr>
<tr>
<td>attsoof3</td>
<td></td>
<td>-.87</td>
</tr>
<tr>
<td>attsoof2</td>
<td></td>
<td>-.94</td>
</tr>
</tbody>
</table>

Eigenvalue | 5.39 | 1.44 | .98
% of Variance | 80.24% |
Cronbach’s Alpha | .91 |

Note: Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

I conducted a CFA to confirm the hypothesized structure of the attitudes related to attitudes toward sexual orientation construct (illustrated in Figure 5). Like previous attitude constructs, I correlated the residual error of items based on semantic group. The
model exhibited close model fit, $\chi^2(15) = 15.93, p = .39$, RMSEA = .15, NNFI = .99, CFI = 1.00, and the modification indices did not suggest any necessary alterations to the model.

![Figure 5](image)

**Figure 5.** Final CFA model of attitudes - sexual orientation.

*Note:* All regression weights are standardized and $p < .01$. AttSOF = attitudes about sexual orientation conversations with family; AttSOOF = attitudes about sexual orientation conversations with opposite sex friends; AttSOSF = attitudes about sexual orientation conversations with same sex friends; AttSO = attitude toward conversations about sexual orientation

**Subjective Norms - Sexual Activity**

The EFA procedure revealed that the three items created to assess subjective norms related to conversations about sexual activity loaded on a single factor. The assumptions for factor analysis were met because KMO (.57) and Bartlett’s test ($\chi^2 =$
89.48 \( (3), p < .001 \) were acceptable. The factor exhibited an Eigen value greater than 1.00. Table 7 presents the factor loadings of the EFA.

Table 7

*Factor Loadings for Subjective Norms – Sexual Activity*

<table>
<thead>
<tr>
<th>Factor Loadings</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>My opposite sex friends approve of me talking about sexual activity.</td>
<td>.83</td>
</tr>
<tr>
<td>My same sex friends approve of me talking about sexual activity.</td>
<td>.73</td>
</tr>
<tr>
<td>My family approves of me talking about sexual activity.</td>
<td>.65</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>1.65</td>
</tr>
<tr>
<td>% of Variance</td>
<td>55.05%</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
<td>.56</td>
</tr>
</tbody>
</table>

*Note:* Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

**Subjective Norms - Sexual Interest**

The EFA procedure demonstrated that the three items created to determine the subjective norms associated with conversations about sexual interest loaded onto a single factor. The assumptions for factor analysis were met because KMO (.58) and Bartlett’s test \( \chi^2 = 129.60 \ (3), p < .001 \) were diminished, but acceptable. The factor exhibited an Eigen value greater than 1.00 and the scree plot indicated a single factor. All items loaded onto a single factor, but the family item was loading poorly. Table 8 presents the factor loadings of the EFA.
Table 8

**Factor Loadings for Subjective Norms - Sexual Interest**

<table>
<thead>
<tr>
<th>Factor Loadings</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>My opposite sex friends approve of me talking about sexual interest.</td>
<td>.74</td>
</tr>
<tr>
<td>My same sex friends approve me of talking about sexual interest.</td>
<td>.59</td>
</tr>
<tr>
<td>My family approves of me talking about sexual interest.</td>
<td>.45</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>1.77</td>
</tr>
<tr>
<td>% of Variance</td>
<td>59.06%</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
<td>.62</td>
</tr>
</tbody>
</table>

Note: Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

**Subjective Norms - Sexual Orientation**

The EFA procedure revealed that the three items created to assess subjective norms related to conversations about sexual orientation all loaded onto a single factor. The assumptions for factor analysis were met because KMO (.67) and Bartlett’s test ($\chi^2 = 180.03$ (3), $p < .001$) were acceptable. The factor exhibited an Eigen value greater than 1.00 and the component matrix confirmed that all three items loading onto a single factor. Table 9 presents the factor loadings of the EFA.
Table 9

*Factor Loadings for Subjective Norms – Sexual Orientation*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>My opposite sex friends approve of me talking about sexual orientation.</td>
<td>.84</td>
</tr>
<tr>
<td>My same sex friends approve of me talking about sexual orientation.</td>
<td>.83</td>
</tr>
<tr>
<td>My family approves of me talking about sexual orientation.</td>
<td>.75</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>1.97</td>
</tr>
<tr>
<td>% of Variance</td>
<td>65.45%</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
<td>.72</td>
</tr>
</tbody>
</table>

*Note:* Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

*Perceived Behavioral Control - Sexual Activity*

The EFA procedure revealed that the six items created to assess perceived behavioral control related to conversations about sexual activity loaded on two factors. Data met the assumptions of factor analysis with acceptable KMO (.66) and Bartlett’s test ($\chi^2 = 846.25$ (15), $p < .001$). Both factors exhibited Eigen values greater than 1.00.

Analysis of the pattern matrix demonstrated factor loadings influenced by conversation target, such that family items are loading on one factor and friends on the other.

However, to maintain consistency among variables, I conducted another EFA forcing the analysis to extract three factors. Data met the assumptions of factor analysis with acceptable KMO (.66) and Bartlett’s test ($\chi^2 = 850.48$ (15), $p < .001$). Table 10 presents the factor loadings of the factor analysis.
Table 10

*Factor Loadings for Perceived Behavioral Control - Sexual Activity*

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Item Description</th>
<th>Opposite Sex Friends</th>
<th>Same Sex Friends</th>
</tr>
</thead>
<tbody>
<tr>
<td>pcbsaof2</td>
<td>I can easily discuss sexual activity with my opposite sex friends.</td>
<td>.99</td>
<td></td>
</tr>
<tr>
<td>pcbsaof1</td>
<td>I have confidence in my ability to discuss sexual activity with my opposite sex friends.</td>
<td>.72</td>
<td></td>
</tr>
<tr>
<td>pbcsaf1</td>
<td>I have confidence in my ability to discuss sexual activity with my family.</td>
<td></td>
<td>.91</td>
</tr>
<tr>
<td>pbcsaf2</td>
<td>I can easily discuss sexual activity with my family.</td>
<td></td>
<td>.83</td>
</tr>
<tr>
<td>pcbsasf1</td>
<td>I can easily discuss sexual activity with my opposite sex friends.</td>
<td></td>
<td>.96</td>
</tr>
<tr>
<td>pcbsasf2</td>
<td>I can easily discuss sexual activity with my same sex friends.</td>
<td>.20</td>
<td>.66</td>
</tr>
</tbody>
</table>

Eigenvalue: 3.08  1.56  0.64
% of Variance: 76.72%
Cronbach’s Alpha: .79

*Note:* Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

After conducting the EFA, I conducted a CFA to confirm the hypothesized structure of the perceived behavioral control in conversations about sexual activity construct (illustrated in Figure 6).
Note: All regression weights are standardized and * $p < .01$. PCBSAF = perceived behavioral control of conversations about sexual activity with family; PCBSASF = perceived behavioral control of conversations about sexual activity with same sex friends; PCBSAOF = perceived behavioral control of conversations about sexual activity with opposite sex friends; PCBSA = perceived behavioral control of conversations about sexual activity

Like previous constructs, I correlated the residual error of items based on item similarities. For the perceived behavioral control construct, I correlated groups of items based on ease of enacting the behavior (e.g., I can easily discuss sexual activity with my same sex friends) and confidence (e.g., I have confidence in my ability to discuss sexual orientation with my opposite sex friends). The model exhibited close model fit, $\chi^2(3) =$
4.32, \( p = .23 \), RMSEA = .04, NNFI = .96, CFI = 1.00, and the modification indices did not suggest any necessary alterations to the model.

*Perceived Behavioral Control - Sexual Interest*

The EFA procedure revealed that the six items created to measure perceived behavioral control related to conversations about sexual interest load on two factors. Data met the assumptions of factor analysis with acceptable KMO (.66) and Bartlett’s test (\( \chi^2 = 904.29 \) (15), \( p < .001 \)). Both factors exhibited Eigen values greater than 1.00. Analysis of the pattern matrix demonstrated factor loadings influenced by conversation target, such that family items are loading on one factor and friends on the other. However, to maintain consistency among variables, I conducted another EFA forcing the analysis to extract three factors. Data met the assumptions of factor analysis with acceptable KMO (.64) and Bartlett’s test (\( \chi^2 = 915.37 \) (15), \( p < .001 \)). Table 11 presents the factor loadings of the factor analysis.
Table 11

*Factor Loadings for Perceived Behavioral Control - Sexual Interest*

<table>
<thead>
<tr>
<th></th>
<th>Opposite Sex Friends</th>
<th>Family</th>
<th>Same Sex Friends</th>
</tr>
</thead>
<tbody>
<tr>
<td>pcbsiof2</td>
<td>I can easily discuss sexual interest with my opposite sex friends</td>
<td>.97</td>
<td></td>
</tr>
<tr>
<td>pcbsiof1</td>
<td>I have confidence in my ability to discuss sexual interest with my opposite sex friends</td>
<td>.76</td>
<td></td>
</tr>
<tr>
<td>pcbsif1</td>
<td>I have confidence in my ability to discuss sexual interest with my family.</td>
<td></td>
<td>.90</td>
</tr>
<tr>
<td>pcbsif2</td>
<td>I can easily discuss sexual interest with my family.</td>
<td></td>
<td>.88</td>
</tr>
<tr>
<td>pcbsisf1</td>
<td>I have confidence in my ability to discuss sexual interest with my same sex friends.</td>
<td></td>
<td>.95</td>
</tr>
<tr>
<td>pcbsisf2</td>
<td>I can easily discuss sexual interest with my same sex friends.</td>
<td>.13</td>
<td>.68</td>
</tr>
<tr>
<td></td>
<td>Eigenvalue</td>
<td>3.22</td>
<td>1.43</td>
</tr>
<tr>
<td></td>
<td>% of Variance</td>
<td></td>
<td>76.90%</td>
</tr>
<tr>
<td></td>
<td>Cronbach’s Alpha</td>
<td></td>
<td>.81</td>
</tr>
</tbody>
</table>

Note: Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

The CFA model for the confirmatory analysis on the perceived behavioral control related to sexual interest exhibited close model fit, $\chi^2(3) = 4.38, p = .22$, RMSEA = .04, NNFI = .96, CFI = 1.00, and the modification indices did not suggest any necessary alterations to the model. The model is represented in Figure 7.
**Perceived Behavioral Control - Sexual Orientation**

EFA procedures revealed that the six items created to assess perceived behavioral control related to conversations about sexual orientation loaded onto a single factor. KMO (.79) and Bartlett’s test ($\chi^2 = 942.18$ (15), $p < .001$) were acceptable. The factor exhibited an Eigen value greater than 1.00. I then conducted another EFA forcing the analysis to extract three factors. Data met the assumptions of factor analysis with...
acceptable KMO (.78) and Bartlett’s test ($\chi^2 = 954.00$ (15), $p < .001$). Table 12 presents the factor loadings of the factor analysis.

Table 12

<table>
<thead>
<tr>
<th>Factor Loadings for Perceived Behavioral Control - Sexual Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>pcbsoof2</td>
</tr>
<tr>
<td>pcbsosf2</td>
</tr>
<tr>
<td>pcbsosf1</td>
</tr>
<tr>
<td>pcbsoof1</td>
</tr>
<tr>
<td>pcbsof1</td>
</tr>
<tr>
<td>pcbsof2</td>
</tr>
</tbody>
</table>

Eigenvalue | 3.08 | .91 | .52 |
% of Variance | 75.47% |
Cronbach’s Alpha | .87 |

Note: Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

Analysis of the factor loadings for the EFA forced to three still indicated that there were two factors. Specifically, items grouped by target (i.e., friends and family). Nonetheless, to stay consistent with the other TPB variables, I conducted a CFA with three factors. The model for the confirmatory analysis on the perceived behavioral control related to sexual orientation exhibited close model fit, $\chi^2(3) = 2.91$, $p = .41$, RMSEA =
.00, NNFI = 1.00, CFI = 1.00, and the modification indices did not suggest any necessary alterations to the model. The model is represented in Figure 8.

Figure 8. Final CFA model of perceived behavioral control - sexual orientation.

Note: All regression weights are standardized and \( p < .01 \). PCBSOF = perceived behavioral control of conversations about sexual orientation with family; PCBSOSF = perceived behavioral control of conversations about sexual orientation with same sex friends; PCBSOOF = perceived behavioral control of conversations about sexual orientation with opposite sex friends; PCBSO = perceived behavioral control of conversations about sexual orientation

Behavioral Intentions - Sexual Activity

The EFA procedure demonstrated that the three items created to determine the behavioral intention to engage in conversations about sexual activity loaded onto a single
factor. The assumptions for factor analysis were met because KMO (.57) and Bartlett’s test ($\chi^2 = 214.29$ (3), $p < .001$) were diminished, but acceptable. The factor exhibited an Eigen value greater than 1.00. All items loaded onto a single factor. Table 13 presents the factor loadings of the EFA.

Table 13

**Factor Loadings for Behavioral Intentions – Sexual Activity**

| I intend to talk with my opposite sex friends about sexual activity in future conversations. | .90 |
| I intend to talk with my same sex friend about sexual activity in future conversations. | .85 |
| I intend to talk with my family about sexual activity in future conversations. | .62 |
| Eigenvalue | 1.92 |
| % of Variance | 63.94% |
| Cronbach’s Alpha | .71 |

*Note:* Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

**Behavioral Intentions - Sexual Interest**

The EFA procedure demonstrated that the three items created to determine the behavioral intention to engage in conversations about sexual interest loaded onto a single factor. The assumptions for factor analysis were met because KMO (.60) and Bartlett’s test ($\chi^2 = 239.61$ (3), $p < .001$) were acceptable. The factor exhibited an Eigen value greater than 1.00 and all items loaded onto a single factor. The CFA model exhibited an RMSEA = .54, NNFI = 1.00, CFI = 1.00. Table 14 presents the factor loadings of the EFA and standardized regression weights of the CFA.
Table 14

*Factor Loadings for Behavioral Intention – Sexual Interest*

<table>
<thead>
<tr>
<th>Factor Loadings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I intend to talk with my opposite sex friends about sexual interest in future conversations.</td>
<td>.90</td>
</tr>
<tr>
<td>I intend to talk with my same sex friend about sexual interest in future conversations.</td>
<td>.86</td>
</tr>
<tr>
<td>I intend to talk with my family about sexual interest in future conversations.</td>
<td>.66</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>1.90</td>
</tr>
<tr>
<td>% of Variance</td>
<td>66.34%</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
<td>.74</td>
</tr>
</tbody>
</table>

*Note:* Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

**Behavioral Intentions - Sexual Orientation**

The EFA procedure demonstrated that the three items created to determine the behavioral intention to engage in conversations about sexual orientation loaded onto a single factor. The assumptions for factor analysis were met because KMO (.67) and Bartlett’s test ($\chi^2 = 383.75$ (3), $p < .001$) were acceptable. The factor exhibited an Eigen value greater than 1.00 and all items loaded onto a single factor. The CFA model exhibited an RMSEA = .54, NNFI = 1.00, CFI = 1.00. Table 15 presents the factor loadings of the EFA and standardized regression weights of the CFA.
Table 15

*Factor Loadings for Behavioral Intention – Sexual Orientation*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>I intend to talk with my opposite sex friends about sexual</td>
<td>.91</td>
</tr>
<tr>
<td>orientation in future conversations.</td>
<td></td>
</tr>
<tr>
<td>I intend to talk with my same sex friend about sexual</td>
<td>.91</td>
</tr>
<tr>
<td>orientation in future conversations.</td>
<td></td>
</tr>
<tr>
<td>I intend to talk with my family about sexual orientation in</td>
<td>.79</td>
</tr>
<tr>
<td>future conversations.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Eigenvalue</th>
<th>% of Variance</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eigenvalue</td>
<td>2.28</td>
<td>75.92%</td>
<td>.84</td>
</tr>
</tbody>
</table>

*Note:* Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

*Self-Conscious Emotions - Sexual Activity*

EFA procedures revealed that the three items created to assess self-conscious emotions related to conversations about sexual activity loaded onto a single factor. KMO (.75) and Bartlett’s test ($\chi^2 = 461.07$ (3), $p < .001$) were acceptable. The factor exhibited an Eigen value greater than 1.00. Analysis of the component matrix confirmed that all three items loaded onto a single factor. Table 16 presents the factor loadings of the EFA.
Table 16

<table>
<thead>
<tr>
<th>Factor Loadings for Self-Conscious Emotions - Sexual Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor Loadings</td>
</tr>
<tr>
<td>Talking about sexual activity makes me feel ashamed.</td>
</tr>
<tr>
<td>Talking about sexual activity makes me feel embarrassed.</td>
</tr>
<tr>
<td>Talking about sexual activity is humiliating.</td>
</tr>
<tr>
<td>Eigenvalue</td>
</tr>
<tr>
<td>% of Variance</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
</tr>
</tbody>
</table>

Note: Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

Self-Conscious Emotions - Sexual Interest

The EFA procedure revealed that the three items created to assess self-conscious emotions related to conversations about sexual interest all loaded onto a single factor. KMO (.76) and Bartlett’s test ($\chi^2 = 601.12$ (3), $p < .001$) were acceptable. The factor exhibited an Eigen value greater than 1.00, with all three items loading onto a single factor. Table 17 presents the factor loadings of the EFA.

