Fall 12-8-2022

USING THE SOCIAL-ECOLOGICAL MODEL TO BETTER UNDERSTAND SEXUAL ASSERTIVENESS AMONG UNDERGRADUATE WOMEN AT AN INSTITUTION OF HIGHER EDUCATION IN THE SOUTHEASTERN UNITED STATES

Lisa Wright

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by

Lisa Wright

A Dissertation
Submitted to the Graduate School,
the College of Education and Human Sciences
and the School of Education
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

Approved by:

Dr. Kyna Shelley, Committee Chair
Dr. Thomas Lipscomb
Dr. Thomas O'Brien
Dr. Kevin Wells

December 2022

Published by the Graduate School

ABSTRACT

This study examined sexual assertiveness among female undergraduate students at an institution of higher education in the southeastern United States from the context of the social-ecological model. An online survey instrument examined sexual assertiveness, sexual communication self-efficacy, campus climate, and sexual scripts. Structural equation modeling was used to examine the relationships between these variables and all variables significantly predicted sexual assertiveness individually, but when examining the relationships collectively, only sexual communication self-efficacy and campus climate remained significant predictors of sexual assertiveness.

ACKNOWLEDGMENTS

The writer thanks Dr. Kyna Shelley for her support and guidance throughout this process, as well as Dr. Kevin Wells for his expertise and dedication. The feedback and contributions from Dr. Thomas Lipscomb and Dr. Thomas O'Brien and the encouragement from Dr. Melissa Roberts and the staff at Moffitt Health Center were also greatly appreciated. Finally, the writer acknowledges the contributions of previous researchers and their permission to use their survey instruments for this study.

DEDICATION

The writer thanks her family and the “village” that provided continued support and encouragement throughout this journey. This work is also dedicated to the Sexual Assault Prevention Ambassadors, as it has been an honor to serve as their advisor and witness their diligent efforts to have conversations about consent and drive cultural change on their campus.

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ACHA-NCHA	National College Health Assessment
ASCS	Assertive Sexual Communication Scale
CCSVS	Campus Climate Survey Validation Study
ESS	Enjoyment of Sexualization Scale
HISA	Hurlbert Index of Sexual Assertiveness
NPHC	National Pan-Hellenic Council
SAQ	Sexual Assertiveness Questionnaire
SAS	Sexual Assertiveness Scale
SCSE	Sexual Communication Self-Efficacy Scale
SDS	Sexual Double Standards
SSS	Sexual Script Scale
SSEI—SF	Sexual Self-Esteem Inventory—Short Form

CHAPTER I - INTRODUCTION

Sexual health is a key component of overall health and well-being. The World Health Organization (WHO, 2006) defines sexual health as not simply the absence of disease, but as "a state of physical, emotional, mental and social well-being in relation to sexuality" which "requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence" (p. 5). For many individuals, college is an ideal time to gain sexual experience, explore sexual identity, and develop relationships (Hirsch & Kahn, 2020). Unfortunately for some students, a campus party exists and when combined with a sense of invulnerability, which may be developmentally appropriate, often leads to excessive risk-taking, and ultimately, high rates of sexually transmitted infections (STIs) and sexual violence (Cantor et al., 2020; Wombacher et al., 2018). Women share a disproportionate burden of these sexual health outcomes, with university health centers reporting positivity rates for gonorrhea, chlamydia, and syphilis nearly doubling over the last 10 years (American College Health Association [ACHA], 2019) and an estimated one in five women attending college having been sexually assaulted (Muelenhard et al., 2017). These experiences may result in lasting health effects such as infertility and increased suicidality, as well as have a negative impact on academic persistence and career opportunities (Banyard et al., 2020; Dworkin et al., 2017; Institute of Medicine [IOM], 1997; Potter et al., 2018).

The ACHA and Centers for Disease Control and Prevention (CDC) advocate for addressing sexual health and violence from the perspective of the social-ecological model. This approach recognizes the importance of the individual, interpersonal,

community, and societal levels of influence on behavior individually and collectively. Extensive research has been done to understand and address sexual health among college students, much of which focuses on either safer sexual practices (i.e., condom use, fewer partners) or sexual assault (i.e., risk reduction, bystander intervention). Interventions have had varying degrees of success, but key criticisms of these efforts include addressing a single level of change, typically the individual-level, or a limited application of a theoretical framework. For example, programs that target safer sexual practices often provide information in a single session, and such efforts have not been effective in creating sustainable change in consistent and correct condom use (Whiting et al., 2019). Similarly, efforts to reduce male perpetration of sexual violence have not significantly reduced rates of sexual violence against women (Gidycz & Dardis, 2014; Orchowski et al., 2020; Rozee & Koss, 2001).

Emphasizing individual-level change and challenging norms may serve as a good starting point, but the more successful sexual health interventions have addressed safer sexual communication, which has been identified as an essential construct in improving outcomes (Noar, Carlyle, & Cole, 2006; Whiting et al., 2019; Widman et al., 2014). These programs recognize the importance of understanding the dyadic nature of safer sexual communication and developing skills that will improve one's self-efficacy in being able to negotiate safer sex (Noar, Carlyle, & Cole, 2006; Widman et al., 2014). Likewise, self-defense, especially when rooted in feminist principles, is among the more successful interventions for empowering women to use verbal assertiveness and physical defense (Orchowski et al., 2020). However, these efforts are also limited by not

addressing the societal-level of influence, as gender roles and socialization are important determinants of assertive communication, including sexual assertiveness.