Table 17

<table>
<thead>
<tr>
<th>Factor Loadings for Self-Conscious Emotions - Sexual Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor Loadings</td>
</tr>
<tr>
<td>Talking about sexual interest is humiliating.</td>
</tr>
<tr>
<td>Talking about sexual interest makes me feel ashamed.</td>
</tr>
<tr>
<td>Talking about sexual interest makes me feel embarrassed.</td>
</tr>
<tr>
<td>Eigenvalue</td>
</tr>
<tr>
<td>% of Variance</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
</tr>
</tbody>
</table>

Note: Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.
Self-Conscious Emotions - Sexual Orientation

The EFA procedure showed that the three items created to assess self-conscious emotions related to conversations about sexual orientation loaded onto a single factor. The assumptions for factor analysis were met because KMO (.77) and Bartlett’s test ($\chi^2 = 664.74 (3), p < .001$) were acceptable. The factor exhibited an Eigen value greater than 1.00. Analysis of the component matrix confirmed a single factor, with all three items loading onto a single factor. Table 18 presents the factor loadings of the EFA.

Table 18

<table>
<thead>
<tr>
<th>Factor Loadings for Self-Conscious Emotions Related to Sexual Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talking about sexual orientation is humiliating.</td>
</tr>
<tr>
<td>Talking about sexual orientation makes me feel ashamed.</td>
</tr>
<tr>
<td>Talking about sexual orientation makes me feel embarrassed.</td>
</tr>
<tr>
<td>Eigenvalue</td>
</tr>
<tr>
<td>% of Variance</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
</tr>
</tbody>
</table>

*Note:* Factor loadings below .10 suppressed. Underlined factor coefficients show acceptable factor loadings.

Data Analysis

Primary Quantitative Analysis

A hypothesized model for study variables was estimated using path analysis using the SPSS AMOS 23.0 for Windows software package. Although SEM was the intended analysis for this study, path analysis was chosen due to unstable latent variables as a result of the low sample size. Model fit was assessed using the four common fit indices forwarded by Kline (2011): (a) model chi-square, (b) the root mean square error of
approximation (RMSEA), (c) the non-normed fit index (NNFI), and (d) the comparative fit index (CFI). Model chi-square assesses model fit, with a good fit indicated by a nonsignificant chi-square value. One shortcoming of chi-square analyses is that it relies heavily on sample size, such that models assessed using moderately large samples sizes almost always produce significant chi-square values. The other three indices forwarded by Kline (2011) correct for this shortcoming. The RMSEA statistic assesses the model fit per degree of freedom, with RMSEA values below .08 indicating an acceptable fit (MacCallum, Browne, & Sugawara, 1996). The NNFI and CFI statistics illustrate the degree to which the observed data fits the proposed model better than a null model with no relationships between the latent constructs. Acceptable fit for both of these statistics is represented by values of .95 or above (Kline, 2011). In addition, to estimate the indirect effects of self-conscious emotions on the theory of planned behavior variables, I used bias-corrected bootstrap confidence intervals (CIs) with 10,000 samples per Kline (2011).

Summary

The purpose of this chapter was to describe the sampling, data collection, and measurement procedures for the first study of this dissertation. The chapter elucidated the participants, measures, and explained data analysis procedures. The next chapter reports the results of study one.
CHAPTER 4: STUDY ONE RESULTS

This chapter reports the results of study one. The purposes of this study were to utilize an extended TPB model to predict college students’ intention to engage in interpersonal sexual communication (ISC) and to determine the relationships between TPB variables, gender, and self-conscious emotions. This chapter describes the final study model and addresses the hypotheses and research questions that were forwarded in Chapter Two. Descriptive statistics, including means, standard deviations, and Pearson correlations for all variables are included in Table 19.

Table 19

Descriptive Statistics and Correlations for all Study One Model Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Masc</td>
<td>5.46</td>
<td>0.88</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Fem</td>
<td>5.70</td>
<td>0.90</td>
<td>0.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. SCE_ISC</td>
<td>2.36</td>
<td>1.23</td>
<td>-0.23</td>
<td>-0.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Att_ISC</td>
<td>4.91</td>
<td>0.98</td>
<td>0.31</td>
<td>0.21</td>
<td>-0.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. SN_ISC</td>
<td>5.29</td>
<td>0.94</td>
<td>0.31</td>
<td>0.32</td>
<td>-0.36</td>
<td>0.68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. PCB_ISC</td>
<td>5.21</td>
<td>0.99</td>
<td>0.33</td>
<td>0.26</td>
<td>-0.52</td>
<td>0.73</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. BI_ISC</td>
<td>4.03</td>
<td>1.38</td>
<td>0.25</td>
<td>0.22</td>
<td>-0.27</td>
<td>0.51</td>
<td>0.57</td>
<td>0.58</td>
<td></td>
</tr>
</tbody>
</table>

Note: All correlations are significant at p < .01. Masc = Masculinity. Fem = Femininity. Att_ISC = Attitudes toward Interpersonal Sexual Communication. SN_ISC = Subjective norms toward Interpersonal Sexual Communication. PCB_ISC = Perceived Behavioral Control of Interpersonal Sexual Communication. BI_ISC = Behavioral Intention to engage in Interpersonal Sexual Communication. SCE_ISC = Self-Conscious Emotions related to Interpersonal Sexual Communication.

Preliminary Analysis

Research question 2a asked, of sex and gender, which predicted more variance in ISC. To answer this question, I conducted a regression analysis with sex in the first step.
and masculinity and femininity in the second step. Results indicate that sex did not predict behavioral intentions to engage in ISC, $F = .02$ (1, 266), $p = .96$. In the second step, the addition of masculinity and femininity resulted in a significant model, $F = 8.95$ (3, 266), $p < .001$, and the change in variance accounted for was significant, $\Delta F = 13.42$ (2, 263), $p < .001$. Overall the model accounted for 8% of the variance in intentions to engage in interpersonal sexual communication. Analysis of regression coefficients indicates that both masculinity, $\beta = .20$, $t = 3.29$, $p < .01$, and femininity, $\beta = .18$, $t = 2.88$, $p < .01$, are robust predictors of intentions to engage in ISC whereas sex is not. As a result of this finding, masculinity and femininity will be included in substantive analysis but sex will not.

### Substantive Analysis

The theory of planned behavior posits that an individual’s attitudes, subjective norms, and perceived behavioral control predict behavioral intention. Because TPB privileges logical thought processes, the role of emotional processes is unclear. Previous research provides evidence to suggest emotions could mediate the effects of attitudes, subjective norms and perceived behavioral control on behavioral intention. Alternatively, emotions could act as an antecedent to attitudes, subjective norms, and perceived behavioral control. To begin the substantive analysis and to assess the fit of the TPB model, I conducted a path analysis in SPSS AMOS without self-conscious emotions. The initial model fit was poor, $\chi^2(5) = 396.32$, $p < .01$, RMSEA = .54, NNFI = 0.40, CFI = 0.40, and review of the modification indices suggested model fit could be much improved by correlating the residual error variances of the first-level TPB variables of attitudes, subjective norms and perceived behavioral control.
Some degree of shared error variance among constructs can be expected as a result of the assessment method. That is, factors such as scale-specific properties and scale response set can explain shared method variance and not correlating their residuals can inhibit meaningful interpretation of structural models (Cole, Ciesla, & Steiger, 2007). I revised the model by covarying the residual error terms of TPB first-level exogenous variables (i.e., attitudes toward ISC to subjective norms about ISC, subjective norms about ISC to perceived behavioral control of ISC, and attitudes toward ISC to perceived behavioral control of ISC) which significantly improved the model fit, $\chi^2(2) = 1.21, p = .54$, RMSEA = .00, NNFI = 0.99, CFI = 1.00. All model paths except for the path between attitudes and behavioral intention were significant and the modification indices suggested no model modifications. The model is presented in Figure 9.
Self-Conscious Emotions as a Mediator

To continue data analysis, I entered self-conscious emotions as a mediator between first-level TPB variables and behavioral intention. The model is represented in Figure 10.
Figure 10. Initial model of interpersonal sexual communication with self-conscious emotions as a mediator.

Note: Masc = Masculinity. Fem = Femininity. Att_ISC = Attitudes toward interpersonal sexual communication. SN_ISC = Subjective norms toward interpersonal sexual communication. PCB_ISC = Perceived behavioral control of interpersonal sexual communication. BI_ISC = Behavioral intention to engage in interpersonal sexual communication.

The fit of the mediation model was acceptable, χ²(4) = 3.93, p = .42, RMSEA = .00, NNFI = 0.99, CFI = 1.00; however, several paths in this model were nonsignificant (i.e., attitude to self-conscious emotions, self-conscious emotions to behavioral intention, subjective norms and self-conscious emotions, and attitudes to behavioral intention). I continued revising the model as described by Kline (2011) and started to remove these nonsignificant paths one by one. To begin to modify the model, I removed the attitude to self-conscious emotion path, then the path between self-conscious emotions and behavioral intention, and then the path between subjective norms and self-conscious
emotions. Assessment of the model following each path removal did not alter the significance of the remaining paths. Thus, the data suggest that self-conscious emotions do not mediate the effects of attitudes, subjective norms, perceived behavioral control on behavioral intentions.

The theoretical justification for removing the paths treating self-conscious emotions as a mediator of the effects of first-level TPB variables and behavioral intention was rooted in literature examining anticipated affect. It seems plausible that the reason the path between emotion and behavioral intention was not significant was due to the time orientation of the emotional and logical experiences as conceptualized by this study. Specifically, anticipated affect “refers to the prospect of feeling positive or negative emotions (e.g., exhilaration, regret) after performing or not performing a behavior” (Rivis et al., 2009, p. 2987); however, the time orientation of the experience of emotion in this study was not future oriented (i.e., I will feel awkward when discussing sexuality), but rather oriented in the present (i.e., Talking about sexual activity is humiliating). In addition, anticipation of feeling an emotion is a logical exercise, making it likely that such a logical process would occur in tandem with other logical TPB variables in previous studies. Because emotion in this study was conceptualized as a feeling that occurs while communicating about sexuality instead of how one thinks s/he will feel as a result of sexual conversations, it follows that the path between attitudes and self-conscious emotions and self-conscious emotions and behavioral intention would be nonsignificant.

Finally, I removed the path from attitudes to behavioral intention. Although there is a strong literature which supports the assertion that attitudes toward a behavior will
predict one’s intention to engage in said behavior, in studies assessing communicative outcomes (e.g., conversations about smoking and sexual health), the path between attitudes and behavioral intention was also not significant (Brann & Sutton, 2009; Rittenour & Booth-Butterfield, 2006). It is possible that sexual communication is similar to these other communicative outcomes and thus, the path was removed.

After removing all the nonsignificant paths consistent with data- and theory-driven concerns, the final iteration of the model, $\chi^2(8) = 8.30, p = .40$, RMSEA = .01, NNFI = 0.99, CFI = 1.00, exhibited excellent fit. The final structural model with standardized regression weights is illustrated in Figure 11 and all study variables accounted for 38% ($p < .01$, 95% CI [.28, .46]) of intention to engage in interpersonal sexual communication.
Recall that because TPB privileges logical thought processes, the role of emotional processes related to behavioral intention is unclear. Previous research provides evidence to suggest emotions could act as a mediator of the effects of attitudes, subjective norms and perceived behavioral control on behavioral intention. Alternatively, emotions could act as an antecedent to attitudes, subjective norms, and perceived behavioral control. After conducting path analysis treating self-conscious emotions as a mediator, I
conducted path analysis in SPSS AMOS treating self-conscious emotions as an antecedent of the theory of planed behavior variables. The full AMOS model is presented in Figure 12.

The initial fit of the model treating self-conscious emotions as an antecedent of TPB variables was acceptable, $\chi^2(3) = 1.75, p = .63, \text{RMSEA} = .00, \text{NNFI} = 0.99, \text{CFI} = 1.00$. To continue fitting the model as per Kline (2011), I began to remove nonsignificant paths and reran the model with each deletion. In the initial model, paths from femininity to attitudes and attitudes to behavioral intention were both nonsignificant. Beginning with

Figure 12. Initial model treating self-conscious emotions as an antecedent of TPB.

Note: Masc = Masculinity. Fem = Femininity. Att_ISC = Attitudes toward Interpersonal Sexual Communication. SN_ISC = Subjective norms toward Interpersonal Sexual Communication. PCB_ISC = Perceived Behavioral Control of Interpersonal Sexual Communication. BI_ISC = Behavioral Intention to engage in Interpersonal Sexual Communication. SCE_ISC = Self-Conscious Emotions related to Interpersonal Sexual Communication.
the least significant path, I removed the femininity to attitudes path. Considering that this path was significant in the first model (i.e., without inclusion of self-conscious emotions), it would appear that self-conscious emotions fully mediate the effect of femininity on attitude, a feature confirmed by analysis of the indirect effect of femininity on attitudes (p < .05, 95% CI [.01, .09]). Deleting this path however, caused the path between femininity and perceived behavioral control to become nonsignificant. As was the case with the effect of femininity on attitudes, the effect of femininity on perceived behavioral control is fully mediated by self-conscious emotions as indicated by the indirect effect of femininity on perceived behavioral control (p < .05, 95% CI [.01, .13]).

Finally, I removed the path between attitudes and behavioral intention. As was the case with the model treating self-conscious emotions as a mediator of the effects of theory of planned behavior first-level variables on behavioral intention, the path between attitudes and behavioral intention was not significant and was removed. Previous research assessing communication behavior has reported nonsignificant paths between attitudes and behavioral intention (Brann & Sutton, 2009; Rittenour & Booth-Butterfield, 2006).

After removing all the nonsignificant paths consistent with data- and theory-driven concerns, the final iteration of the model, \( \chi^2(6) = 9.58, p = .14, \) RMSEA = .05, NNFI = 0.99, CFI = 1.00, exhibited excellent fit. The final structural model with direct and indirect effects and standardized regression weights is illustrated in Figure 13 and all study variables accounted for 38% (p < .001, 95% CI [.28, .46]) of intention to engage in interpersonal sexual communication.
Figure 13. Final model of interpersonal sexual communication treating self-conscious emotions as an antecedent to theory of planned behavior variables.

Note: Dashed lines represent nonsignificant paths that were removed from model. All effects sizes are standardized, indirect effect sizes are in parentheses and *p < .05. **p < .01. ***p < .001. Masc = Masculinity. Fem = Femininity. Att_ISC = Attitudes toward interpersonal sexual communication. SN_ISC = Subjective norms toward interpersonal sexual communication. PCB_ISC = Perceived behavioral control of interpersonal sexual communication. BI_ISC = Behavioral intention to engage in interpersonal sexual communication.

Model Assessment and Results

Recall that previous research provides evidence to suggest emotions could act as a mediator of the effects of attitudes, subjective norms and perceived behavioral control on behavioral intention relationships or an antecedent to attitudes, subjective norms, and perceived behavioral control. This section identifies the role of self-conscious emotions in predicting behavioral intention to engage in interpersonal sexual communication and addresses the hypotheses and research questions that were forward in Chapter Two.
Role of Self Conscious Emotions

Research question one queried the nature of the relationships between self-conscious emotions related to interpersonal sexual communication and the theory of planned behavioral variables (i.e., attitude, subjective norms, perceived behavioral control, and behavioral intention). To answer this research question, I conducted two path analyses- one with self-conscious emotions as a mediator of the effects of first order TPB variables on behavioral intentions and one with self-conscious emotions as an antecedent of TPB variables. Because the two models were not nested, there were no direct empirical tests (e.g., chi square) by which to determine which model was preferable. Some scholars suggest that, in addition to comparing the fit indices and variance accounted for in the model, Akaike Information Criterion (AIC) values of two non-nested models can be compared to determine which model is preferable (Hooper, Coughlan, & Mullen, 2008). Smaller values are indicative of a good fitting, parsimonious model; however, the AIC for the mediation model (341.98) was only marginally better than that of the antecedent model (345.69). In addition, the fit indices and variance accounted for of the mediation and antecedent models do not overtly suggest the superiority of one model over the other. Because AIC for the models did not suggest a superior model, I continued to evaluate the model based on theoretical consistency and interpretation of model parameters.

Although from a statistical standpoint, the data adequately fit the final mediation model, the superior model from a theoretical standpoint is the antecedent model. Firstly, the antecedent model is superior because the relationship between emotion and TPB variables is more consistent with how self-conscious emotions were operationalized. That is, because self-conscious emotion items were worded to reflect an emotional experience
occurring in the present sense, (i.e., talking about sexual activity is humiliating), it would follow that this present based visceral experience would be an antecedent to logical TPB variables. Likewise, although Haidt (2006) describes logical and emotional thought processes as occurring in tandem (i.e., mutually influencing cognitions), it would seem more reasonable that there would be relationships between most logical (i.e., TPB) and emotional variables as illustrated by the antecedent model. Finally, because the self-conscious emotions to behavioral intention path was not significant in the mediation model, the assertion that self-conscious emotions partially mediate the effects of first-level TPB variables on behavioral intention is unsupported. As such, results suggest self-conscious emotions are an antecedent of TPB variables such that self-conscious emotions demonstrate a negative relationship with attitudes toward ISC ($\beta = -.33, p < .001, 95\% \text{ CI} [-.44, -.22]$), subjective norms related to ISC ($\beta = -.29, p < .001, 95\% \text{ CI} [-.39, -.18]$) and perceived behavioral control of ISC ($\beta = -.46, p < .001, 95\% \text{ CI} [-.55, -.36]$) meaning that with increased self-conscious emotions, individuals’ attitudes toward the behavior are less favorable, they perceive that family and friends approve less of their communicating about sexual issues, and they experience diminished perceptions of their ability to enact ISC.

**Substantive Hypotheses and Research Questions**

Hypothesis 1a proposed that attitudes toward interpersonal communication about sexuality would positively predict behavioral intentions to engage in ISC. Results indicated that attitudes toward interpersonal communication about sexuality did not predict behavioral intentions to engage in ISC. Thus, hypothesis 1a was not supported.
Hypothesis 2a proposed that subjective norms toward interpersonal communication about sexuality would positively predict behavioral intentions to engage in ISC. As expected, subjective norms toward interpersonal communication about sexuality predicted behavioral intentions to engage in ISC ($\beta = .30, p < .001, 95\% \text{ CI} [.16, .45]$) such that the more an individual perceived that his or her family and friends approved of he or she engaging in interpersonal communication about sexuality, the greater his or her intention to engage in ISC. Thus hypothesis 2a was supported.

Hypothesis 3a proposed that perceived behavioral control toward interpersonal communication about sexuality would positively predict behavioral intentions to engage in ISC. As expected, perceived behavioral control toward interpersonal communication about sexuality predicted behavioral intentions to engage in ISC ($\beta = .35, p < .001, 95\% \text{ CI} .20, .49]$) such that the greater perceived behavioral control an individual perceived related to ISC, the greater their intention to engage in ISC. Thus, hypothesis 3a was supported.

Research question 3a queried as to the relationship between masculinity and the theory of planned behavior variables of attitudes, subjective norms and perceived behavioral control. Results indicated positive significant relationships between masculinity and attitudes ($\beta = .23, p < .001, 95\% \text{ CI} [.13, .34]$), subjective norms ($\beta = .21, p < .001, 95\% \text{ CI} [.10, .32]$), and perceived behavioral control ($\beta = .23, p < .001, 95\% \text{ CI} [.12, .33]$). As such, with increased perception of masculinity, attitudes toward the ISC are more favorable, subjective norms related to ISC are more favorable, and perceived behavioral control of enacting ISC also increase.
Results also indicate that self-conscious emotions mediate the effect of masculinity on attitudes, subjective norms, and perceived behavioral with indirect effects of $\beta = .07, p < .001, 95\% \text{ CI } [.03, .12]$, $\beta = .06, p < .001, 95\% \text{ CI } [.02, .10]$, and $\beta = .09, p < .001, 95\% \text{ CI } [.04, .15]$ respectively. Table 20 reports the total, direct, and indirect effects.

Table 20

*Direct, Indirect and Total Effects of Self-Conscious Emotions on Masculinity and TPB Variables in ISC Model*

<table>
<thead>
<tr>
<th>Variables in ISC Model</th>
<th>Total</th>
<th>Direct</th>
<th>Indirect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculinity $\rightarrow$ Attitudes</td>
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<td>.23</td>
<td>.07</td>
</tr>
<tr>
<td>Masculinity $\rightarrow$ Subjective Norms</td>
<td>.27</td>
<td>.21</td>
<td>.06</td>
</tr>
<tr>
<td>Masculinity $\rightarrow$ Perceived Behavioral Control</td>
<td>.32</td>
<td>.23</td>
<td>.09</td>
</tr>
</tbody>
</table>

*Note:* All effects sizes are standardized and significant at $p < .05$.

Research question 4a inquired as to the relationship between femininity and the theory of planned behavior variables of attitudes, subjective norms and perceived behavioral control. Results indicated that there was a positive relationship between femininity and subjective norms ($\beta = .13, p < .001, 95\% \text{ CI } [.04, .15]$), such that when femininity increases, so do subjective norms related to ISC. There was no direct relationship between femininity and attitudes or perceived behavioral control; however, as evidenced by analysis of the total effects (Table 21), results indicate that self-conscious emotions fully mediate the effects of femininity on attitudes and on perceived behavioral control. The results also indicate self-conscious emotions partially
mediate the effect of femininity on subjective norms. This is evidenced by a significant indirect effect of femininity on attitudes ($\beta = .04, p < .05, 95\% \text{ CI} [.04, .09]$), perceived behavioral control ($\beta = .06, p < .05, 95\% \text{ CI} [.01, .12]$), and subjective norms ($\beta = .04, p < .05, 95\% \text{ CI} [.00, .08]$) respectively meaning that part of the total positive effect on subjective norms and perceived behavioral control and the full total positive effect on attitudes is attributable to self-conscious emotions.

Table 21

| Direct, Indirect and Total Effects of Self-Conscious Emotions on Femininity and TPB Variables in ISC Model |
|--------------------------------------------------------------------------------------------------|-------------------------------------------------|-------------------|
| Best---------------------------------------------------------------| Total   | Direct | Indirect |
| Feminity $\rightarrow$ Attitudes                                | .04     | .00    | .04      |
| Feminity $\rightarrow$ Subjective Norms                        | .16     | .13    | .04      |
| Feminity $\rightarrow$ Perceived Behavioral Control            | .06     | .00    | .06      |

*Note: All effects sizes are standardized and significant at \( p < .05 \).*

Research question 5a asked as to the nature of the relationship between masculinity and self-conscious emotions related to interpersonal communication about sexuality. Results indicate that there is a negative relationship between masculinity and self-conscious emotions ($\beta = -.20, p < .001, 95\% \text{ CI} [-.44, -.11]$), such that the more masculine an individual perceives his or herself to be, the lower self-conscious emotions they experience when engaging in ISC.

Research question 6a asked as to the nature of the relationship between the femininity and self-conscious emotions related to interpersonal communication about
sexuality. Results indicate a significant, negative relationship between femininity and self-conscious emotions $\beta = -.13$, $p < .001$, 95% CI [-.33, -.01], such that the more feminine an individual perceives his or herself to be, the lower self-conscious emotions s/he experiences when engaging in ISC.

Summary

This chapter reported the results of the first study of this dissertation. The chapter described the proposed models and addressed the research questions and hypothesis that were forwarded in Chapter Two. Two models were proposed and the superior model was identified. The next chapter discusses the methods of the second study of this dissertation. The discussion of findings of this study are combined with those from study two (see Chapter 7: Discussion).
CHAPTER 5: STUDY TWO METHOD

The primary aim of this study was to utilize an extended TPB model to predict college students’ intention to engage in interpersonal sexual assault communication (ISAC) building on the previous study which examined sexual communication generally. The study tested the ability of traditional TPB variables (attitudes, subjective norms, perceived behavioral control related to sexual assault communication), topically relevant traits of the sender (masculinity, femininity and past interpersonal sexual communication behavior), and self-conscious emotions to predict ISAC.

Conceptualizing Interpersonal Sexual Assault Communication

As a specific type of interpersonal sexual communication, interpersonal sexual assault communication relates specifically to conversations about sexual assault. Sexual assault includes “incidents in which the victim was unable to provide consent due to drug or alcohol use; forced to penetrate another person; or coerced to engage in sexual contact (including nonphysical pressure to engage in sex) unwanted sexual contact (including forcible kissing, fondling, or grabbing); and noncontact unwanted sexual experiences that do not involve physical contact” (National Research Council, 2014, p. 86). Consequently, interpersonal sexual assault communication is defined as “verbal interpersonal expressions about the sexual assault of oneself or another.”

Participants and Sample Size

Participants were a convenience sample of 682 students recruited from introductory communication courses. Although a minimum sample size of 200 is considered adequate for structural equation modeling analysis, others suggest a minimum of 10 cases per variable (Meyers et al., 2013). According to these heuristics, the required
sample size for study two ranges from 160 to 200. Yet, because of the potential for cases to be excluded due to issues of social desirability, survey fatigue, and completion rates, 800 students were recruited.

Of the final sample, a total of 16 cases were removed due to missing responses on nearly all survey questions (see also Missing Data in Preliminary Data Analysis section). The final sample \((n = 666)\) consisted of 40.3\% male students \((n = 268)\), 59.7\% female students \((n = 397)\) and 1 student who did not indicate sex. The participants ranged in age from 18 to 29 years, with a mean age of 19.05 years \((SD = 1.27)\). One participant did not indicate his/her age. The sample consisted of 56.2\% first-year students \((n = 374)\), 24.5\% sophomores \((n = 163)\) 13.4\% juniors \((n = 89)\), 5.6\% seniors \((n = 37)\), and 0.5\% other students \((n = 3)\). Participants were predominantly White/Caucasian (87.8\%); however, 3.9\% were African American/Black, 2.9 \% were Asian/Pacific Islander, 1.2\% were Hispanic/Latino/a, 3.0\% were multi-racial or multi-ethnic, and 1.1\% were of other ethnic origins.

Procedure and Design

Following IRB approval, I sent students assigned to the study information on how to complete the study survey. Participants completed the cross-sectional survey through Qualtrics, an online survey tool. Upon linking to the study, participants were presented with informed consent information. After consenting to the study, participants completed the study measures of previous interpersonal sexual communication behavior, attitudes related to ISAC, subjective norms of ISAC, perceived behavioral control of ISAC, intention to engage in ISAC, self-conscious emotions related to ISAC, masculinity, femininity, rape myth acceptance, past experience with sexual assault and social
desirability. Rape myth acceptance, past experience with sexual assault and social desirability were not included in analyses.

Measurement

To confirm the factor structure of study measures, the data were examined using a series of confirmatory factor analyses using SPSS AMOS software. AMOS allows for testing whether data fit a pre-assigned model. Kline (2011) forwards that there are four commonly reported indices by which to assess model fit: (a) model chi square, (b) root mean square of approximation (RMSEA), (c) non-normed fit index (NNFI), and (d) comparative fit index (CFI). Although a non-significant model chi square would indicate an acceptable model fit, due to the reliance of chi square analysis on sample size (Kline, 2011), significant chi square values are common. Thus, an alternative indicator of model fit is an RMSEA value of .08 or lower (MacCallum, Browne, & Sugawara, 1996) and NNFI and CFI values which exceed .90 and .95 respectively (Kline, 2011). In the sections that follow, the measures are described and the results of confirmatory factor analysis are reported where appropriate.

Previous Interpersonal Sexual Communication Behavior

Participants indicated their previous ISC behavior by completing a modified version of the interpersonal sexual communication scale created in the first study. Participants indicated how frequently they had engaged in conversations about sexual activity, sexual orientation, and sexual interest in the two weeks prior to taking the survey. Participants responded to each item on a 7-point Likert-type scale ranging from 1 (never) to 7 (very frequently). Sample items included “In the past two weeks, I have had a conversation with my family about sexual orientation” and “In the past two weeks, I have
had a conversation with a same sex friend about sexual activity.” Items were summed to create a frequency of past interpersonal sexual communication behavior ranging from 9 to 63 ($M = 27.64$, $SD = 13.34$, $\alpha = .91$) with higher scores representing engaging in more conversations about sexuality issues.

**Attitudes toward Interpersonal Sexual Assault Communication**

Participants indicated their attitudes related to ISAC by answering three items (one per interpersonal conversational partner: family, opposite sex friend and same sex friend) developed in accordance with Ajzen (1991). In relation to each type of interaction, participants rated three pairs of words- bad/good, unpleasant/pleasant, and undesirable/desirable- on a 7-point Likert-type scale. Sample items included “Talking to my family about sexual assault is bad/good” and “Talking to my same sex friends about sexual assault is punishing/rewarding.” Higher scores represented more positive attitudes toward communicating about sexual assault. Items were averaged to create a composite measure of attitudes toward ISAC by target resulting in a composite measure for family ($M = 3.54$, $SD = 1.40$, $\alpha = .79$), same sex friend ($M = 4.16$, $SD = 1.49$, $\alpha = .84$) and opposite sex friend ($M = 3.82$, $SD = 1.39$, $\alpha = .86$). Overall reliability of the measure was .91.

**Subjective Norms Related to Interpersonal Sexual Assault Communication**

Participants indicated their subjective norms related to ISAC by answering three items developed in keeping with Ajzen (1991). Participants indicated on a scale from 1 (strongly disagree) to 7 (strongly agree) how much they agree with the statements. Sample items included, “In general, my family approves of me talking about sexual assault” and “In general, my same sex friends approve of me talking about sexual
assault.” Higher scores indicate increased perceptions of one’s significant others approving of his/her conversations about sexual assault. The three scale items were used as individual indicators of the latent subjective norms related to ISAC construct. The overall reliability of the items were .94.

**Perceived Behavioral Control Related to Interpersonal Sexual Assault Communication**

Participants indicated their perceived behavioral control related to ISAC by answering six items developed for the purposes of this study. Participants indicated on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*) how much they believe each statement to be true of themselves. Sample items included “I have confidence in my ability to discuss sexual assault with my family” and “I can easily discuss sexual assault with my opposite sex friends.” Higher scores indicated more perceived control over discussing sexual assault. Items were averaged to create a composite measure of perceived behavioral control related to ISAC by target resulting in a composite measure for family (*M* = 4.90, *SD* = 1.55, *α* = .88), same sex friend (*M* = 5.36, *SD* = 1.30, *α* = .85) and opposite sex friend (*M* = 5.04, *SD* = 1.38, *α* = .86). Overall reliability of the measure was .92.

**Behavioral Intention to Engage in Interpersonal Sexual Assault Communication**

Participants indicated their intentions to engage in ISAC by answering three items developed for the purposes of this study. Recall that perceived behavioral control includes aspects of controllability and ability. Because controllability relates to external resources required to engage in a behavior and there are few external resources necessary to engage in communicative behavior, only self-efficacy (i.e., ability) items were included. In each type of interaction (i.e., family, opposite sex friend, same sex friend),
participants were asked to rate on a scale from 1 (not at all likely) to 7 (very likely) their intentions to engage in conversations about sexual assault in the next 30 days. Sample items included “I am likely to talk with my family about sexual assault” and “I am likely to talk with my same sex friends about sexual assault.” Higher scores indicated increased intentions to engage in conversations related to sexual assault. The three scale items, one referencing family ($M = 3.81$, $SD = 1.50$), opposite sex friends ($M = 4.10$, $SD = 1.46$) and same sex friends ($M = 4.15$, $SD = 1.50$), were used as indicators of the latent behavioral intention to engage in ISAC construct. The overall reliability of the items was .92.

*Self-Conscious Emotions related to Interpersonal Sexual Assault Communication*

Participants indicated their self-conscious emotions related to interpersonal sexual assault communication by responding to three items created for the purposes of this study representing three self-conscious emotions (ashamed, embarrassed, and humiliated). I created items in keeping with self-conscious emotions as described by Robins, Noftle and Tracy (2007). Participants indicated on a scale from 1 (strongly disagree) to 7 (strongly agree) how much they believe each statement to be true of themselves. Example items included, “Talking about sexual assault makes me feel ashamed” and “Talking about sexual assault is humiliating.” Higher scores represented more self-conscious emotions related to conversations about sexual assault. The three scale items, one assessing shame ($M = 2.83$, $SD = 1.46$), embarrassment ($M = 2.98$, $SD = 1.52$) and humiliation ($M = 2.76$, $SD = 1.50$), were used as indicators of the latent self-conscious emotions related to ISAC construct. The overall reliability of the items were .93.


**Femininity and Masculinity**

Participants indicated their femininity and masculinity by completing a modified Bem sex role inventory (BSRI; 1981) short form. The original instrument presents individuals with 30 characteristics (10 masculine, 10 feminine, and 10 androgynous) for which participants indicate on a scale from 1 (*almost never true*) to 7 (*almost always true*) how true each characteristic is of them. Although this instrument is often used as a categorization tool to organize individuals into masculine, feminine, and androgynous groups using median splits, the current study utilized only the masculinity and femininity items (10 masculine and 10 feminine) with the intent of deploying gender as two separate variables. The scale has been used for this purpose in previous research (Smiler & Epstein, 2010) and the scale exhibits good psychometric qualities (Wheeless & Dierks-Stewart, 1981). Example masculine characteristics include assertive, aggressive and dominant and feminine characteristics include warm, nurturing, and gentle. Higher scores represent increased identification with masculinity or femininity respectively. Items retained from each subscales were averaged to create composite scores for both masculinity ($M = 5.45$, $SD = 0.88$, $\alpha = .81$) and femininity ($M = 5.70$, $SD = 0.90$, $\alpha = .91$). Items utilized were based on the findings of the first study. Table 1 (Femininity) and Table 3 (Masculinity) reports the items that were retained.