Sexual assertiveness is a specific type of sexual communication that is rooted in human rights, with an emphasis on autonomy over one's sexuality and sexual experiences (Morokoff et al., 1997). Sexual assertiveness includes "firm and direct verbal and nonverbal communication to express a desire for safer sexual choices (e.g., condom use) without engaging in aggressive, hostile, or attacking communication toward a partner" (Mercer Kollar et al., 2016, p. 692). Sexual assertiveness has been associated with more correct interpretations of sexual consent communication (Shafer et al., 2018) and with a lower likelihood of unprotected sex and unwanted sexual contact (Loshek & Terrell, 2015). Deficits in sexual assertiveness are also associated with low use of contraception and condoms and more sexually coercive encounters for adolescent females (Auslander et al., 2007). Previous research has identified sexual experience, relationship status, history of sexual violence, body-esteem, sexual self-esteem, fear, feminine ideologies, gender roles, sexual double standards, and racial inequalities among the variables associated with sexual assertiveness to varying degrees (Auslander et al., 2007; Auslander et al., 2012; Brown et al., 2018; Curtin et al., 2011; Kennett et al., 2009; Livingston et al., 2007; Lopez Alvarado et al., 2020; Menard & Offman, 2009; Morokoff et al., 1997; Rickert et al., 2002; Testa & Dermen, 1999; Ullman, 2007; Zerubavel & Messman-Moore, 2013).

Problem Statement

Sexual assertiveness is a communication skill that is an essential means of preventing adverse sexual health outcomes, yet little is understood regarding the

mechanisms that contribute to its development over the course of one's lifetime (López Alvarado et al., 2020). While some significant variables have been identified, additional constructs are not firmly established in the literature. For example, Loshek and Terrell (2015) argued there is limited support for gender roles, as well as for an understanding of other considerations such as personality traits and life experiences in predicting sexual assertiveness. There has also been some criticism of the lack of understanding of the role of race and culture on sexual health decision-making, and while research on sexual assertiveness has been largely limited in its application to African American women, qualitative studies have suggested they may struggle to assert themselves out of a fear of losing their partner (Brown et al., 2018) and because of low self-esteem (Kennedy & Jenkins, 2011). It is also important to understand which predictors and dimensions of sexual assertiveness are associated with different sexual health decision-making outcomes, including condom use and consent communication. Issues in developing a better understanding of the construct include differing definitions and measures, not examining sexual assertiveness as the primary outcome of interest, and a failure to analyze the construct from within a theoretical framework.

Purpose Statement

The purpose of this study is to better understand sexual assertiveness from the context of the social-ecological model. Predictors of sexual assertiveness (communication about sexual initiation and satisfaction, refusal of unwanted sexual acts, and the ability to communicate about sexual history and risk), as defined by Loshek and Terrell (2015), will be identified at each level of the social-ecological model. Sexual self-esteem and sexual communication self-efficacy will be examined as individual-level predictors of

sexual assertiveness. Zeanah and Schwarz (1996) identified skill and experience, attractiveness, control, moral judgment, and adaptiveness as the five dimensions of the construct. Skill and experience include the availability of sexual encounters and the ability to please or be pleased sexually. Attractiveness is an individual's feeling of sexual attractiveness, while control describes the ability to manage sexual feelings and interactions. Moral judgment is the degree to which one's thoughts, feelings, and behaviors align with one's moral standards. Finally, adaptiveness assesses the degree to which one's sexual experiences align with personal goals (Zeanah & Schwarz, 1996). Sexual communication self-efficacy addresses communicating with a partner about contraception, sexual history, condom negotiation, and positive and negative sexual messages (Quinn-Nilas et al., 2016). Campus climate, which includes connectedness and norms, will be an exploratory variable at the community-level. The Sexual Script Scale (sexual standards, complexity, sex drive, performance, players, and emotional sex) will be used to examine sexual assertiveness at the societal-level (Sakaluk et al., 2014). The constructs will then be examined from the context of the social-ecological model to examine how identified predictors at each level influence each other simultaneously. Finally, group differences (e.g., race, enjoyment of sexualization) will be considered.

Research Questions and Hypotheses

Research Question 1) Which variables best predict the dimensions of sexual assertiveness at the individual-, community-, and societal-levels of the social-ecological model?

Hypothesis 1: At the individual-level, sexual self-esteem/sexual communication self-efficacy variables will positively predict sexual assertiveness.

Hypothesis 2: At the community-level, a supportive campus climate will predict or moderate sexual assertiveness.

Hypothesis 3: At the societal-level, endorsing sexual script variables will negatively predict sexual assertiveness.

Research Question 2) To what extent do the variables collectively predict sexual assertiveness simultaneously?

Research Question 3) How do identified variables differ by group in the final model?

Hypothesis 1: Sexual assertiveness will differ by age, relationship status, race, sexual orientation, athletic participation, Greek affiliation, student involvement, and enjoyment of sexualization.

Justification

Sexual health is an important component of overall health and well-being for college students. The high rates of STIs and sexual assaults are common concerns among a variety of campus representatives, which may include students and staff working for housing and residence life, Title IX, Greek life, athletics, health services, and counseling centers. In general, the rates of STIs are high and continue to increase among those between the ages of 15-24 years, with approximately half of new cases occurring in this age group (CDC, 2019). Long-term health consequences of STIs may include cancers, pelvic inflammatory disease (PID), and infertility (IOM, 1997). Immediate outcomes of sexual violence may include traumatic injury and STIs, while long-term effects may include chronic health problems and decreased quality of life (American College of Obstetricians and Gynecologists [ACOG], 2019; National Center for Injury Prevention and Control [NCIPC], 2021; Stewart, 2014). In addition to physical health issues, sexual

assault survivors are more likely to experience substance misuse and psychopathology, with post-traumatic stress disorder (PTSD) and suicidality among the most common (Dworkin et al., 2017).

In addition to health consequences, students may also experience negative academic impacts after an STI diagnosis. Self-reported data on sexual health as a part of the ACHA's National College Health Assessment (ACHA-NCHA) indicated that 16.1% of students diagnosed with chlamydia reported that it harmed their academic performance in the past 12 months. Reported negative impacts were even greater among those diagnosed with gonorrhea (30.0%) and PID (43.6%) (ACHA, 2020b). Similarly, intimate relationships and experiences with sexual violence harmed academic performance according to students responding to the ACHA-NCHA. Nearly one-third (31.4%) of students in an intimate relationship stated the relationship was detrimental. Among those that had experienced a sexual assault (1.8%), 31.1% reported a negative impact (ACHA, 2020b). These negative impacts significantly decreased GPAs and outcomes associated with student engagement and persistence (Banyard et al., 2020). Many sexual assault survivors have also reported leaving the institution and becoming employed in a setting with little opportunity for advancement (Potter et al., 2018).