**Preliminary Data Analysis**

**Missing Data**

Before conducting substantive analysis, I conducted preliminary analyses to assess missing data. Upon ocular review of cases, sixteen cases contained nearly all missing data. In reviewing the time stamp and IP address information of these surveys, it
was determined that these cases were most likely instances in which participants accidently repeated the study or did so to ensure their credit information was entered correctly. As such, these cases were removed. After removing these cases, there were no cases missing more than three data points. Likewise, no adjustments for any of the other scale measures were conducted because, of the 666 cases, all had less than one percent missing data.

Univariate Outliers

After conducting missing data analysis, cases were screened for univariate outliers. Substantive analysis of these data included regression analysis and structural equation modeling. Due to the sensitivity of regression analysis to outliers (Viswanathan, 2005), it is important to assess these data for such cases. To assess outliers, z-scores were created for all items. Those scores which were < -3.29 or > 3.29 were flagged. There were several cases which had outliers on some items that were not a result of an error in data entry or missing value code. However, because these cases were legitimate members of the population, were few in number, did not occur on a consistent variable, and were not grouped into meaningful patterns, they were not removed.

Item Level Analysis

Following missing data and item level univariate outlier analyses, all items were analyzed for normality. I examined the range, means, standard deviations, and skew and kurtosis of the items. For items measured on a 7-point scale, the standard deviations should be at least equal to one-fifth of the range, which in this case would be 1.20 (Tabachnick & Fidell, 2013). I examined item skew and kurtosis by examining histograms and calculating a t-value for skew and kurtosis for each item. The t-values
were obtained by dividing the skew and kurtosis statistics by their standard error statistic. Several items were significantly skewed and demonstrated significant kurtosis; however, no transformations were performed on items. This is because the composite variables which were created by averaging study items did not exhibit significant skew or kurtosis or were, in the case of self-conscious emotions related to ISAC, expected to be positively skewed (Tracy et al., 2007).

Confirmatory Factor Analysis

Prior to conducting substantive analysis, I examined the study measures created for the purposes of this dissertation study by conducting a series of confirmatory factor analyses (CFAs). I conducted CFAs on second-order constructs that were parceled (i.e., attitudes and perceived behavioral control) but not on other TPB variables (subjective norms, behavioral intention and self-conscious emotions) because, being only first-order constructs, their structure will be tested in the structural model. EFA enables an exploratory approach to identifying construct factors. CFA deductively tests data against an a priori factor structure determined by the researcher. In all the CFAs that follow, data were tested against the factor structure formulated based on the findings of the first study of this dissertation (See Chapter 4: Exploratory and Confirmatory Factor Analyses section).

*Attitudes toward Interpersonal Sexual Assault Communication*

To confirm the hypothesized structure of the attitudes toward interpersonal sexual assault communication, I conducted a CFA. Based on the findings of the CFAs in study one, I correlated the residual error terms of items from each semantic differential response set (i.e., good/bad, pleasant/unpleasant, desirable/undesirable). The model
exhibited close model fit, $\chi^2(15) = 35.93, p < .01$, RMSEA = .05, NNFI = .99, CFI = 0.99, and the modification indices did not suggest any necessary alterations to the model. The model is represented in Figure 14.

Figure 14. CFA of attitudes - interpersonal sexual assault communication.

Note: Att_F = Attitudes toward conversations with family. Att_SF = Attitudes toward conversations with same sex friends. Att_OF = Attitudes toward conversations with opposite sex friends. F = Family. SF = Same sex friends. OF = Opposite sex friends. AttISAC = Attitudes toward interpersonal sexual assault communication.
Perceived Behavioral Control of Interpersonal Sexual Assault Communication

To confirm the hypothesized structure of the perceived behavioral control of interpersonal sexual assault communication, I conducted a CFA. Similarly to the CFAs in study one, I correlated groups of items based on ease of enacting the behavior (e.g., I can easily discuss sexual assault with my same sex friends) and confidence (e.g., I have confidence in my ability to discuss sexual assault with my opposite sex friends). The model exhibited close model fit, $\chi^2(1) = 35.93, p < .01$, RMSEA = .08, NNFI = .99, CFI = 0.99, and the modification indices did not suggest any necessary alterations to the model. The model is represented in Figure 15.
Primary Quantitative Analysis

A hypothesized model for study variables was estimated using structural equation modeling using the SPSS AMOS 23.0 for Windows software package. SEM was selected because, as an analysis procedure which purifies manifest variables of error variance, SEM creates an opportunity for truer tests of the relationships between latent constructs.
of interest (Kline, 2011). In contrast to manifest variable statistical techniques such as hierarchical regression, SEM allows for the research to test the overall fit of a model in a single procedure. Model fit was assessed using the four common fit indices forwarded by Kline (2011): (a) model chi-square, (b) the root mean square error of approximation (RMSEA), (c) the non-normed fit index (NNFI), and (d) the comparative fit index (CFI). In addition, to estimate the indirect effects, I used bias-corrected bootstrap confidence intervals (CIs) with 10,000 samples per Kline (2011).

Parceling

The hypothesized model consisted of five latent constructs: attitudes toward ISAC (AttISAC), subjective norms related to ISAC (SNISAC), perceived behavioral control of ISAC (PCBISAC) behavioral intention toward ISAC (BIISAC), and self-conscious emotions related to ISAC (SCEISAC). Second-order constructs (i.e., attitudes toward ISAC and perceived behavioral control of ISAC) were formed by parceling each scale into three parcels. A parcel is defined as “an aggregate-level indicator comprised of the sum (or average) of two or more items, response, or behaviors” (Little, Cunningham, Shahar, & Widaman, 2002, p. 152). Each of the three parcels created for the latent constructs were the mean of the items in each scale based on target. For example, the three parcels created for the AttISAC construct (i.e., Att_F, Att_SF, Att_OF) were created by averaging the items within each topic (family, same sex friend and opposite sex friend). The parceling technique reduces the number of indicator variables and creates models that are more parsimonious, have fewer chances for residuals to be correlated and lead to reductions in sampling error (MacCallum, Widaman, Zhang, & Hong, 1999).
CHAPTER 6: STUDY TWO RESULTS

The purpose of this study was to utilize an extended TPB model to predict college students’ intention to engage in interpersonal sexual assault communication (ISAC). This chapter describes the structural model and addresses the hypotheses and research questions that were forwarded in Chapter Two. Descriptive statistics, including means, standard deviations, and Pearson correlations for all variables are included in Table 22.
Table 22

Descriptive Statistics and Correlations for all Study Two Model Variables

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<th>Variable</th>
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Note. All correlations except for those indicated by * are significant at p < .01. Masc = Masculinity. Fem = Femininity. PISC = Past interpersonal sexual communication. Att_F = Attitudes about conversations with family. Att_OF = Attitudes about conversations with opposite sex friends. Att_SF = Attitudes about conversations with same sex friends. SN_F = Subjective norms about conversations with family. SN_SF = Subjective norms about Conversations with Same Sex Friends. SN_OF = Subjective norms about Conversations with Opposite Sex Friends. PCB_F = Perceived behavioral control of conversations with family. PCB_SF = Perceived behavioral control of conversations with same sex friends. PCB_OF = Perceived behavioral control of conversations with opposite sex friends. BI_F = Behavioral intention to engage in conversations with family. BI_SF = Behavioral Intention to engage in conversations with same sex friends. BI_OF = Behavioral intention to engage in conversations with opposite sex friends. SCE_1 = Ashamed. SCE_2 = Embarrassing. SCE_3 = Humiliating.
Preliminary Analysis

Research question 2b asked of sex and gender, which predicted more variance in ISAC. To answer this question, I conducted a regression analysis with sex (male = 0, female = 1) in the first step and masculinity and femininity in the second step. Results indicate that being male ($B = 3.70$) and female ($B = 4.23$) predicts 3% of the variance in behavioral intentions to engage in ISAC, $F = 24.63$ (1, 664), $p < .001$. In the second step, the addition of masculinity and femininity resulted in a significant model, $F = 15.96$ (3, 661), $p < .001$, and the change in variance accounted for was significant, $\Delta F = 11.25$ (2, 661), $p < .001$. Overall the second model accounted for 7% of the variance in intentions to engage in interpersonal sexual communication. Analysis of regression coefficients indicates that although sex does predict intentions to engage in ISAC, both masculinity, $\beta = .11$, $t = 2.61$, $p < .01$, and femininity, $\beta = .10$, $t = 2.30$, $p < .05$, are better predictors of intentions to engage in ISAC. As a result, masculinity and femininity were included in the subsequent model and sex was not.

Model of Interpersonal Sexual Assault Communication

The theory of planned behavior posits that an individual’s attitudes, subjective norms, and perceived behavioral control predict behavioral intention. Because TPB privileges logical thought processes, the role of emotional processes is unclear. Results of the first study of this dissertation suggest that self-conscious emotions operate as an antecedent to TPB and mediate the effects of gender on first-level TPB variables. As such, self-conscious emotions were treated as an antecedent to TPB variables and a mediator of the effects of gender on first-level TPB variables. To begin the substantive analysis, I conducted an SEM analysis in SPSS AMOS 23.0 treating self-conscious
emotions and past interpersonal sexual communication as antecedents of attitudes, subjective norms, perceived behavioral control and behavioral intention. The full AMOS model is presented in Figure 16.
Figure 16. Initial model of interpersonal sexual assault communication.

Note: Masc = Masculinity. Fem = Femininity. PISC = Past interpersonal sexual communication. Att_F = Attitudes about conversations with family. Att_OF = Attitudes about conversations with opposite sex friends. Att_SF = Attitudes about conversations with same sex friends. SN_F = Subjective norms about conversations with family. SN_SF = Subjective norms about conversations with same sex friends. SN_OF = Subjective norms about conversations with opposite sex friends. PCB_F = Perceived behavioral control of conversations with family. PCB_SF = Perceived behavioral control of conversations with same sex friends. PCB_OF = Perceived behavioral control of conversations with opposite sex friends. BI_F = Behavioral intention to engage in conversations with family. BI_SF = Behavioral Intention to engage in conversations with same sex friends. BI_OF = Behavioral intention to engage in conversations with opposite sex friends. SCE_1 = Ashamed. SCE_2 = Embarrassing. SCE_3 = Humiliating. 

AttISAC = Attitudes about interpersonal sexual assault communication. SNISAC = Subjective norms related to interpersonal sexual assault communication. PCBISAC = Perceived behavioral control of interpersonal sexual assault communication. BIISAC = Behavioral intentions to engage in interpersonal sexual assault communication. SCEISAC = Self-conscious emotions related to interpersonal sexual assault communication.
The initial fit of the model was poor. Values suggest significant model misfit, $\chi^2(119) = 1535.12, p < .001$, RMSEA = .13, NNFI = 0.84, CFI = 0.85. As was the case with the models in study one, analysis of the modification indices suggested that the model fit could be much improved by correlating the residual error variances of gender, and theory of planned behavior variables by target (i.e., family, same sex friends, and opposite sex friends). I revised the model by covarying the residual error terms of all of these variables. Figure 17 provides an example of the correlations for gender and theory of planned behavior items relative to family. This revision resulted in adequate model fit, $\chi^2(94) = 412.24, p < .001$, RMSEA = .07, NNFI = 0.96, CFI = 0.97.
Figure 17. Model of interpersonal sexual assault communication with correlated error variances for gender and family items only.

Note: Masc = Masculinity. Fem = Femininity. PISC = Past interpersonal sexual communication. Att_F = Attitudes about conversations with family. Att_OF = Attitudes about conversations with opposite sex friends. Att_SF = Attitudes about conversations with same sex friends. SN_F = Subjective norms about conversations with family. SN_SF = Subjective norms about Conversations with Same Sex Friends. SN_OF = Subjective norms about Conversations with Opposite Sex Friends. PCB_F = Perceived behavioral control of conversations with family. PCB_SF = Perceived behavioral control of conversations with same sex friends. PCB_OF = Perceived behavioral control of conversations with opposite sex friends. BI_F = Behavioral intention to engage in conversations with family. BI_SF = Behavioral Intention to engage in conversations with same sex friends. BI_OF = Behavioral intention to engage in conversations with opposite sex friends. SCE_1 = Ashamed. SCE_2 = Embarrassing. SCE_3 = Humiliating. . . AttISAC = Attitudes about interpersonal sexual assault communication. SNISAC = Subjective norms related to interpersonal sexual assault communication. PCBISAC = Perceived behavioral control of interpersonal sexual assault communication. BIISAC = Behavioral intentions to engage in interpersonal sexual assault communication. SCEISAC = Self-conscious emotions related to interpersonal sexual assault communication.
To continue fitting the model as per Kline (2011), I began to remove nonsignificant paths. In the initial model, paths from femininity to self-conscious emotions, femininity to attitudes, and masculinity to attitudes were nonsignificant. I, respectively, removed each path from the model and reran the analysis. In all subsequent model iterations, the paths that were originally nonsignificant remained so.

As was the case with the first study, the femininity to attitudes path was not significant; however, unlike the first study, the effect of femininity on attitudes was not mediated by self-conscious emotions. This difference is likely the result of the nonsignificant path between self-conscious emotions and femininity. It is possible that because sexual assault is mistakenly perceived to be a feminine-issue, perhaps individuals who perceive themselves to be more feminine do not experience self-conscious emotions related to communicating about the topic and their attitudes related to the issue are not formed as a result of femininity. As such, both these paths were removed (i.e., femininity to attitudes and femininity to self-conscious emotions). The masculinity to attitudes paths in this study were the same as the first. That is, masculinity was not directly related to attitudes, but the effect of masculinity on attitudes was fully mediated by self-conscious emotions. As such, the nonsignificant path between masculinity and attitudes was removed.
After removing the aforementioned nonsignificant paths and reassessing the final model, the model fit was acceptable, $\chi^2(98) = 415.47, p < .001$, RMSEA = .07, NNFI = 0.96, CFI = 0.97. The structural model of the final model of interpersonal sexual assault communication is presented in Figure 18 and the model accounts for 28% of in the variance in intentions to engage in interpersonal sexual assault communication.

**Figure 18.** Structural model of interpersonal sexual assault communication.

*Note:* Dashed lines represent nonsignificant paths with significant indirect effects that were removed from model. All effects sizes are standardized, indirect effect sizes are in parentheses and *$p < .05$, **$p < .01$, ***$p < .001$. Effects that are circled represent paths with suppression effects (i.e., beta weights that exceeded the range of the bivariate correlations between indicator variables). PISC = Past interpersonal sexual communication. Att ISAC = Attitudes about interpersonal sexual assault communication. SN ISAC = Subjective norms related to interpersonal sexual assault communication. PCB ISAC = Perceived behavioral control of interpersonal sexual assault communication. BI ISAC = Behavioral intentions to engage in interpersonal sexual assault communication. SCE ISAC = Self-conscious emotions related to interpersonal sexual assault communication.
Substantive Hypotheses and Research Questions

Hypothesis 1b proposed that attitudes toward interpersonal sexual assault communication would positively predict behavioral intentions to engage in ISAC. As expected, attitudes toward interpersonal sexual assault communication predicted behavioral intentions to engage in ISAC ($\beta = .25, p < .01, 95\% CI [.15, .34]$) such that the more favorable attitudes an individual held regarding ISAC, the greater their intention to engage in ISAC. Thus, hypothesis 1b was supported.

Hypothesis 2b proposed that subjective norms toward interpersonal sexual assault communication would positively predict behavioral intentions to engage in ISAC. As expected, subjective norms toward interpersonal sexual assault communication predicted behavioral intentions to engage in ISAC ($\beta = .16, p < .01, 95\% CI [.07, .28]$) such that the more an individual perceived that his or her family and friends approved of he or she engaging in interpersonal communication about sexual assault, the greater his or her intention to engage in ISAC. Thus hypothesis 2b was supported.

Hypothesis 3b proposed that perceived behavioral control toward interpersonal communication about sexual assault would positively predict behavioral intentions to engage in ISAC. As expected, perceived behavioral control toward interpersonal communication about sexual assault predicted behavioral intentions to engage in ISAC ($\beta = .22, p < .01, 95\% CI [.06, .28]$) such that the greater perceived behavioral control an individual perceived related to ISAC, the greater their intention to engage in ISAC. Thus, hypothesis 3b was supported.

Research question 1b asked as to the nature of self-conscious emotions in ISAC. Results suggest self-conscious emotions demonstrate a negative relationship with
attitudes toward ISAC ($\beta = -.24, p < .01, 95\% \text{ CI } [-.32, -.14]$), subjective norms related to ISAC ($\beta = -.14, p < .01, 95\% \text{ CI } [-.22, -.06]$), and perceived behavioral control of ISAC ($\beta = -.32, p < .01, 95\% \text{ CI } [-.32, -.24]$) such that increased self-conscious emotions results in less favorable attitudes toward ISAC, less perceived behavioral control of ISAC, and decreased perceptions that family and friends approve of one engaging in ISAC.

Research question 3b queried as to the relationship between masculinity and the theory of planned behavior variables of attitudes, subjective norms and perceived behavioral control of ISAC. Results indicate positive significant relationships between masculinity and subjective norms ($\beta = .18, p < .01, 95\% \text{ CI } [.10, .26]$) and masculinity and perceived behavioral control ($\beta = .20, p < .01, 95\% \text{ CI } [.12, .28]$). As such, with increased perception of masculinity, subjective norms and perceived behavioral control toward ISAC also increase. There was no direct relationship between masculinity and attitudes.

Research question 4b queried as to the relationship between femininity and the theory of planned behavior variables of attitudes, subjective norms and perceived behavioral control. Results indicate that there is a positive direct relationship between femininity and subjective norms ($\beta = .16, p < .01, 95\% \text{ CI } [.08, .24]$) and femininity and perceived behavioral control ($\beta = .17, p < .01, 95\% \text{ CI } [.10, .24]$), but no relationship between femininity and attitudes. As such, with increased perception of femininity, subjective norms and perceived behavioral control toward ISAC also increase.

Research question 5b asked as to the nature of the relationship between the masculinity and self-conscious emotions related to interpersonal communication about sexual assault. Results indicate that there is a negative relationship between masculinity
and self-conscious emotions ($\beta = -.21, p < .01, 95\% \text{ CI} [-.28, -.12]$), such that the more masculine an individual perceives his or herself to be, the lower self-conscious emotions they experience when engaging in ISAC.

Although there is no direct relationship between masculinity and attitudes toward ISAC, the total indirect effect (equivalent to the total effect given there was no direct path between masculinity and attitudes) of self-conscious emotions via masculinity on attitudes was significant ($\beta = .05, p < .001, 95\% \text{ CI} [.02, .08]$). There was also a significant total indirect effect of self-conscious emotions via masculinity on subjective norms ($\beta = .03, p < .001, 95\% \text{ CI} [.01, .04]$) and masculinity on perceived behavioral control ($\beta = .07, p < .001, 95\% \text{ CI} [.04, .10]$). As such, self-conscious emotions partially mediate the effects of masculinity on subjective norms and masculinity on perceived behavioral control. SCE also fully mediate the effects of masculinity on attitudes. Table 23 reports the direct, indirect and total effects.

Table 23

<table>
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*Note: All effects sizes are standardized and significant at $p < .05$. 

*Note: All effects sizes are standardized and significant at $p < .05$. 

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Research question 6b asked as to the nature of the relationship between the femininity and self-conscious emotions related to interpersonal communication about sexual assault. Results indicate that there is no relationship between femininity and self-conscious emotions related to ISAC.

Hypothesis 4 forwarded that past ISC behavior would be positively related to attitudes, subjective norms, perceived behavioral control and intention to engage in ISAC. Results indicate that there are significant, positive relationships between past ISC and attitudes related to ISAC ($\beta = .23, p < .001, 95\% CI [.14, .31]$), subjective norms related to ISAC $\beta = .12, p < .001, 95\% CI .04, .21$), perceived behavioral control of ISAC ($\beta = .18, p < .001, 95\% CI [.10, .26]$), and behavior intention to engage in ISAC ($\beta = .13, p = .001, 95\% CI [.06, .21]$). Thus, when individuals report increased past ISC behavior, the attitudes, subjective norms and perceived behavioral control of ISAC also increase and the hypothesis was supported.
CHAPTER 7: DISCUSSION

This chapter outlines the findings of these dissertation studies and discusses them within the context of previous theory and research. Theoretical and practical implications are offered. The limitations of these dissertation studies and future research are also discussed.

Summary of Findings

The primary purpose of study one of this dissertation was to identify a model of interpersonal sexual communication. The results of study one support the final model and suggest that masculinity, femininity, self-conscious emotions and two theory of planned behavior variables (i.e., subjective norms and perceived behavioral control) all play a role in predicting students’ intentions to engage in communication about sexuality.

Regression analysis conducted before path analysis demonstrates that masculinity ($\beta = .20$) and femininity ($\beta = .18$) are both predictors of intentions to engage in ISC whereas sex (i.e., male or female) is not and thus, masculinity and femininity were utilized for all subsequent modeling, not sex. Path modeling demonstrates that masculinity ($\beta = -.20$) and femininity ($\beta = -.13$) both negatively predict self-conscious emotions related to ISC; however, whereas masculinity is directly related to attitudes ($\beta = .23$), subjective norms ($\beta = .21$) and perceived behavioral control ($\beta = .23$), femininity is only directly related to subjective norms ($\beta = .13$). There are indirect effects of self-conscious emotions via femininity on attitudes ($\beta = .04$), subjective norms ($\beta = .04$) and perceived behavioral control ($\beta = .07$) suggesting that the effects of femininity on attitudes and femininity on perceived behavioral control are fully mediated by self-conscious emotions. Self-conscious emotions partially mediate the effects of femininity on subjective norms. In
addition to self-conscious emotions being directly related to attitudes (β = -.33), subjective norms (β = -.29) and perceived behavioral control (β = -.46), self-conscious emotions also partially mediate the effects of masculinity on theory of planned behavior variables (i.e., attitudes, subjective norms and perceived behavioral control) evidenced by indirect effects of self-conscious emotions via masculinity and attitudes (β = .07), subjective norms (β = .06) and perceived behavioral control (β = .09). Finally, results indicated significant relationships between behavioral intention and subjective norms (β = .30) and perceived behavioral control (β = .35), but no relationship between attitudes and behavioral intention.

The primary purpose of study two of this dissertation was to forward and test a model of interpersonal sexual assault communication. The results of study two support the proposed model and suggest that past interpersonal sexual communication, masculinity, femininity, self-conscious emotions, and theory of planned behavior variables (i.e., attitudes, subjective norms and perceived behavioral control) all play a role in predicting intentions to engage in interpersonal sexual assault communication. Past ISC is positively related to attitudes (β = .23), subjective norms (β = .12) perceived behavioral control (β = .18) and intentions to engage in ISAC (β = .13). Masculinity (β = -.21) negatively predicts self-conscious emotions related to ISAC; however, whereas masculinity is directly related to subjective norms (β = .18) and perceived behavioral control (β = .20), there is no direct relationship between masculinity and attitudes.

There are, however, indirect effects of self-conscious emotions via masculinity on attitudes (β = .05), subjective norms (β = .03) and perceived behavioral control (β = .07) suggesting that the effect of masculinity on attitudes is fully mediated by self-conscious
emotions and the effect of masculinity on subjective norms and the effect of masculinity on perceived behavioral control are partially mediated by self-conscious emotions. There is no relationship between neither femininity and self-conscious emotions nor femininity and attitudes, but there are direct relationships between femininity and subjective norms (β = .16) and femininity and perceived behavioral control (β = .17). Self-conscious emotions are directly related to attitudes (β = -.24), subjective norms (β = -.14) and perceived behavioral control (β = -.32). The attitudes to behavioral intention (β = .24), subjective norms to behavioral intention (β = .18) and perceived behavioral control to behavioral intention (β = .17) paths are all significant.

**Theoretical Implications**

These dissertation studies had several goals relative to theory. Firstly, these dissertation studies, utilizing the TPB, sought to explicate the rational processes that undergird the decision to engage in sexual and sexual assault communication. Secondly, these studies sought to identify the role of self-conscious emotions in TPB models predicting intentions to engage in sexual and sexual assault communication. Finally, these studies sought to identify relevant background variables in sexual and sexual assault communication models.

*Rational Processes in Sexual and Sexual Assault Communication*

One of the goals of this dissertation was to utilize the TPB to identify the rational processes that undergird students’ intentions to engage in communication about sexuality and sexual assault. Sexual assault on college campuses is a serious issue. Bystander interventions aim to address sexual assault on campus by compelling students to intervene in situations which have the potential to result in sexual assault; however, to
intervene, individuals must perceive they have the skills required to do so (Latané & Darley, 1970). As the ability to talk about sexual assault and sexuality more generally could be skills required in some potential sexual assault situations, it is important to understand the logical processes that undergird students’ decisions to engage in sexual and sexual assault communication. The TPB has not only been used to elucidate the rational factors which predict individuals’ actual and intention to engage in health-related behaviors, but also to predict behaviors consistent with sexual and sexual assault communication (Ajzen, 1991; Armitage & Conner, 2001; Godin & Kok, 1996; Hagger et al., 2002; McEachan, et al., 2011, Schulze & Whittmann, 2003; Trafimow, Sheeran, Conner, & Finlay, 2002). The results of this dissertation suggest similarities between previous TPB research and the logical processes that undergird sexual and sexual assault communication among college students.

Consistent with previous TPB literature, the rational processes which undergird students’ intentions to engage in sexual and sexual assault communication are, for the most part, consistent with the TPB framework. This finding is most likely because, as has been the case with a plethora of other health related behaviors, the rational thought processes that undergird students’ behavioral intention to engage in sexual and sexual assault communication is composed of their general positive or negative feelings related to talking about sexuality and sexual assault, the degree to which their families, same and opposite sex friends approve of them talking about sexuality and sexual assault, and their perceived ability to talk about sexuality and sexual assault (Ajzen, 1988, 1991, 2005, 2012). In this regard, the structure of the logical process that undergirds students’ intentions to engage in communication about sexual assault is consistent with the TPB.
These dissertation studies illustrate that TPB in its unaltered form (i.e., sans mediating effects between first and second-level TPB constructs) is sufficient in predicting students’ intentions to engage in sexual and sexual assault communication. With this knowledge, interventionists could design program components aiming to increase students’ positive attitudes about sexual and sexual assault communication, increase their perception that family and friends approve of their communication about sexual and sexual assault and increase their perceived ability to engage in communication about sexual and sexual assault. Increasing these factors, particularly students’ perceived ability to enact sexual assault communication, could increase students’ likelihood of students intervening in potential sexual assault situations.

*Emotional Processes in the Theory of Planned Behavior*

Another one of the goals of this dissertation was to determine the role of emotion in TPB informed models of sexual and sexual assault communication. Ajzen (1991) argues that emotions in TPB are captured by attitudes; however, a growing amount of TPB literature provides support for considering emotional variables in addition to traditional TPB variables, particularly when predicating behaviors with strong affective or irrational components (Godin & Kok, 1996). Emotion in TPB has traditionally been considered by assessing affective attitudes and anticipated affect (Conner et al., 2015). Affective attitudes consist of semantic differential items, most often nested within attitude items, and anticipated affect is captured by items assessing the prospect of feeling an emotion as a result of enacting, or not enacting, a behavior.

The bodies of work utilizing these two constructs can be distinguished in several ways. Literature assessing affective attitudes has focused on affect experienced while
enacting the behavior and tends to assess positive, hedonic emotions relating to preforming a behavior. Conversely, anticipated affect literature has focused on affect expected to be experienced as a result of the performance or nonperformance of a behavior but tends to only assess negative, self-conscious emotions expected to be a result of not performing a behavior. This literature has typically shown affective attitudes to be an antecedent to TPB variables and anticipated emotion (most often anticipated regret) to mediate the effects of first-level TPB variables (attitudes, subjective norms and perceived behavioral control) on behavioral intention. Because I found no studies assessing affective attitudes (captured in these dissertation studies as attitudes) or negative, self-conscious emotions experienced as a result of the performance of a behavior, the role of self-conscious emotions in TPB models of sexual and sexual assault communication was unclear.

_Self-Conscious Emotions in Sexual and Sexual Assault Communication_

When predicting intentions to engage in sexual and sexual assault communication, self-conscious emotions act as antecedents to first-level, TPB variables (i.e., attitudes, subjective norms, and perceived behavioral control) and work to silence individuals communication related to sexual and sexual assault communication. Self-conscious emotions experienced as a result of sexual and sexual assault communication have a silencing effect because they lead an individual to hold less favorable attitudes related to communicating about sexuality and sexual assault, diminished perceptions that family and friends approve of their communication about sexuality or sexual assault, and diminished perceptions of their ability to enact sexual or sexual assault communication,
which in turn diminishes one’s intentions to engage in sexual and sexual assault communication.

Possible explanations for these findings are the cross-sectional design of the study and self-report data collection procedures. It is possible that because these studies were not experimental, the location of self-conscious emotions in these models is a product of the data. Also, it’s possible that because students’ self-reported their emotions, instead of the emotions being induced experimentally, that instead of self-conscious emotions leading to diminished attitudes, subjective norms and perceived behavioral control, that individuals with diminished TPB first-level variables report more self-conscious emotions when considering engaging in ISC and ISAC.

Yet, in spite of these possible explanations, it is more likely that these findings are a result of the decisions to engage in ISC and ISAC being consistent with Haidt’s (2006) understanding of the emotional and logical thought processes. Looking at the final models, the levels of variables can easily be grouped into three categories: first, background variables or individual characteristics; second, emotional cognitions; and, third, rational cognitions. Following Hadit’s (2006) elephant/rider metaphor, self-conscious emotions experienced as a result of communicating about sexual and sexual assault issues are the irrational “elephant” and attitudes, subjective norms, and perceived behavioral control are the logical “rider.” Further, in the case of ISC and ISAC, the emotional “elephant” restricts (i.e., silences) the logical, communicative decisions of the “rider.”

Accepting this elephant/rider explanation of the cognitive ISC and ISAC processes has important implications for theory and practice. Firstly, as demonstrated in
these models, the emotional component of thought processes missing from the TPB explains, in part, why the theory performs less effectively when predicating behaviors with a strong affective component (Godin & Kok, 1996). Because the addition of self-conscious emotions in ISC and ISAC models explained additional variance in all logical TPB variables, it would seem that the “elephant” is driving the “riders’” behavioral decisions to some degree and in the case of ISC and ISAC, has a silencing effect on intentions to engage in ISC and ISAC behavior. This is important for practitioners because the effectiveness of sexual assault interventions could be bolstered by, in addition to appealing to the logical rider, appealing to the emotional elephant. Such appeals might include program elements that decrease the self-conscious emotions experienced while communicating about sexual and sexual assault issues or other cognitions (e.g., moral emotions) that are shown to influence the irrational elephant and thus, rational rider.

Secondly, due to the moderate, negative correlation between self-conscious emotions and attitudes ($r = -.39$) and the additional explained variance the inclusion of self-conscious emotions adds to TPB variables in the ISC and ISAC, self-conscious emotions are not likely to be accounted for in attitudes. Although Ajzen’s (1991) assertion that emotional experiences are captured within affective attitudes is accurate, this assertion is incomplete because emotional experiences also influence subjective norms and perceived behavioral control. It is possible that these findings are a result of the non-experimental data collection procedures, but it is more likely that self-conscious emotions function differently than do anticipated self-conscious emotions and they do so because of their respective emotional and rational components.
Richard and colleagues (1996) forward that affective attitudes and anticipated affect differ based on time. That is, that anticipated affect refers to the prospect of an individual experiencing an emotion as a result of completing, or not completing, a behavior and affective attitudes are general evaluations about performing, or not, an action. Although these findings do not negate this argument, perhaps a more fruitful way to understand how these two constructs function in TPB models is to distinguish them by their respective emotionality/rationality rather than time. That is, anticipation of an emotion, whether it is negative or positive—expected to be experienced as a result of enacting, or not, a behavior—is a logical, “rider” exercise whereas actually experiencing an emotion is often an irrational and involuntary experience of the “elephant”.

Considering this distinction and these study findings in the context of TPB, it would seem likely that any anticipated emotion would occur in tandem with the more rational TPB variables, as has been illustrated in the anticipated regret literature, and emotions experienced while enacting a behavior would be an antecedent to rational variables, as has been illustrated in these dissertation studies. Making such a distinction is consistent with Hadit’s (2006) understanding of our thought processes. He argues that emotional cognitions occur unconsciously and immediately, whereas rational cognitions occur afterwards and often times, aim to rationalize the emotional cognitions. These findings suggest that self-conscious emotions are not only a unique and important construct when predicting rational components of intentions to engage in sexual and sexual assault communication, but could also be important to predicting other sexual health related topics in as much as enacting the behavior requires communication about sexuality or sexual assault issues.
Although Richard and colleagues’ (1996) argument of time is accurate, conceptualizing this difference as emotional and logical might be more fruitful for practitioners because this understanding can allow them to further focus their program content and assessment. Recall that a discrete approach to understanding emotions forwards that emotions have action tendencies that motivate individuals to engage, or not engage, in behaviors. Adding in the emotional and logical division, the same emotion could have different action tendencies based on whether it is being experienced as a result of a behavior or anticipated as a result of a behavior. Conversely, an anticipated versus an experienced emotion could have the same action tendency, but target efforts to minimize the actual experience or anticipated experience of the emotion could be need to different.