The ACHA (2020a) advocates for a socioecological approach to addressing sexual health among college students. On an individual-level, they encourage interventions that emphasize the use of safer sex practices through better communication skills. In specifically addressing the prevention of sexual violence, they argue it is important to help students develop skills to foster healthy relationships and avoid negative experiences. They also support complementary risk reduction efforts that avoid

placing blame on survivors, rather than the perpetrators of assault and emphasize empowerment over fear, while also considering gender socialization, bystander intervention, and the role of alcohol and drugs (ACHA, 2016). Consistent with ACHA and CDC recommendations for addressing sexual health from a social-ecological perspective, East and Adams (2002) argued that developing a more comprehensive understanding of sexual assertiveness as a vital but complicated skill will likely require a multi-pronged, integrated approach (ACHA, 2020a; CDC, 2021b).

Assumptions and Delimitations

This study assumed that respondents answered truthfully when completing the survey instrument. There were several delimitations. The study was limited to a convenience sample of undergraduate female students. Attention checks were not included in the survey instrument. It was also feasible that there were more relevant variables at each level of the social-ecological model that were not included, and it is plausible that there was a more appropriate theory to explain sexual assertiveness. A final delimitation is that the survey instruments were selected in a way that did not require respondents to be in a relationship or reference a specific partner or sexual encounter.

CHAPTER II – REVIEW OF THE LITERATURE

Sexual assertiveness is a specific type of safer sexual communication (Noar, Carlyle, & Cole, 2006) and studies have linked it to fewer unwanted sexual encounters (López Alvarado et al., 2020; Loshek & Terrell, 2015), to correct interpretation of sexual consent communication (Shafer et al., 2018), and to contraception use (Auslander et al., 2007). East and Adams (2002) advocated for women to become empowered and recognize "their right to experience sexuality free of violence, risk of pregnancy and disease, and exploitation, and that any partner who does not respect their wishes for effective protection is not a desirable partner" (p. 213). This literature review will examine sexual assertiveness and related constructs, discuss the college campus culture with an emphasis on sexual health outcomes, and consider sexual assertiveness from the context of the social-ecological model.

Operationalizing Sexual Assertiveness

Sexual assertiveness is an understanding that "individuals 'own' or have rights over their bodies and their sexuality and are never under social obligation to let someone touch their body…This concept thus implies a basic human right to retain autonomy over sexual experiences" (Morokoff et al., 1997, p. 791). In developing the Sexual Assertiveness Scale (SAS), the construct was multidimensional with three components: Initiation of wanted sexual activity, refusal of unwanted sexual activity, and prevention of STIs and pregnancy (Morokoff et al., 1997). The SAS has become one of the more widely utilized instruments (Loshek & Terrell, 2015) and has been used to study sexual assertiveness among African American women (Brown et al., 2018; Jenkins & Kennedy, 2013) and adolescents (Auslander et al., 2007), as well as examining how sexual

assertiveness relates to body-esteem (Auslander et al., 2012), sexual compliance (Darden et al., 2019), sexual victimization (Katz et al., 2010; Livingston et al., 2007; Walker et al., 2011), and social anxiety (Schry & White, 2013).

Other measures of sexual assertiveness include the Hurlbert Index of Sexual Assertiveness (HISA), which places more of an emphasis on sexual communication, and the Assertive Sexual Communication Scale (ASCS), which includes subscales for communication about sexual preferences and seeking information about sexual history (Loshek & Terrell, 2015). Some researchers have also developed measures or adapted existing measures that approximated sexual assertiveness, such as the Health Protective Communication Scale (Testa & Dermen, 1999), the Relational Sexual Assertiveness Scale, the Sexual Agency and Communication Scale, and the Partner Approval Scale (Zerubavel & Messman-Moore, 2013).

In their development of the Sexual Assertiveness Questionnaire (SAQ), Loshek and Terrell (2015) strived to develop a comprehensive measure that would encompass all dimensions from SAS, HISA, and ASCS. They also challenged previous items that specifically referred to contraception and condom use as components of being sexually assertive, as these issues may not be relevant among all women, depending on their life stage. However, they agreed with the importance of discussing STIs as a part of communication about sexual history, regardless of a woman's life stage and relationship status, as a failure to do so may have a detrimental impact on sexual health. Their final model demonstrated support for three dimensions of sexual assertiveness in the SAQ: Communication about sexual initiation and satisfaction, the ability to refuse unwanted

sexual encounters, and the ability to communicate about sexual risk (Loshek & Terrell, 2015).

Sexual Resourcefulness and Sexual Agency

Sexual resourcefulness and sexual agency are two constructs similar to sexual assertiveness. In the development of their sexual self-control model, Kennett et al. (2009) defined sexual resourcefulness as an intentional mix of cognitive and behavioral skills that include anticipating and planning how to manage an unwanted sexual encounter by communicating with one's partner. Predictors of sexual resourcefulness included sexual self-efficacy, reasons for consenting to unwanted sex, endorsement of gender norms, contextual factors, and sexual arousal. Women who were more sexually compliant were less resourceful, had less sexual self-efficacy, and had more reasons to consent (Kennett et al., 2009).

Sexual agency also involves encouraging women to use refusal skills to address unwanted sexual encounters, while also promoting independence and self-worth (Bay-Cheng, 2019). Sexual agency is often defined by a combination of behaviors such as health care utilization, communication skills, and safe sex, but Bay-Cheng (2019) believes this oversimplifies the construct and ignores the importance of social, cultural, and environmental factors. Cense (2019a) also challenged sex educators to not view sexual agency as an autonomous process but to work from a framework that also incorporates social and moral considerations. Thus, any efforts to develop sexual assertiveness must also consider contextual factors, as failing to do so would "implicitly abet inequalities, buffer those with privilege, and blame those without" (Bay-Cheng, 2019, p. 468).

Sexual resourcefulness is like sexual assertiveness for the refusal of unwanted activity but has usually been studied in relation to sexual compliance. While the implications of sexual compliance may be subject to debate, sexual violence is a widespread problem (Bay-Cheng & Bruns, 2016). For this reason, studying sexual assertiveness for the refusal of unwanted sexual activity will be the priority of this research as it has potentially more meaningful implications in preventing sexual violence. Sexual agency also addresses a concept similar to sexual assertiveness, with more consideration given to relevant social, environmental, and cultural influences. However, sexual agency currently lacks a clear definition and a definitive way to measure the construct, versus sexual assertiveness which is clearly defined and has dimensions that are particularly salient in addressing sexual health problems among college students.

Campus Culture

While most students go to college to seek an education, some go because it is a means of postponing responsibility, with partying functioning as the "nonacademic hallmark of modern college life" (Weiss, 2013, p. xiii). Even though most campuses are relatively safe from serious crimes, minor crimes are common, often due to a party culture, which is characterized by the excessive use of alcohol and/or drugs and other forms of risk-taking behaviors (Weiss, 2013). In a recent study, over one-third of college students randomly sampled had experienced either physical violence or sexual assault, with nearly half reporting more than one incident, much of which was attributed to excessive alcohol consumption and a subculture of sexual aggression among those that partied regularly (Weiss & Dilks, 2016).

On an institutional-level, data obtained from Clery Act reporting indicated universities with more liquor law violations and a stronger presence of athletes and Greek-affiliated students were more likely to report rapes. Consistent with previous studies, the authors suggested campuses with more students involved in Greek life and athletics have a culture that encourages sexual assault through hypermasculinity, the endorsement of more traditional gender roles, and supportiveness of rape myths (Wiersma-Mosely et al., 2017). Finally, a party culture is also associated with the widespread practice of hooking up, which involves a sexual encounter with no expectation of a committed relationship. Individuals who hook up are at a higher risk for STIs and, when alcohol or drugs are involved, more encounters that were unintended or not consensual due to incapacitation (Garcia et al., 2012).

Sexually Transmitted Infections

Sexually transmitted infections (STIs) are those passed between individuals through sexual contact, which may include vaginal, oral, or anal sex. In the U.S., rates of STIs continue to increase annually. In a recent analysis, the Centers for Disease Control and Prevention (CDC) estimated that one in five Americans had an STI, which included chlamydia, gonorrhea, hepatitis B, herpes simplex virus type 2, human immunodeficiency virus (HIV), syphilis, and trichomoniasis. In 2018, chlamydia, trichomoniasis, genital herpes, and human papillomavirus (HPV) accounted for 93% of all new cases of STIs and 98% of the total STI prevalence (CDC, 2021a). STIs may have long-term health consequences such as cancers associated with HPV or hepatitis B, pelvic inflammatory disease (PID), and infertility (IOM, 1997).

Rates of STIs on college campuses have also been increasing. The ACHA's Sexual Health Services Survey, which collects data from college and university health centers, compared data over the course of 10 years and found significant increases in the positivity rates for gonorrhea, chlamydia, and syphilis, with the overall rates nearly doubling for each (ACHA, 2019). Self-reported data on sexual health were also collected from college students as a part of the ACHA's National College Health Assessment (ACHA-NCHA), which is the largest and most comprehensive known source of survey data on student health. When asked about using condoms or another protective barrier for vaginal intercourse within the last 30 days, less than half (41.9%) of students reported they did so "most of the time" or "always." In addition to potential health consequences, students reported experiencing negative academic impacts after being diagnosed with an STI. Negative academic impacts were most common in those diagnosed with PID (43.6%), followed by gonorrhea (30.0%) and chlamydia (16.1%) (ACHA, 2020b).

Sexual Violence Defined

The definition of sexual violence varies across studies and organizations, and terms are often used interchangeably. The lack of a consistent definition is problematic in that it allows room for interpretation as to what constitutes sexual violence, which "is likely to coincide with people's existing scripts about what sexual assault is like" in terms of being "traumatic, devastating, and life-changing" (Muelenhard et al., 2017, p. 571-572). Another inherent risk in this approach is that it may also minimize sexual coercion and other types of sexual violence. Many believe that sexual violence should ultimately be considered a multidimensional continuum of behaviors (Muelenhard et al., 2017).

The CDC's National Center for Injury Prevention and Control (NCIPC) defines sexual violence as "a sexual act that is committed or attempted by another person without freely given consent of the victim or against someone who is unable to consent or refuse" (Basile et al., 2014, p. 11). Acts of sexual violence may include "penetrative and non-penetrative acts as well as non-contact forms" of sexual conduct (p. 1). Sexual violence may also occur through physical force, alcohol and/or drug-induced incapacitation, or nonphysical pressure (Basile et al., 2014). Since this study will emphasize sexual assertiveness among college women, it is also important to consider the terminology the Office of Civil Rights (OCR) uses for enforcing Title IX, the federal law that prohibits sex-based discrimination at any institution receiving federal assistance. Title IX views sexual violence as a type of sexual harassment, which is considered unwelcome sexual conduct. For Title IX investigations, sexual harassment encompasses rape, sexual assault, sexual battery, sexual abuse, and sexual coercion (OCR, 2020).

Definitions of sexual coercion also vary (Pugh & Becker, 2018), but it is generally considered pressuring a partner to have sex through a range of nonphysical behaviors (Chamberlain & Levenson, 2013). Examples of sexual coercion include repeated requests or demands, deception or making false promises, threatening to end a relationship, or abusing one's authority (Smith et al., 2018). There is also growing interest in a subset of potentially sexually coercive behaviors referred to as condom use resistance (CUR). CUR is trying to have intercourse without a condom when a partner wants to use one. Davis et al. (2019) view CUR as an act of sexual violence when coercion is involved, or the condom is removed without the partner's knowledge in a practice referred to as stealthing.

Sexual Violence Prevalence

Sexual violence is a public health problem in the U.S., with almost half of all women (43.6%) experiencing some form of sexual violence. Among these women, an estimated 37.0% have experienced unwanted sexual contact, 21.3% have been raped (attempted or completed), and 16.0% have been sexually coerced (Smith et al., 2018). However, depending on how verbal sexual coercion is defined, as few as 1.7% to as many as 60% of women have reported complying with unwanted sex (Pugh & Becker, 2018). Finally, in a community-based sample that examined the practice of CUR, 48.9% of the women had experienced coercive strategies (e.g., manipulation, deception, force), which also coincided with higher rates of STIs (Davis et al., 2019).