For example, consider anticipated versus experienced self-conscious emotions in conversations about sexual assault. Although the experienced verses anticipated self-conscious emotions from enacting sexual assault communication might both motivate an individual to avoid talking, to maximize the effectiveness of interventions, practitioners might include experiential learning program components designed to minimize experienced self-conscious emotions and persuasive appeals to logic that target anticipated self-conscious emotions such as perceptions about social norms (i.e., increasing subjective norms) and sexual communication skills training (i.e., increasing perceived behavioral control). Then, when assessing program effectiveness, practitioners could assess decreases in both the experienced and anticipated emotions, as decreases in both could increase one’s likelihood to engage in sexual assault communication and, perhaps, intervene in a sexual assault situation. Although these findings relative to self-conscious emotions offer a way for practitioners to maximize on the action tendencies of
experienced and anticipated emotions, they also offer additional insight into understanding the role of gender in TPB.

**Self-Conscious Emotions and Gender**

Not only are self-conscious emotions an antecedent to first-level TPB variables, they also mediate the effects of masculinity and femininity on first-level TPB variables in both ISC and ISAC models. These findings were somewhat unexpected, but not unexplainable from a theoretical standpoint. As previously described, the ISC and ISAC models have three stages of variables: background, emotional, and logical. Because individuals are socialized to experience self-conscious emotions as a result of background variables such as sex and gender (Else-Quest, Allison, Higgins, & Morton, 2012), it would follow that the emotional experiences in this mid-level of the model would explain, in part, the direct relationships between background variables and logical variables. Put another way, in the case of ISC and ISAC, self-conscious emotions are the experiential filter between stable background variables and rational thought processes.

Not only are self-conscious emotions the experiential filter between stable background variables, these dissertation studies suggest that the experience of self-conscious emotions is more important than background variables in informing the logical processes undergirding intentions to engage in ISC and ISAC. In the ISC and ISAC models, three of the 11 significant effects of background on logical variables (i.e., femininity on attitudes in ISC, femininity on perceived behavioral control in ISC, and masculinity on attitudes in ISAC) were fully mediated by self-conscious emotions and six of the 11 significant effects between background and logical variables (i.e., femininity on subjective norms in ISC, masculinity on attitudes, subjective norms, and perceived
behavioral control in ISC, masculinity on subjective norms and perceived behavioral control in ISAC) were partially mediated by self-conscious emotions. This could mean that in sexually relevant health behaviors, the stable background variables once thought to influence the rational thought processes only do so via self-conscious emotions. Such a suggestion has significant implications for practitioners targeting sexually relevant health behaviors.

Not only do these studies add additional importance to continuing to consider background and emotional variables in TPB research, these dissertation studies offer interventionists with perhaps a better way to influence communication about sex and sexual assault by diminishing self-conscious emotions associated with enacting the behavior. Although historically the inclusion of background variables in TPB models has resulted in an increase of variance explained in study models, background variables pose a particular limitation for interventions because they cannot be experimentally manipulated. That is, although someone’s age or gender might explain variance in TPB models, interventions, in most cases, cannot change stable features such as one’s age or gender. However, because emotional experiences (e.g., self-conscious emotions) partially and fully explain the effects between stable variables and logical variables, intervention programs targeting health behaviors with affective components could influence behavior by reducing or increasing the likelihood of individuals’ experiencing the emotions with the desired action tendency. That is, interventionists, by diminishing the self-conscious emotions related to ISC and ISAC, could diminish the silencing effect of self-conscious emotions on TPB variables and subsequently, intentions to engage in ISC and ISAC.
Background Variables in Sexual and Sexual Assault Communication

Another goal of this dissertation was to explicate relevant background variables in both ISC and ISAC models. This dissertation considered the background gender variables of masculinity and femininity in both the model of ISC and ISAC. It also considered past ISC behavior in the model of ISAC.

Sex and Gender in Sexual and Sexual Assault Communication

Previous TPB research has made a strong case for considering sex (i.e., male or female) in TPB models (Ajzen, 1991; Armitage & Conner, 2001; Godin & Kok, 1996; Hagger et al., 2002; McEachan, et al., 2011; Schulze & Whittmann, 2003; Trafimow, Sheeran, Conner, & Finlay, 2002). Sex (i.e., male or female) and gender (i.e., masculinity or femininity) are often conflated in this literature, but because gender encompasses components of gender identity, sexual orientation and biological sex, it would seem plausible that gender would be a better predictor of ISC and ISAC than sex. These dissertation studies suggest that both masculinity and femininity are better predictors of intentions to engage in ISC and ISAC than is sex.

It is possible that because sex is a dichotomous variable and gender is continuous that these results are a product of the level of measure of the two variables. Although this explanation is plausible, it is more likely that, as suggested by Butler (2006), gender is more relevant in behaviors related to sex and sexuality. These findings are consistent with previous TPB literature that has assessed constructs similar to gender identity in sexual communication behavior (Alvarez & Villarruel, 2015) and suggests that when utilizing TPB to predict behaviors relevant to sexuality, gender (i.e., the degree to which someone perceived themselves to be masculine or feminine) is more important than sex. Such
insight is relevant to theorists and practitioners aiming to influence health-related behavior because gender could account for additional variance in TPB models and provide practitioners with a new way to tailor interventions to maximize desired effects.

Gender in Rational Processes of Sexual and Sexual Assault Communication

After establishing of sex and gender, which was a better predictor of intentions to engage in ISC and ISAC, this dissertation sought to understand how gender was related to theory of planned behavior variables. In both models of ISC and ISAC, masculinity directly and positively predicted subjective norms and perceived behavioral control, but only in the model of ISC did masculinity directly predict attitudes. As previously mentioned, the significant results are likely because masculine individuals are more direct and assertive (i.e., increasing their perceived behavioral control of ISC and ISAC), masculinity prescribes that communication about sexuality and sexual assault are appropriate behavior (i.e., increasing perceptions of social norms of ISC and ISAC) and because masculinity influences attitudes related to sexual issues (i.e., increasing attitudes related to ISC). Considering this, it is not surprising that masculinity predicts one’s attitudes, social norms and perceived ability to enact ISC and ISAC behavior.

Although the indirect relationships findings discussed previously (see Self-Conscious Emotions and Gender section) are more novel, these direct relationships between gender and TPB variables also have implications for theory and practice. Such findings suggest perceptions of masculinity and femininity directly shape the attitudes, subjective norms and perceived behavioral control of ISC and ISAC. Understanding this could provide interventionists with a gender communication approach to tailoring programing related to sexual and sexual assault communication.
Past ISC Behavior in Rational Processes of Sexual Assault Communication

Finally, as for background variables specific to the ISAC model, this dissertation sought to explicate the role of past ISC behavior in the model of ISAC. Previous communication research has elucidated that individuals are silenced about date rape on cultural, individual, situational and immediate contextual levels (Burnett et al., 2009). Yet, research has also established that there are factors which inhibit individuals from engaging in conversations about sexuality more generally (Dyer & das Nair, 2013; Martinez, 2011; Theiss & Estlein, 2013; Wilson, Dalberth, Koo, & Gard, 2010).

Considering that sexual assault communication is a more specific type of sexual communication, it was hypothesized that past ISC behavior would predict one’s attitudes, subjective norms, perceived behavioral control and behavioral intentions to engage in ISAC, a hypothesis that was supported by study findings. This suggests that although self-conscious emotions, through TPB variables, diminish one’s intentions to engage in ISC and ISAC behavior (as illustrated by the ISC and ISAC models), those who actually engage in ISC behavior hold more favorable attitudes toward talking about sexual assault, hold increased perceptions that their family and friends approve of them discussing sexual assault, perceive themselves to be more capable of engaging in communication sexual assault and report increased intentions to engage in communication about sexual assault in the future.

It could be that individuals who have engaged in past ISC behavior, through habit or disposition, do not experience self-conscious emotions when talking about sexual issues and thus, do not experience the same decreases in TPB constructs related to sexual assault. Previous TPB research has shown correlations between a series of similar
behaviors and intentions to engage in specific behaviors (Beck & Ajzen, 1991; Parker et al., 1992). This could mean that fostering ISC communication or encouraging the development of a habit of ISC could increase one’s likelihood to engage in ISAC. Such findings are important for theory and practice because it presents a more complicated picture of the relationship between past and future behavior in TPB, because not only does past specific behavior predict specific behavior, but broader more general behaviors also predict specific behaviors nested within these broader patterns. Identifying theoretical constructs such as self-conscious emotions in sexual communication could have implications for any sexual health related behavior, in as much as enacting the behavior requires communication. This also has implications for sexual assault interventionist because it could be an indication of additional psychological characteristics or habitual behaviors which could help predict behavior among groups of similar behaviors. It also has implications for communication scholars as it could suggest fostering habits and skills related to sexual communication could inspire students to see sexual assault communication more favorably.

Differences in ISC and ISAC Models

Although there is considerable similarity between ISC and ISAC models, there are also differences. Namely, some of the relationships that were significant in the ISC models were not significant in the ISAC models and vice versa. This section discusses the differences in the rational, emotional and background processes between ISC and ISAC models and offers possible explanations for the findings.
Differences in Rational Processes in ISC and ISAC

Results of these dissertation studies suggest that the rational processes undergirding decisions to engage in ISC and ISAC differ slightly. Specifically, although all TPB variables (attitudes, subjective norms and perceived behavioral control) predict intentions to engage in ISC, subjective norms and perceived behavioral control positively predict students’ intentions to engage in ISAC, but attitudes related to the behavior does not. Although this is consistent with several studies that have also assessed communicative behaviors (Brann & Sutton, 2009; Rittenour & Booth-Butterfield, 2006), this result diverges from a considerable literature suggesting that attitudes predict intentions to engage in behavior (Alvarez & Villarruel, 2015; Askelson et al., 2011; Chroni et al., 2013; Roberto, Krieger, Katz, Goei, & Jain, 2011; Walrave, 2014).

One possible explanation for this finding is the use of a college student sample. Brann and Sutton (2009) and Rittenour and Booth-Butterfield (2006) both found that attitudes did not predict intentions to engage in communication about smoking and sexual health respectively; however, both utilized a college sample. It is possible that because college students are influenced so much by their peers (Boyd et al., 2014), their attitudes related to enacting particular behaviors are overshadowed by their subjective norms and perceived behavioral control. Yet, because the attitudes to behavioral intention path was significant in the model of sexual assault communication, it would seem that the topic (i.e., the nature of the communicative behavior) could explain, in part, this difference.

An alternate explanation for this difference between the two models is the sample size and specificity of the communicative behavior. That is, interpersonal about sexual communication is a broad communicative behavior, encompassing communication about
sexual activity, sexual orientation and sexual desire. This sample size and general behavior explanation seems more likely because I utilized a smaller sample size to estimate the ISC model likely making the effect between attitude and behavioral intention too small to detect. Nonetheless, these findings elucidate that the logical processes that undergird intentions to engage in communication about sexuality and sexual assault are, for the most part, consistent with the TPB.

*Differences in Emotional Processes and Background Variables in ISC and ISAC*

It is also worth noting that the effects of gender on TPB variables and the mediating role of emotional experiences, can vary based on the topic (i.e., communication about sexual issues verses sexual assault). In the ISC model, both masculinity and femininity were directly and negatively related to self-conscious emotions, meaning that the more masculine or feminine and individual perceived themselves to be, the less self-conscious emotions they experienced when communicating about ISC; however, this was not true of the ISAC model. Looking at the ISAC model, femininity is not directly related to TPB variables, which suggests that those who perceive themselves to be more feminine do not experience self-conscious emotions when communicating about sexual assault. Masculinity on the other hand is negatively associated with self-conscious emotions.

Understanding trends in previous research about sex differences in sexual contexts might explain why masculinity, femininity, and self-conscious emotions exhibited differences based on topic (i.e., sexual topics versus sexual assault). Gender prescribes appropriate behavior for men and women (Bem, 1981; Butler, 2006). Masculinity is typified by independence and self-reliance whereas femininity is typified
by caring and interdependence (Bem, 1981). Gender identity could not only influence the 
valance of attitudes, social norms and perceived behavioral control toward 
communicating about sexual issues, but the embarrassment or humiliation one 
experiences when engaging in behaviors (i.e., the degree to which behaviors elicit 
negative self-conscious emotions because the behavior violates gender expectations). In 
this vein, looking at sex differences, Walrave (2014) found that women had more 
negative attitudes toward sexting and more negative social norms toward the behavior 
than did men. Similarly, Alvarez and Vilarruel (2015) found that gender norms were a 
significant predictor among Latina women’s sexual health communication, but not 
among Latino men. Unfortunately, these studies organize their findings based on sex and 
not gender, so the ability to compare these findings with those of these dissertation 
studies is limited. Nonetheless, if men and women exhibit different valances and 
emotional tendencies in various studies related to communication about sexual issues and 
sex is a determinate of gender socialization, it seems likely that gender identity could 
result in the different valences and emotions when engaging in various sexually relevant 
communicative behaviors.

Findings also suggest the relationships between TPB and background variables 
can also be influenced by topic. In both models of ISC and ISAC, femininity directly and 
positively predicts subjective norms. Only in the model of ISAC did femininity directly 
predict perceived behavioral control. These results are likely the case because 
communication about sexuality and sexual assault are perceived by college students to be 
socially appropriate for feminine individuals (i.e., increasing social norms of ISC and 
ISAC). In the case of ISAC, being feminine might predict perceived behavioral control
because feminine individuals perceive themselves to be caring toward others and sexual assault an issue which constitutes the harm of an individual. In this way, individuals who have greater perceptions of care for others find it easier to talk about issues that have the potential to harm others.

Practical Implications for Bystander Interventionists

As the implementation of bystander interventions continues on college campuses, the findings of these dissertation studies have practical implications for those who conduct and design bystander interventions. Firstly, individuals who conduct and test the effectiveness of bystander interventions should consider pretesting participants and grouping individuals by gender. Although researchers have begun to evaluate bystander interventions tailored and delivered to single-sex audiences (Gidycz, Orchowski, & Berkowitz, 2011; Gidycz, Warkentin, et al., 2011), the findings of these dissertation studies suggests tailoring interventions and organizing test groups by masculinity and femininity might also be a fruitful vein of research. For example, programing targeting feminine audiences could have less emphasis on diminishing self-conscious emotions and programing targeting masculine audiences could highlight the components of masculinity identity which serve to decrease self-conscious emotions related to ISAC behavior. By grouping individuals based on gender rather than sex, intervention assessment could show stronger observed effects of the intervention.

Secondly, in addition to enacting interventions aiming for first-order effects, individuals dedicated to combating sexual assault on college campuses should consider enacting practices aiming for second-order effects on sexual assault related issues. For example, the results of these dissertation studies suggest that previous communication
about sexuality can positively influence attitudes, subjective norms and perceived behavioral control of intentions to engage in sexual assault communication. As such, interventions aimed at increasing the frequency of students’ communication about sexual activity, sexual orientation and sexual desire, could have the second-order effect of increasing students’ likelihood in engaging in sexual assault communication. Such activities could include advocating for colleges and universities to offer sexual communication courses, offering training and development seminars on sexual communication or conducting open discussion groups about sexuality related issues.

Another fruitful avenue for second-order effects is to enact and test interventions aimed directly at decreasing the self-conscious emotions one experiences as a result of communicating about sexuality and sexual assault. Given the relationship between self-conscious emotions and first-level TPB variables, it would seem likely that such factors could play a role in one’s likelihood to intervene in a potential assault situation. Knowing this, developers of interventions could include intervention components designed to specifically address and diminish the likelihood of experiencing self-conscious emotions. This is especially important given the large effect between self-conscious emotions and perceived behavioral control because if someone perceives little to no self-efficacy to engage in communication about sexual assault, they might have a diminished perception of their ability to intervene in sexual assault situations.

Finally, interventionists taking a communicative approach to combating issues surrounding sexual assault should develop and test subjective norms-based interventions targeting sexual and sexual assault communication behaviors. Interventions informed by subjective norms theory aim to provide individuals in communities with normative
feedback as a way of correcting misconceptions related to a particular behavior (Berkowitz, 2003). Perhaps the reason college students experience self-conscious emotions while talking about sexuality and sexual assault is because they have misconceptions related to the appropriateness of the behavior - a misconception that a subjective norms campaign might be able to address. Such interventions could, for example, reduce the suppressive tendency of self-conscious emotions on subjective norms path in both models of ISC and ISAC and thereby communication about sexuality and sexual assault.

Limitations and Future Research

Overall, these dissertation studies explicate the background, emotional and rational processes that undergird intentions to engage in sexual and sexual assault communication. Despite the contributions of these studies, the limitations of these studies inspire caution when interpreting results.

First, perhaps the greatest limitation to these dissertation studies is their cross-sectional design. Path analysis and structural equation modeling, the analyses utilized for these studies, are statistical techniques that are useful for making causal statements. Although it is tempting to make causal inferences about the relationships between study variables as a result of these findings, the non-experimental design of these studies warrants caution. This cross-sectional design is also a likely result for the seemingly contradictory findings in study one. Recall that because the role of emotions in TPB was unclear, I conducted a total of three path analyses in the first study - the first, the model without self-conscious emotions; the second, the model with self-conscious emotions as a mediator of the effects of first and second level TPB variables; and the third (preferred
model) with self-conscious emotions as an antecedent of first level TPB variables. Although in the second model self-conscious emotions did not mediate the effects of first-level TPB variables on behavior intention, the final trimmed model, nonetheless, exhibited suitable fit and accounted for as much variance in intentions to engage in ISC as the final, preferred model. It is important to note that these findings are most likely a product of these data being cross-sectional. As such, there is no methodological temporal precedence established by which to order the study variables, which made the second model seem, at least statistically, plausible.