Sexual Violence on College Campuses

Rates of sexual violence among college students have remained relatively stable, suggesting the increased concern may be due to more media attention. Much of this increased visibility may be attributed to the accessibility of college students for studies, increased pressure on Title IX, and the "pseudoparental" role of universities to protect women who are mostly White and of higher socioeconomic status (Muelenhard et al., 2017, p. 567). In comparing rates of sexual violence among women attending college to those not attending college in the 18-24-year-old age group, women not attending college were more likely to have experienced sexual violence, which is contrary to the misconception that college women experience more sexual assaults (Sinozich & Langton, 2014). Muelenhard et al. (2017) shared similar findings in their meta-analysis with either no difference or the opposite to be true, with women not attending college having a higher prevalence.

Accurate estimates of the prevalence of sexual violence on college campuses are limited due to different measures and sampling strategies. However, the commonly cited estimate of one in five sexual assaults among women on college campuses is likely accurate. In a recent meta-analysis, the prevalence varied considerably across campuses, with most reporting between one in five or one in four, but some reporting one in eight on the lower end to one in three on the higher end (Muelenhard et al., 2017). Rates of revictimization were also high, with students experiencing a median of three sexual assaults (Mellins et al., 2017).

In a review of specific behaviors reported in prevalence studies between 2000-2015, Fedina et al. (2018) found that unwanted sexual contact and sexual coercion, followed by incapacitated rape and attempted or completed forcible rape, were the most prevalent types of sexual violence reported by college women. Sexual coercion was also high in a random sample of college men and women, with 31.7% having been sexually coerced in their relationship. Alcohol consumption was associated with increased coercion and sexual coercion was also a predictor of inconsistent condom use (Fair & Vanyur, 2011). Finally, in studying unwanted non-condom use among a diverse sample of community college students, Smith (2003) found that men and women were equally likely to report this experience, with 46.7% experiencing it at least once since the age of 16 and 37% experiencing it with a current or recent partner.

Consequences of Sexual Violence

Experiencing sexual violence is associated with a variety of health problems, which may be acute or lifelong. Immediate physical consequences may include traumatic injury and STIs, while more chronic health problems may include difficulties with the

reproductive, gastrointestinal, or cardiovascular systems, which have largely been attributed to the stress associated with the assault (NCIPC, 2021; Stewart, 2014). Women may also experience decreased social functioning and quality of life (ACOG, 2019). Mental health consequences may also be immediate and potentially lifelong. Rape-trauma syndrome may occur in the days and weeks after the assault (ACOG, 2019). Sexual assault survivors were also significantly more likely to experience psychopathology (Dworkin et al., 2017). Survivors were at an increased risk of all forms of psychopathology included in a meta-analysis (e.g., obsessive-compulsive disorders, bipolar disorder, depression, anxiety, and eating disorders), but the strongest evidence was for PTSD and suicidality (Dworkin et al., 2017). Support has also been found for alcohol abuse and drug misuse or dependence among assault survivors (ACOG, 2019; Dworkin et al., 2017).

Sexual violence has also been linked to negative outcomes in the pursuit of educational and professional aspirations. Mengo and Black (2016) studied the impact of sexual violence on the GPAs of college women and found significant decreases after experiencing sexual violence; they also found that those who experienced sexual violence were significantly more likely to leave the institution, especially students in their first year of study. Other indicators of academic performance that have been negatively impacted by sexual violence included stress, scholarly conscientiousness, institutional commitment, and academic efficacy, which were linked to less student engagement and persistence (Banyard et al., 2020). Finally, Potter et al. (2018) examined long-term educational outcomes and career attainment among survivors of sexual assault and found that most women (i.e., nearly two-thirds) reported that mental health issues (e.g.,

depression, anxiety, PTSD) hurt their academics, which ultimately forced them to take some time away from their studies or to drop out of the institution. Women also reported difficulties with having ambition or confidence in pursuing a career and were often employed in settings with little opportunity for advancement and access to health insurance. Although the sample size was small (n = 81), 91% reported the health problems they associated with their assault led to problems in attaining academic and professional goals (Potter et al., 2018).

Addressing Sexual Health on College Campuses

Sexual health is an important component of overall health and well-being. The World Health Organization (WHO, 2006) defines sexual health as not simply the absence of disease, but as "a state of physical, emotional, mental and social well-being in relation to sexuality" which "requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence" (p. 5). For many students, college is considered a time to gain sexual experience, explore their sexual identity, and develop relationships (Hirsch & Kahn, 2020). Unfortunately for some students, the campus culture and a sense of invulnerability that may be developmentally appropriate often leads to excessive risk-taking, and ultimately, high rates of STIs and sexual violence (Cantor et al., 2020; Wombacher et al., 2018). Extensive research has sought to understand and address sexual health outcomes among college students. Findings for safer sex and sexual violence interventions will be reviewed, followed by a discussion of major criticisms of these interventions.

Safer Sex Interventions

In their meta-analysis of non-experimental behavioral interventions aimed at increasing condom use among college students, Whiting et al. (2019) concluded that the most successful approaches provided information about STIs, addressed attitudes and social norms about condoms, and provided training on condom use and negotiation with a partner. Programs that provided information alone were not beneficial because they did not to address motivating factors, self-efficacy, and skill development (Whiting et al., 2019). Communication skills were also an important consideration in safer sex education efforts. Noar, Carlyle, and Cole (2006) completed a meta-analysis that examined safer sexual communication for condom use and identified communication as one of the most important determinants. While these findings were limited by how safer sexual communication was defined and measured across studies, from a theoretical perspective, safer sexual communication requires cooperation between partners and should be considered an important part of a successful intervention, in addition to self-efficacy and skill development (Noar, Carlyle, & Cole, 2006). These findings were also supported in a meta-analysis by Widman et al. (2014) where they reiterated the importance of addressing the dyadic nature of safer sexual communication and further concluded it is essential that efforts with women should specifically address sexual assertiveness, while also considering how they may be socialized in a way that silences their voices in relationships.