Second, the self-report data collection procedures of these dissertation studies means one should interpret study findings with caution. Caution is particularly warranted in the case of the measurement of emotion because experimentally inducing an emotional response is quite different than asking participants to self-report emotional responses. Because self-conscious emotions are a category of constructs that are often under-reported (Tracy et al., 2007), it is possible the effect sizes related to emotions are suppressed in these studies. Future research can address the cross-sectional and self-report limitations of these studies by conducting experiments with randomly assigned experimental groups that utilize physiological (e.g., heart rate) and observational (e.g., blushing as an indicator of embarrassment) data to indicate the experience of self-conscious emotions.

Third, the homogenous sample of these studies might warrant caution. Because the goals of these dissertation studies were specific to the college student population, the homogenous age and college student sample are not significant limitations. However, considering that previous research has shown race and ethnicity to be relevant factors in
the experience of self-conscious emotions when communicating about sexual issues (Alvarez & Villarruel, 2015), the fact that both studies feature a predominantly White/Caucasian population is a significant limitation. Future research should consider collecting data across multiple universities of varying sizes and recruit more diverse samples in terms of race and ethnicity.

Fourth, although the scale items created for the purposes of these dissertation studies fared relatively well in exploratory and confirmatory factor analysis, the scales warrant further assessment and scrutiny. This is particularly necessary given the low reliabilities of some of the measures, particularly the subjective norms constructs. The scale items created for the purposes of this study were modeled after McCroskey’s (1992) willingness to communicate (WTC) scale. In the WTC scale, each item has both a context (e.g., group, meeting, interpersonal, or public speaking) and a receiver (e.g., stranger, acquaintance or friend), a feature that was mimicked in the creation of the scale items for these studies. Unfortunately, this decision resulted in many of the items being cross-loaded in factor analysis and suppressed the reliability of subjective norms related to the various topic constructs. This particular construct exhibited greater reliability when items were divided by target (i.e., family, same sex friend and opposite sex friend) but doing so in the final analysis would have been a deviation from how all the other TPB variables were constructed. Future research should not only scrutinize the scales further, but should consider strategies for ways to eliminate the likelihood of items cross loading in factor analysis.

Fifth, given the interesting findings related to the role of emotion in both of these TPB informed models, future research should continue to explore the role of emotion in
TPB informed models. To do so, research could explore the role of hedonic emotions in ISC and ISAC, assess anticipated emotions (self-conscious or otherwise) in ISC and ISAC, and conduct longitudinal studies to assess if students’ self-conscious emotions related to ISC and ISAC change during their time in college. Also, due to the mediating role of self-conscious emotions in both models, future research should whether self-conscious emotions mediate the effects of other background variables on first-level TPB constructs.

Sixth, future research should broaden ISC and ISAC measures and assess actual communicative behavior. For example, due to survey length constraints, these dissertation studies only assessed family, same sex and opposite sex friends as conversation targets. To gain a better understanding of general ISC and ISAC behaviors, a broader sampling of conversation targets should be considered. Models of these various targets should be tested and compared to determine how and if the models differ. Such findings could provide interventionists with the ability to tailor bystander intervention strategies by target (e.g., intervening on behalf of a stranger verses a friend). Moreover, as both these studies assessed only behavioral intentions and there is often a disparity between intentions and actual behavior, future research, in addition to being experimental, should conduct follow-up surveys to assess actual behavior.

Seventh, future research should continue to explicate the role of past general behaviors on future, more specific behavior and how to inspire prosocial conversations about sexual issues. This is because, although past ISC behavior did predict ISAC behavior, the valence and content of these past communicative behaviors was not assessed. In this sense, simply having talked about sexual activity, desire, and/or
orientation does not mean the content of such conversations were positive or anti-discriminatory. Because it would seem most likely that positive, anti-discriminatory communication about sexual issues generally and sexual assault specifically would be most productive in combating attitudes which support sexual assault, future research should explore the factors which predict positive communication about these issues.

Finally, future research should confirm the path analysis from study one utilizing structural equation modeling, retest the study model against other college samples and utilize qualitative data collection techniques to identify factors which influence intentions to engage in ISC and ISAC. Doing so could not only confirm the structural models forwarded here, but also provide evidence to suggest the generalizability of these models of ISC and ISAC across additional college student samples. Further, because 62% of the variance in intentions to engage in ISC and 72% of intentions to engage in ISAC remains unexplained, future research should utilize open-ended questions to identify additional relevant variables.

Conclusion

Sexual assault on college campuses is a serious issue. It is also an issue not easily addressed given how deeply exploitative and rape-supportive attitudes are entrenched in campus communities. Brummet and colleagues (2009), in concluding their study on the silence college students experience surrounding date rape, state:

Perhaps, if organizations began to communicate different messages about date rape so that, ultimately, college students as a whole as well as university officials were not muted in discussing the matter, we might discover (again) the real power of communication (p. 483).
As the authors suggest, addressing issues of sexual assault will take a considerable, targeted and sustained effort by university administrators, activists, and policy makers to address the silences among college students that create the space for these destructive attitudes and cultures. In many ways, this dissertation has given structure to the silence surrounding sexual and sexual assault issues. Perhaps now that we understand more about why these silences occur, we can together— as survivors, activists, administrators, family and friends— continue to shatter the silence.
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APPENDIX A: STUDY ONE SURVEY

[Consent Document]

Please type your first name, last name, Ohio ID, course number, section number, and instructor name below. Thanks!

First name  
Last name  
Ohio ID (i.e., everything before the “@” in your Ohio e-mail address)  
Course (e.g., COMS 1010, 1030, 1100, 2020, etc.)  
Section (e.g., 101)  
Instructor  

After clicking the “next” button, you will be rerouted to a different survey which records your responses. It might take a few seconds for the page to load, so please don’t exit the survey.

[Page Break and Route to New Survey]

Welcome! This survey asks about sexual activity, your emotions and your beliefs related to talking about sexual issues and should take you about 40 minutes to complete.

The survey asks about opinions, so there are no right or wrong answers.

You might notice that some of the questions seem the same, but this is intentional.

[Page Break]

[Attitudes] Answered on 7-point scale semantic differential

This set of questions is about your feelings toward commutating about sexuality.

Definitions:
Sexual activity encompasses a range of sexual behaviors including touching, hugging and oral, anal and vaginal intercourse.
Sexual orientation conversations are those which include explicit references to someone’s sexual disposition (e.g., heterosexual, homosexual, bisexual, etc.).
Sexual interest conversations are those related to one’s capacity for sexual desires and eroticism.
Please read each question and use the adjectives below each question to rate how you feel about each activity.

1. Talking to my family about sexual activity in general is:
   a. bad/good
   b. unpleasant/pleasant
   c. undesirable/desirable

2. Talking to my family about sexual orientation in general is:
   a. bad/good
   b. unpleasant/pleasant
   c. undesirable/desirable

3. Talking to my family about sexual interest in general is:
   a. bad/good
   b. unpleasant/pleasant
   c. undesirable/desirable

4. Talking to my opposite sex friends about sexual activity in general is:
   a. bad/good
   b. unpleasant/pleasant
   c. undesirable/desirable

5. Talking to my opposite sex friends about sexual orientation in general is:
   a. bad/good
   b. unpleasant/pleasant
   c. undesirable/desirable

6. Talking to my opposite sex friends about sexual interest in general is:
   a. bad/good
   b. unpleasant/pleasant
   c. undesirable/desirable

7. Talking to my same sex friends about sexual activity in general is:
   a. bad/good
   b. unpleasant/pleasant
   c. undesirable/desirable

8. Talking to my same sex friends about sexual orientation in general is:
   a. bad/good
   b. unpleasant/pleasant
   c. undesirable/desirable
9. Talking to my same sex friends about sexual interest in general is:
   a. bad/good
   b. unpleasant/pleasant
   c. undesirable/desirable

Page Break

[Subjective Norms] Answered on 7-point scale, 1 = strongly disagree to 7 = strongly agree

This set of questions is about how your family and friends feel about you taking about sexual issues.

Definitions:
Sexual activity encompasses a range of sexual behaviors including touching, hugging and oral, anal and vaginal intercourse.
Sexual orientation conversations are those which include explicit references to someone’s sexual disposition (e.g., heterosexual, homosexual, bisexual, etc.).
Sexual interest conversations are those related to one’s capacity for sexual desires and eroticism.

Please read each question and use the adjectives below each question to rate how you feel about each activity.

Please indicate the degree to which you agree or disagree with the following statements:

10. My family approves me talking about sexual activity.
11. My family approves me talking about sexual orientation.
12. My family approves me talking about sexual interest.

13. My same sex friends approve me talking about sexual activity.
14. My same sex friends approve me talking about sexual orientation.
15. My same sex friends approve me talking about sexual interest.

16. My opposite sex friends approves me talking about sexual activity.
17. My opposite sex friends approves me talking about sexual orientation.
18. My opposite sex friends approves me talking about sexual interest.

[Page Break]

[Perceived Behavioral control] Answered on 7-point scale, 1 = strongly disagree to 7 = strongly agree

This set of questions asks about your confidence in discussing sexual issues.
Sexual activity encompasses a range of sexual behaviors including touching, hugging and oral, anal and vaginal intercourse.
Sexual orientation conversations are those which include explicit references to someone’s sexual disposition (e.g., heterosexual, homosexual, bisexual, etc.). Sexual interest conversations are those related to one’s capacity for sexual desires and eroticism.

Please indicate the degree to which you agree or disagree with the following statements:

19. I have confidence in my ability to discuss sexual activity with my family.
20. I have confidence in my ability to discuss sexual orientation with my family.
21. I have confidence in my ability to discuss sexual interest with my family.

22. I have confidence in my ability to discuss sexual activity with my opposite sex friends.
23. I have confidence in my ability to discuss sexual orientation with my opposite sex friends. I have confidence in my ability to discuss sexual interest with my opposite sex friends.

24. I have confidence in my ability to discuss sexual activity with my same sex friends.
25. I have confidence in my ability to discuss sexual orientation with my same sex friends.
26. I have confidence in my ability to discuss sexual interest with my same sex friends.

27. I can easily discuss sexual activity with my family.
28. I can easily discuss sexual orientation with my family.
29. I can easily discuss sexual interest with my family.

30. I can easily discuss sexual activity with my opposite sex friends.
31. I can easily discuss sexual orientation with my opposite sex friends. I can easily discuss sexual interest with my opposite sex friends.

32. I can easily discuss sexual activity with my same sex friends.
33. I can easily discuss sexual orientation with my same sex friends.
34. I can easily discuss sexual interest with my same sex friends.

[Page Break]

[Self-Conscious Emotions] Answered on 7-point scale, 1 = strongly disagree to 7 = strongly agree

This set of questions asks about how discussion about sexual issues makes you feel.
Sexual activity encompasses a range of sexual behaviors including touching, hugging and oral, anal and vaginal intercourse.

Sexual orientation conversations are those which include explicit references to someone’s sexual disposition (e.g., heterosexual, homosexual, bisexual, etc.).

Sexual interest conversations are those related to one’s capacity for sexual desires and eroticism.

Please indicate the degree to which you agree or disagree with the following statements:

35. Talking about sexual activity makes me feel ashamed.
36. Talking about sexual orientation makes me feel ashamed.
37. Talking about sexual interest makes me feel ashamed.
38. Talking about sexual activity makes me feel embarrassed.
39. Talking about sexual orientation makes me feel embarrassed.
40. Talking about sexual interest makes me feel embarrassed.
41. Talking about sexual activity makes me feel humiliating.
42. Talking about sexual orientation makes me feel humiliating.
43. Talking about sexual interest makes me feel humiliating.

[Page Break]

[Intentions to Engage in Interpersonal Sexual Communication Answered on 7-point scale, 1 = extremely unlikely to 7 = extremely likely]

This set of questions is about your intentions to communicate about sexuality.

Sexual activity encompasses a range of sexual behaviors including touching, hugging and oral, anal and vaginal intercourse.

Sexual orientation conversations are those which include explicit references to someone’s sexual disposition (e.g., heterosexual, homosexual, bisexual, etc.).

Sexual interest conversations are those related to one’s capacity for sexual desires and eroticism.

Please indicate how likely you are to in the next 30 days to:

44. I intend to talk with my family about sexual activity in future conversations.
45. I intend to talk with my family about sexual orientation in future conversations.
46. I intend to talk with my family about sexual desire in future conversations.
47. I intend to talk with my opposite sex friends about sexual activity in future conversations.
48. I intend to talk with my opposite sex friends about sexual orientation in future conversations.
49. I intend to talk with my opposite sex friends about sexual desire in future conversations.
50. I intend to talk with my friend about sexual activity in future conversations.
51. I intend to talk with my friend about sexual orientation in future conversations.
52. I intend to talk with my friend about sexual desire in future conversations.

[Page Break]

[Gender] Answered on a 7 point scale from 1 (almost never true) to 7 (almost always true)

Please use the following characteristics to describe yourself by indicating how true of you each of the characteristics are:

53. Defend my own beliefs
54. Affectionate
55. Independent
56. Sympathetic
57. Assertive
58. Sensitive to others
59. Strong personality
60. Understanding
61. Forceful
62. Compassionate
63. Have leadership abilities
64. Eager to soothe hurt feelings
65. Willing to take risks
66. Warm
67. Dominant
68. Tender
69. Willing to take a stand
70. Love children
71. Aggressive
72. Gentle
[Page Break]

[Morality Part One] Answered on 7-point scale, 1 = not at all relevant to 7 = extremely relevant

This set of questions asks about how you make decisions about right and wrong.

When you decide whether something is right or wrong, to what extent are the following considerations relevant to your thinking?

73. Whether or not someone suffered emotionally
74. Whether or not some people were treated differently than others
75. Whether or not action showed love for his or her country
76. Whether or not someone showed a lack of respect for authority
77. Whether or not someone violated standards of purity
78. Whether or not someone was good at math
79. Whether or not someone cared for someone weak or vulnerable
80. Whether or not someone acted unfairly
81. Whether or not someone did something to betray his or her group
82. Whether or not someone conformed to the traditions of society
83. Whether or not someone did something disgusting
84. Whether or not someone was cruel
85. Whether or not someone was denied his or her rights
86. Whether or not someone showed a lack of loyalty
87. Whether or not an action caused chaos or disorder
88. Whether or not someone acted in a way that God would approve of

[Page Break]

[Morality Part Two] Answered on 7-point scale, 1 = strongly disagree to 7 = strongly agree

Please read the following sentences and indicate your agreement or disagreement:

89. Compassion for those who are suffering is the most crucial virtue.
90. When the government makes laws, the number one principle should be ensuring that everyone is treated fairly.
91. I am proud of my country.
92. Respect for authority is something all children need to learn.
93. People should not do things that are disgusting, even if no one is harmed.
94. It is better to do good than to do bad.
95. One of the worst things a person could do is hurt a defenseless animal.
96. Justice is the most important requirement for a society.
97. People should be loyal to their family members, even when they have done something wrong.
98. Men and women each have different roles to play in society.
99. I would call some acts wrong on the grounds that they are unnatural.
100. It can never be right to kill a human being.
101. I think it’s morally wrong that rich children inherit a lot of money while poor children inherit nothing.
102. It is more important to be a team player than to express oneself.
103. If I were a soldier and disagreed with my commanding officer’s orders, I would obey anyway because that is my duty.
104. Chastity is an important and valuable virtue.

[Page Break]

Please indicate your year in school:
- First-year: □
- Sophomore □
- Junior □
- Senior □
- Graduate □
- Other □

Please indicate your age: ______

Please indicate your race/ethnicity:
- Caucasian/White □
- African □
- American/Black □
- Asian/Pacific Islander □
- Native Hawaiian or Alaskan □
- Hispanic/Latino/a □
- Multi-racial or Multi-ethnic □
- Other □
Please indicate your sex:

- Male □
- Female □
- Other □

Please indicate the degree to which you perceive yourself to be:

<table>
<thead>
<tr>
<th>Very Masculine</th>
<th>Masculine</th>
<th>Somewhat Masculine</th>
<th>Slightly Masculine</th>
<th>Androgynous</th>
<th>Slightly Feminine</th>
<th>Somewhat Feminine</th>
<th>Feminine</th>
<th>Very Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

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APPENDIX B: STUDY TWO SURVEY

[Consent Document]

Please type your first name, last name, Ohio ID, course number, section number, and instructor name below. Thanks!

| First name |  |
| Last name |  |
| Ohio ID (i.e., everything before the “@” in your Ohio e-mail address) |  |
| Course (e.g., COMS 1010, 1030, 1100, 2020, etc.) |  |
| Section (e.g., 101) |  |
| Instructor |  |

After clicking the “next” button, you will be rerouted to a different survey which records your responses. It might take a few seconds for the page to load, so please don’t exit the survey.

[Page Break and Route to New Survey]

Welcome! This survey asks about your emotions and your beliefs related to talking about sexual assault.

The survey should take you about 60 minutes to complete.

The survey asks about opinions, so there are no right or wrong answers.

You might notice that some of the questions seem the same, but this is intentional.

[Past ISC Behavior] Answered on 7-point scale (1= never to 7 = very frequently)

This set of questions is about your past behavior related to communicating about sexuality generally.

Sexual activity encompasses a range of sexual behaviors including touching, hugging and oral, anal and vaginal intercourse.

Sexual orientation conversations are those which include explicit references to someone’s sexual disposition (e.g., heterosexual, homosexual, bisexual, etc.).

Sexual interest conversations are those related to one’s capacity for sexual desires and eroticism.
Please indicate how often in the past 2 weeks you have done the following:

105. Talked with my family about sexual activity.
106. Talked with my family about sexual orientation.
107. Talked with my family about sexual desire.
108. Talked with my opposite sex friends about sexual activity.
109. Talked with my opposite sex friends about sexual orientation.
110. Talked with my opposite sex friends about sexual desire.
111. Talked with my friend about sexual activity.
112. Talked with my friend about sexual orientation.
113. Talked with my friend about sexual desire.

[Attitudes] Answered on 7-point scale semantic differential

This set of questions is about your feelings toward commutating about sexuality.

Definitions:
Sexual assaults are incidents in which the victim was unable to provide consent due to drug or alcohol use; forced to penetrate another person; or coerced to engage in sexual contact (including nonphysical pressure to engage in sex) unwanted sexual contact (including forcible kissing, fondling, or grabbing); and noncontact unwanted sexual experiences that do not involve physical contact.

Please read each question and use the adjectives below each question to rate how you feel about each activity.

114. Talking to my family about sexual assault in general is:
   a. bad/good
   b. unpleasant/pleasant
   c. undesirable/desirable

115. Talking to my opposite sex friends about sexual assault in general is:
   a. bad/good
   b. unpleasant/pleasant
   c. undesirable/desirable

116. Talking to my same sex friends about sexual assault in general is:
   a. bad/good
   b. unpleasant/pleasant
   c. undesirable/desirable
**[Subjective Norms] Answered on 7-point scale, 1 = strongly disagree to 7 = strongly agree**

This set of questions is about how your family and friends feel about you taking about sexual assault.

Definitions:
Sexual assaults are incidents in which the victim was unable to provide consent due to drug or alcohol use; forced to penetrate another person; or coerced to engage in sexual contact (including nonphysical pressure to engage in sex) unwanted sexual contact (including forcible kissing, fondling, or grabbing); and noncontact unwanted sexual experiences that do not involve physical contact.

Please indicate the degree to which you agree or disagree with the following statements:

117. My family approves me talking about sexual assault.
118. My same sex friends approve me talking about sexual assault.
119. My opposite sex friends approves me talking about sexual assault.

**[Perceived Behavioral control] Answered on 7-point scale, 1 = strongly disagree to 7 = strongly agree**

This set of questions asks about your confidence in discussing sexual assault.

Sexual assaults are incidents in which the victim was unable to provide consent due to drug or alcohol use; forced to penetrate another person; or coerced to engage in sexual contact (including nonphysical pressure to engage in sex) unwanted sexual contact (including forcible kissing, fondling, or grabbing); and noncontact unwanted sexual experiences that do not involve physical contact.

Please indicate the degree to which you agree or disagree with the following statements:

120. I have confidence in my ability to discuss sexual assault with my family.
121. I have confidence in my ability to discuss sexual assault with my opposite sex friends.
122. I have confidence in my ability to discuss sexual assault with my same sex friends.
123. I can easily discuss sexual assault with my family.
124. I can easily discuss sexual assault with my opposite sex friends.
125. I can easily discuss sexual assault with my same sex friends.
[Intentions to Engage in Interpersonal Sexual Assault Communication Answered on 7-point scale, 1 = extremely unlikely to 7 = extremely likely]

This set of questions asks about your intent in discussing sexual assault in future conversations.

Sexual assaults are incidents in which the victim was unable to provide consent due to drug or alcohol use; forced to penetrate another person; or coerced to engage in sexual contact (including nonphysical pressure to engage in sex) unwanted sexual contact (including forcible kissing, fondling, or grabbing); and noncontact unwanted sexual experiences that do not involve physical contact.

Please indicate the degree to which you agree or disagree with the following statements:

1. I intend to talk with my family about sexual assault in future conversations.
2. I intend to talk with my same sex friends about sexual assault in future conversations.
3. I intend to talk with my opposite sex friends about sexual assault in future conversations.

[Page Break]

[Self-Conscious Emotions] Answered on 7-point scale, 1 = strongly disagree to 7 = strongly agree

This set of questions asks about how discussions about sexual assault make you feel.

Sexual assaults are incidents in which the victim was unable to provide consent due to drug or alcohol use; forced to penetrate another person; or coerced to engage in sexual contact (including nonphysical pressure to engage in sex) unwanted sexual contact (including forcible kissing, fondling, or grabbing); and noncontact unwanted sexual experiences that do not involve physical contact.

Please indicate the degree to which you agree or disagree with the following statements:

1. Talking about sexual assault makes me feel ashamed.
2. Talking about sexual assault makes me feel embarrassed.
3. Talking about sexual assault is humiliating.
[Page Break]

[Morality Part One] Answered on 7-point scale, 1 = not at all relevant to 7 = extremely relevant

This set of questions asks about how you make decisions about right and wrong.

When you decide whether something is right or wrong, to what extent are the following considerations relevant to your thinking?

1. Whether or not someone suffered emotionally  
2. Whether or not some people were treated differently than others  
3. Whether or not an action showed love for his or her country  
4. Whether or not someone showed a lack of respect for authority  
5. Whether or not someone violated standards of purity  
6. Whether or not someone was good at math  
7. Whether or not someone cared for someone weak or vulnerable  
8. Whether or not someone acted unfairly  
9. Whether or not someone did something to betray his or her group  
10. Whether or not someone conformed to the traditions of society  
11. Whether or not someone did something disgusting  
12. Whether or not someone was cruel  
13. Whether or not someone was denied his or her rights  
14. Whether or not someone showed a lack of loyalty  
15. Whether or not an action caused chaos or disorder  
16. Whether or not someone acted in a way that God would approve of

[Page Break]

[Morality Part Two] Answered on 7-point scale, 1 = strongly disagree to 7 = strongly agree

Please read the following sentences and indicate your agreement or disagreement:

17. Compassion for those who are suffering is the most crucial virtue.  
18. When the government makes laws, the number one principle should be ensuring that everyone is treated fairly.  
19. I am proud of my country.  
20. Respect for authority is something all children need to learn.  
21. People should not do things that are disgusting, even if no one is harmed.  
22. It is better to do good than to do bad.  
23. One of the worst things a person could do is hurt a defenseless animal.  
24. Justice is the most important requirement for a society.  
25. People should be loyal to their family members, even when they have done something wrong.  
26. Men and women each have different roles to play in society.
27. I would call some acts wrong on the grounds that they are unnatural.
28. It can never be right to kill a human being.
29. I think it’s morally wrong that rich children inherit a lot of money while poor children inherit nothing.
30. It is more important to be a team player than to express oneself.
31. If I were a soldier and disagreed with my commanding officer’s orders, I would obey anyway because that is my duty.
32. Chastity is an important and valuable virtue.

[Page Break]

[Gender] Answered on a 7 point scale from 1 (almost never true) to 7 (almost always true)

Please use the following characteristics to describe yourself by indicating how true of you each of the characteristics are:
1. Defend my own beliefs
2. Affectionate
3. Independent
4. Sympathetic
5. Assertive
6. Sensitive to others
7. Strong personality
8. Understanding
9. Forceful
10. Compassionate
11. Have leadership abilities
12. Eager to soothe hurt feelings
13. Willing to take risks
14. Warm
15. Dominant
16. Tender
17. Willing to take a stand
18. Love children
19. Aggressive
20. Gentle
[Rape Myth Acceptance] Answered on 7-point scale 1= strongly disagree, 7 = strongly agree

The following represent some people’s beliefs about rape and sexual assault. Please indicate how much you agree or disagree with each statement below.

[Subscale 1: She asked for it]
1. If a girl is raped while she is drunk, she is at least somewhat responsible for letting things get out of hand.
2. When girls go to parties wearing slutty clothes, they are asking for trouble.
3. If a girl goes to a room alone with a guy at a party, it is her own fault if she is raped.
4. If a girl acts like a slut, eventually she is going to get into trouble.
5. When girls get raped, it’s often because the way they said “no” was unclear.
6. If a girl initiates kissing or hooking up, she should not be surprised if a guy assumes she wants to have sex.

[Subscale 2: He didn’t mean to]
7. When guys rape, it is usually because of their strong desire for sex.
8. Guys don’t usually intend to force sex on a girl, but sometimes they get too sexually carried away.
9. Rape happens when a guy’s sex drive goes out of control.
10. If a guy is drunk, he might rape someone unintentionally.
11. It shouldn’t be considered rape if a guy is drunk and didn’t realize what he was doing.
12. If both people are drunk, it can’t be rape.

[Subscale 3: It wasn’t really rape]
13. If a girl doesn’t physically resist sex—even if protesting verbally—it can’t be considered rape.
14. If a girl doesn’t physically fight back, you can’t really say it was rape.
15. A rape probably doesn’t happen if a girl doesn’t have any bruises or marks.
16. If the accused “rapist” doesn’t have a weapon, you really can’t call it rape.
17. If a girl doesn’t say “no” she can’t claim rape.

[Subscale 4: She lied]
18. A lot of times, girls who say they were raped agreed to have sex and then regret it.
19. Rape accusations are often used as a way of getting back at guys.
20. A lot of times, girls who say they were raped often led the guy on and then had regrets.
21. A lot of times, girls who claim they were raped have emotional problems.
22. Girls who are caught cheating on their boyfriends sometimes claim it was rape.
Please indicate your year in school:
   First-year: □
   Sophomore □
   Junior □
   Senior □
   Graduate □
   Other □

Please indicate your age: ______

Please indicate your race/ethnicity:
   Caucasian/White □
   African □
   African/American/Black □
   Asian/Pacific Islander □
   Native Hawaiian or Alaskan □
   Hispanic/Latino/a □
   Multi-racial or Multi-ethnic □
   Other □

Please indicate your sex:
   Male □
   Female □
   Other □

Please indicate the degree to which you perceive yourself to be:

[Page Break]

[Social Desirability] Answered on 7-point scale 1 = strongly disagree, 7 = strongly agree

1. It is sometimes hard for me to go on with my work if I am not encouraged.
2. I sometimes feel resentful when I don’t get my way.
3. On a few occasions, I have given up doing something because I thought too little of my ability.
4. There have been times when I felt like rebelling against people in authority even though I knew they were right.
5. No matter who I’m talking to, I’m always a good listener.
6. There have been occasions when I took advantage of someone.
7. I’m always willing to admit it when I make a mistake.
8. I sometimes try to get even rather than forgive and forget.
9. I am always courteous, even to people who are disagreeable.
10. I have never been irked when people expressed ideas very different from my own.
11. There have times when I was quite jealous of the good fortune of others.
12. I am sometimes irritated by people who ask favors of me.
13. I have never deliberately said something that hurt someone’s feelings.

[SES-SFV]

The following questions concern sexual experiences that you may have had that were unwanted. We know that these are personal questions, so we do not ask your name or other identifying information. Your information is completely confidential. We hope that this helps you to feel comfortable answering each question honestly. Place a check mark in the box showing the number of times each experience has happened to you. If several experiences occurred on the same occasion—for example, if one night someone told you some lies and had sex with you when you were drunk, you would check both boxes a and c. The past 12 months refers to the past year going back from today. Since age 14 refers to your life starting on your 14th birthday and stopping one year ago from today.

<table>
<thead>
<tr>
<th>Sexual Experiences</th>
<th>How many times in the past 12 months?</th>
<th>How many times since age 14?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch or butt) or removed some of my clothes without my consent (but did not attempt sexual penetration) by:</td>
<td>0 1 2 3+</td>
<td>0 1 2 3+</td>
</tr>
<tr>
<td>a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn’t want to.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn’t want to.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Taking advantage of me when I was too drunk or out of it to stop what was happening.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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2. Someone had oral sex with me or made me have oral sex with them without my consent by:

<table>
<thead>
<tr>
<th></th>
<th>How many times in the past 12 months?</th>
<th>How many times since age 14?</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn’t want to.</td>
<td>0 1 2 3+</td>
</tr>
<tr>
<td>b.</td>
<td>Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn’t want to.</td>
<td>0 1 2 3+</td>
</tr>
<tr>
<td>c.</td>
<td>Taking advantage of me when I was too drunk or out of it to stop what was happening.</td>
<td>0 1 2 3+</td>
</tr>
<tr>
<td>d.</td>
<td>Threatening to physically harm me or someone close to me.</td>
<td>0 1 2 3+</td>
</tr>
<tr>
<td>e.</td>
<td>Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.</td>
<td>0 1 2 3+</td>
</tr>
</tbody>
</table>

If you are a male, check box and skip to item 4.

3. A man put his penis into my vagina, or someone inserted fingers or objects without my consent by:

<table>
<thead>
<tr>
<th></th>
<th>How many times in the past 12 months?</th>
<th>How many times since age 14?</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn’t want to.</td>
<td>0 1 2 3+</td>
</tr>
<tr>
<td>b.</td>
<td>Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn’t want to.</td>
<td>0 1 2 3+</td>
</tr>
<tr>
<td>c.</td>
<td>Taking advantage of me when I was too drunk or out of it to stop what was happening.</td>
<td>0 1 2 3+</td>
</tr>
<tr>
<td>d.</td>
<td>Threatening to physically harm me or someone close to me.</td>
<td>0 1 2 3+</td>
</tr>
<tr>
<td>e.</td>
<td>Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.</td>
<td>0 1 2 3+</td>
</tr>
</tbody>
</table>

4. A man put his penis into my butt, or someone inserted fingers or objects without my consent by:

<table>
<thead>
<tr>
<th></th>
<th>How many times in the past 12 months?</th>
<th>How many times since age 14?</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn’t want to.</td>
<td>0 1 2 3+</td>
</tr>
<tr>
<td>b.</td>
<td>Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn’t want to.</td>
<td>0 1 2 3+</td>
</tr>
<tr>
<td>c.</td>
<td>Taking advantage of me when I was too drunk or out of it to stop what was happening.</td>
<td>0 1 2 3+</td>
</tr>
<tr>
<td>d.</td>
<td>Threatening to physically harm me or someone close to me.</td>
<td>0 1 2 3+</td>
</tr>
<tr>
<td>e.</td>
<td>Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.</td>
<td>0 1 2 3+</td>
</tr>
</tbody>
</table>
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn’t want to.

c. Taking advantage of me when I was too drunk or out of it to stop what was happening.

d. Threatening to physically harm me or someone close to me.

e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.

Even though it didn’t happen, someone TRIED to have oral sex with me, or make me have oral sex with them without my consent by:

a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn’t want to.

b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn’t want to.

c. Taking advantage of me when I was too drunk or out of it to stop what was happening.

d. Threatening to physically harm me or someone close to me.

e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.

5. Even though it didn’t happen, someone TRIED to have oral sex with me, or make me have oral sex with them without my consent by: 0 1 2 3+ 0 1 2 3+

If you are male, check this box and skip to item 7.

Even though it didn’t happen, a man TRIED to put his penis into my vagina, or someone tried to stick in fingers or objects without my consent by:

Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn’t want to.

a. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn’t want to.

b. Taking advantage of me when I was too drunk or out of it to stop what was happening.

c. Threatening to physically harm me or someone close to me.

d. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.

How many times in the past 12 months? How many times since age 14? 0 1 2 3+ 0 1 2 3+
Using force, for example holding me down with their body
e. weight, pinning my arms, or having a weapon.

Even though it didn’t happen, a man TRIED to put his penis
7. into my butt, or someone tried to stick in objects or fingers 0 1 2 3+ 0 1 2 3+
without my consent by:

- Telling lies, threatening to end the relationship, threatening to
  spread rumors about me, making promises I knew were
  untrue, or continually verbally pressuring me after I said I
didn’t want to.
- Showing displeasure, criticizing my sexuality or
b. attractiveness, getting angry but not using physical force, after
  I said I didn’t want to.
- Taking advantage of me when I was too drunk or out of it
c. to stop what was happening.
- Threatening to physically harm me or someone close to
d. me.
- Using force, for example holding me down with their
  body weight, pinning my arms, or having a weapon.

8. I am: Female Male My age is _____________ years and ______________ months.
9. Did any of the experiences described in this survey happen to you 1 or more times?
   Yes No
What was the sex of the person or persons who did them to you?
   Female only
   Male only
   Both females and males
   I reported no experiences
10. Have you ever been raped? Yes No