Sexual Violence Interventions

Sexual violence interventions targeting men have had mixed results, but efforts directed at women are among the most successful approaches (Gidycz & Dardis, 2014;

Orchowski et al., 2020; Rozee & Koss, 2001). Early efforts sought to increase awareness and improve personal safety practices, but these programs were largely unsuccessful in reducing sexual assaults and were criticized for restricting women's personal freedom while taking the blame away from the perpetrators of sexual violence (Orchowski et al., 2020; Rozee & Koss, 2001). Programming eventually began to address assaults by acquaintances and shift blame to the perpetrator. Feminist self-defense is a commonly used curriculum that addresses the continuum of sexual violence and seeks to develop skills to prevent, rather than react to, an attempted assault (Orchowski et al., 2020). This approach ultimately seeks to empower women to protect themselves through both verbal assertiveness and physical defense, with consideration given to their limitations in strength and size, while also helping them overcome psychological barriers that often exist when encountering an assault by an acquaintance (Gidycz & Dardis, 2014).

Although self-defense training has been successful in helping women prevent sexual assault, it has not been widely adopted (Orchowski et al., 2020). Critics have argued women are not strong enough to rely on physically defending themselves (Gidycz & Dardis, 2014; Orchowski et al., 2020), but Rozee and Koss (2001) countered this with evidence that forceful physical and verbal resistance have repeatedly been shown to be effective means of resisting an assault. An additional criticism of self-defense training has been that such efforts place responsibility on women when it should ultimately be men's responsibility to end sexual assault (Gidycz & Dardis, 2014; Orchowski et al., 2020). Experts agree that while "the blame always resides with the perpetrator, women need to be cognizant of the most effective ways to protect themselves" given the limited effectiveness of interventions targeting men and the CDC's recent recommendation of

empowering women as a key component of prevention programming (Basile et al., 2016; Gidycz et al., 2008, p. 572; Orchowski et al., 2020).

Criticisms

There are several criticisms over how sexual health has been addressed on college campuses, with much of it centering around program delivery, appropriate use of theory, and methodological issues. Sexual health efforts have generally been delivered through social marketing campaigns and workshops or classes (Banyard, 2014), often as a single session, which is likely not sufficient to have a meaningful impact on developing healthy relationships and negotiation skills (DeGue et al., 2014). Many programs also lack a strong theoretical foundation and have been limited to primarily providing information on risk factors. Those that had a theoretical foundation were often rooted in health behavior change theories (e.g., the health belief model, theory of planned behavior) that addressed individual attitudes or subjective norms (Banyard, 2014). The emphasis on attitudinal outcomes was also problematic as there was little understanding of how they were relevant to preventing sexual violence and, even when programs were successful in changing attitudes, they were unable to change behavioral outcomes (DeGue et al., 2014). Orchowski et al. (2020) have also questioned programs that relied on different theoretical frameworks because they may have conflicting messages (i.e., women need to be protected, women can defend themselves).

The Social-Ecological Model

The ACHA advocates for a social-ecological approach to addressing sexual health (ACHA, 2020a), and the CDC specifically recommends addressing violence through the social-ecological model (CDC, 2021b). Kurt Lewin introduced the concept of ecological

psychology, which Urie Bronfenbrenner would go on to use in the 1970s to develop his Systems Theory, comprised of the microsystem, mesosystem, and exosystem, to explain behavior (Bronfenbrenner, 1992). Using an ecological perspective to understand and change behavior has also been applied to health education and public health interventions. Various adaptations of the original models have been utilized, but all share a common understanding that there are multiple levels of influence on health behaviors that interact across levels, and behavioral interventions are most effective when they address multiple levels and target a specific behavior (Sallis et al., 2008).

The social-ecological model serves as an important multilevel public health framework by recognizing the influence of individual, relationship, community, and societal risk and protective factors, individually and collectively (CDC, 2021b). Individual-level factors may include biology, personal history, attitudes, and behaviors; relationship-level factors consider an individual's interactions with peers and family members; community-level factors examine the risk that is inherent to an individual's setting (e.g., school, neighborhood); and societal-level factors may include norms and policies (CDC, 2021b). All levels of the framework interact and by working to address multiple levels simultaneously, more sustainable, population-level change is more likely (CDC, 2021b; Golden & Earp, 2012).

Ecological approaches have been successful in addressing HIV prevention, bullying, and alcohol misuse (Casey & Lindhorst, 2009). In a review of health promotion interventions published in *Health Education and Behavior* over the last 20 years, most fell short in addressing multiple levels of influence. However, Golden and Earp (2012) also recognized that it may not be realistic or feasible for an intervention to address

multiple levels given limitations on resources, so, at a minimum, they recommended addressing at least two levels when possible.

Individual-Level Social-Ecological Model Variables

Several individual-level factors are relevant to sexual assertiveness and sexual health, with some being more amenable to change than others. While variables such as demographic variables, a personal history of sexual violence, and personality are among those less amenable to change, they may serve as important moderators in understanding sexual assertiveness. However, variables related to mental health, sexual self-esteem, and self-efficacy may be more amenable predictors of sexual assertiveness.

Age

College students generally fall into the age range that consistently experiences an increased burden of STIs, with approximately half of all new cases occurring among those between the ages of 15-24 years (CDC, 2021a). The 18–25-year age range is also vulnerable to sexual violence, with most women (81.3%) who have experienced an attempted or completed rape reporting the first incident having occurred before the age of 25 (Smith et al., 2018). This has been a stable trend, with the Department of Justice (DOJ) finding that most rapes and acts of sexual violence between 1995-2013 occurred among women between the ages of 18-24 years (Sinozich & Langton, 2014). Specific to college students, being a first-year student appears to be a time of high vulnerability, but the risk also accumulates over the traditional four years of undergraduate studies, with 36.4% of women reporting an experience with sexual assault by their senior year (Mellins et al., 2017).

Diversity

Racial and ethnic minorities and members of the lesbian, gay, bisexual, transgender, or questioning (LGBTQ+) community also share a disproportionate burden of STIs (CDC, 2021c) and possibly sexual violence. The prevalence of sexual violence among students that identify as LGBTQ+ is unknown because most studies have been limited to White, heterosexual females. However, in a recent national campus climate survey, 22.8% of LGBTQ+ students reported experiences with nonconsensual contact (Cantor et al., 2020). Other studies have suggested women who identified as bisexual or some other sexual identity not considered heterosexual or homosexual (e.g., asexual, pansexual, queer) may have some of the highest overall prevalence rates (Fedina et al., 2018; Mellins et al., 2017). Regarding race and ethnicity, Hirsch and Khan (2020) found that every Black female they spoke with in their qualitative interviews had experienced unwanted sexual touching. Likewise, Black and Latino students were more likely to experience unwanted non-condom use, which is especially problematic given the disproportionate rates of STIs and HIV among these individuals (Smith, 2003).

Sex

College-aged women are at a greater risk of negative outcomes associated with low sexual assertiveness. In general, late adolescence and emerging adulthood are important time periods as individuals begin to date and form relationships, while also learning how to negotiate sexual activity and deal with peer pressure or coercion from a partner (López Alvarado et al., 2020). Women are consistently more likely to experience sexual violence (Bhochhibhoya et al., 2019; Herres et al., 2018), with a recent estimate suggesting they are twice as likely to be sexually assaulted (i.e., sexualized touching,

attempted penetrative sex, and penetrative sex) than men while attending college (Mellins et al., 2017). Women also experience a higher prevalence of STIs (CDC, 2021a). According to ACHA's Sexual Health Services Survey, female respondents were more likely to have been diagnosed with chlamydia, genital herpes, and HPV in the last 12 months (ACHA, 2019).

Sexual Experience

Findings have been mixed on the influence of one's sexual experiences, typically defined as the age of first sexual experience and/or the number of lifetime sexual partners, on the dimensions of sexual assertiveness. Early work by Morokoff et al. (1997) demonstrated that sexual experience predicted both initiation and refusal, while later work found that women who were more sexually active were more comfortable initiating sex but had difficulty refusing or negotiating safer sex (Auslander et al., 2007). In a more recent study, Bouchard and Humphreys (2019) examined both the number and type of sexual partners and found that having fewer casual partners was a predictor of refusal assertiveness while having more committed partners was a better predictor of initiation assertiveness. Finally, in a study examining a more distal outcome in relation to sexual assertiveness, Walker et al. (2011) found that having more lifetime partners lowered sexual assertiveness and predicted more sexual assaults.

Personal History of Violence

Previous experiences with violence have been linked to negative sexual health outcomes. College students with a baseline history of interpersonal trauma, including sexual assault, were significantly more likely to be revictimized while attending college (Conley et al., 2017; Herres et al., 2018; Katz et al., 2010). Specifically, childhood sexual

abuse has been associated with additional rapes and sexually coercive experiences later in life (Testa & Dermen, 1999). Experiences with physical violence can also be detrimental to sexual assertiveness, as women who were abused were much less likely to believe they had a right to tell their partner they were being too rough or to refuse sex with a current partner (Rickert et al., 2002).

Studies have also demonstrated that among women with a history of sexual assault, there is a relationship between decreased sexual assertiveness and increased alcohol use, which often coincided with increased sexual risk-taking (Kelley & Gidycz, 2020). In Morokoff et al.'s (1997) study, sexual victimization was a predictor of low refusal sexual assertiveness. Additional work by Morokoff et al. (2009) identified child sexual assault as a predictor of subsequent experiences with sexual violence, which then predicted lower sexual assertiveness for the prevention of STIs and pregnancy in both men and women. Likewise, more frequent experiences with sexual victimization were associated with lower overall sexual assertiveness (Morokoff et al., 2009). Livingston et al. (2007) shared similar findings in their study on the implications of sexual assault on sexual assertiveness and concluded the variables functioned reciprocally. A history of sexual assault has also been linked to lower sexual self-efficacy and sexual resourcefulness, which may be attributed to learned helplessness (Kennett et al., 2009), as women who have been assaulted have learned their wishes will likely be ignored (Katz et al., 2010).

Personality

There has been some evidence that personality traits may influence sexual assertiveness. Conley et al. (2017) found support for neuroticism, extraversion, and

openness as being associated with more sexual assaults, while conscientiousness appeared to function as a protective factor. The findings on sensation seeking have been mixed with Harlow et al. (1993) concluding it was not a significant predictor for high-risk sexual activity, but another study demonstrated sensation seeking and impulsivity had an indirect effect on condom use by influencing condom attitudes, norms, and self-efficacy for using condoms (Noar, Zimmerman, et al., 2006).

The role of compulsivity is also complex. Wright et al. (2012) found that compulsivity interacted with the benefits of communication in a way that suggested women who were more compulsive tended to be more condom-assertive if they believed there would be relational benefits. Finally, Allen (2019) identified extraversion as the personality characteristic most strongly associated with having more partners, more hooking up, and inconsistent condom use. Other personality traits associated with these outcomes to a lesser extent included neuroticism, agreeableness, and conscientiousness (Allen, 2019).

Body-Esteem

Body-esteem is relatively stable (Tiggemann, 2004) but Auslander et al. (2012) found that women with low body-esteem were less likely to be sexually assertive about condom use. They suggested that women with better body-esteem would be more inclined to feel they had a right to be sexually assertive (Auslander et al., 2012). Body-esteem has also been examined in relation to sexual assertiveness and social media usage. In a study that examined the implications of Facebook involvement on body consciousness and sexual assertiveness, Manago et al. (2015) concluded that Facebook involvement contributed to more objectified body consciousness, which was associated

with more body shame and lower sexual assertiveness. The authors attributed this to feelings of "inadequacy when failing to live up to idealized online personas" (p. 10). They also suggested body shame may have a negative impact on sexual assertiveness by making one feel less comfortable with their sexuality and their ability to communicate in sexual encounters (Manago et al., 2015).

Self-Esteem

The role of self-esteem has not been studied extensively in relation to sexual assertiveness, but some have suggested that sexually coercive encounters may lower self-esteem, which may then lower sexual assertiveness (Testa & Dermen, 1999). However, because self-esteem is relatively stable into adulthood (Trzesniewski et al., 2003), Testa and Dermen (1999) challenged this relationship and suggested it is more likely that low self-esteem makes women more vulnerable to sexual coercion. They also speculated that women with low self-esteem would be more likely to remain in coercive relationships and be less sexually assertive in refusing unwanted contact (Testa & Dermen, 1999).

The concept of sexual self-esteem is distinct from global self-esteem (Zeanah & Schwarz, 2019), and Menard and Offman (2009) identified it as a potential predictor of sexual assertiveness, which may be more amenable to change. Sexual self-esteem is defined as the affective reactions to one's sexuality and includes the dimensions of skill and experience, attractiveness, control, moral judgment, and adaptiveness (Zeanah & Schwarz, 1996).

Mental Health

Mental health and substance use are also among some potentially amenable variables relevant to sexual assertiveness. Symptoms of depression and PTSD are

significant predictors of sexual assault for women, while resilience is a protective factor for both men and women (Conley et al., 2017). Schry and White (2013) examined the role of social anxiety and found it predicted sexual coercion. Social anxiety also had an indirect effect on coercion and rape through sexual assertiveness. The authors suggested that a direct effect of social anxiety on rape may not have been supported because women with more social anxiety may take fewer risks socially (Schry & White, 2013).

Substance Use

Substance use is often involved in sexual risk-taking behaviors and sexual assaults. Women who use marijuana are at an increased risk of rape (Weiss & Dilks, 2016) and alcohol consumption has been associated with both sexual coercion and rape (Testa & Dermen, 1999). While less is known about the implications of marijuana use, alcohol consumption is commonly involved in sexual assaults, either by compromising one's ability to assess risk, lessening one's ability to resist, or incapacitation (Muehlenhard et al., 2016). Students who were risky or hazardous drinkers based on Alcohol Use Disorders Identification Test (AUDIT) scores were at an increased risk of experiencing sexual assault, as were those that engaged in binge drinking at least once a month (Mellins et al., 2017). Research has indicated men often perceive women who are drinking as "more sexually permissive and available" which "in combination with young people's limited knowledge about sex, gendered sexual expectations, and participation in party culture, can create a 'perfect storm' of risk factors" (Muehlenhard et al., 2016, pp.461-462).

Survey research findings have been somewhat mixed on the role of alcohol on safer sex behaviors, but experimental studies have demonstrated a causal relationship. In

their meta-analysis of 30 experimental studies that used role-playing, viewing videos, or vignettes to simulate sexual encounters, individuals that consumed alcohol were causally linked to more intention to have unprotected sex and lower sexual communication and negotiation skills (Scott-Sheldon et al., 2016). In an experimental study that examined the role of alcohol on condom abdication by using a scenario, George et al. (2016) found that high partner pressure was a significant predictor of condom abdication, but when alcohol was involved, partner pressure had a direct effect on abdication. Alcohol intoxication also increased condom use resistance among men (George, 2019) responding to vignettes. However, a notable exception was in an experimental study conducted by Stoner et al. (2008) where participants read a story involving a sexual encounter. While alcohol consumption generally decreased the perceived threat of negative health consequences and the likelihood of insisting on using condoms, those who were more sexually assertive were more likely to insist on condom use in response to a threat even when alcohol was consumed. The authors stressed the benefits of developing sexual assertiveness in women as it remained a protective factor in hypothetical sexual encounters involving alcohol consumption (Stoner et al., 2008).

Fear

Fear and stigma are important psychological barriers in assertively responding to sexual assault, especially in situations with an acquaintance where there are positive expectations for the relationship. Women may fear overreacting or embarrassing themselves, as well as potentially damaging their relationship with the acquaintance (Macy et al., 2006). When developing skills, it is important for women to be aware that they may feel conflicted in how they respond and to learn to balance the desire to have

positive social relationships while protecting themselves against threats in a way that helps them be cognizant of their vulnerabilities while also capitalizing on their strengths (Macy et al., 2007). Macy et al. (2006) further suggested that developing sexual assertiveness may help women better protect their personal boundaries while lessening negative emotional reactions of fear or sadness and eliciting stronger emotions (e.g., anger, confidence) in response to a threat from an acquaintance.

Fear has also been studied in relation to cognitive-emotional dysregulation (Zerubavel & Messman-Moore, 2013). Fear was a significant barrier across all dimensions of sexual assertiveness, alone and in combination with emotional dysregulation, for women. While emotional dysregulation was a more significant barrier for women with a history of sexual assault, the relationship between fear and emotional dysregulation was present for all women. Emotional dysregulation also interacted with fear and resulted in more sexual compliance, and among women with a history of sexual assault, the interaction was synergistic. Overall, fear was a strong barrier, and the authors were surprised to find that it was more powerful than healthy emotional regulation in predicting sexual compliance, suggesting it may be useful to address sexual powerlessness while increasing self-efficacy (Zerubavel & Messman-Moore, 2013).

General Assertiveness

The relationship between general assertiveness and sexual assertiveness is complex. Studies have generally concluded there is no association between the variables, but Zamboni et al. (2000) found that high levels of sexual assertiveness were associated with general assertiveness, which they suggested may have been due to using a better measure in their study. Testa and Dermen (1999) examined the predictors of rape and

sexual coercion separately and found that consistent with other studies, there was no relationship between rape and general assertiveness, but there was a relationship between experiences with coercion, low self-esteem, and low general assertiveness. They suggested the predictors of rape may be different from those for sexual coercion (Testa & Dermen, 1999). In examining the individual dimensions of sexual assertiveness, Bouchard and Humphreys (2019) found that general assertiveness predicted both initiation and refusal sexual assertiveness but was not sufficient to fully explain either. Finally, Wright et al. (2012) found that general assertiveness interacted with peer norms, with less assertive females being more condom assertive if they believed their peers were more condom assertive.

Self-Efficacy

Self-efficacy is a predictor of both refusal and prevention sexual assertiveness (Morokoff, et al., 1997). Kennett et al. (2013) also studied sexual self-efficacy, which they defined as one's confidence in dealing with unwanted sexual advances, and its role in predicting sexual resourcefulness and found support for higher levels of general resourcefulness and sexual self-efficacy predicting more sexual resourcefulness. Learned resourcefulness and having less reasons to consent also predicted sexual resourcefulness, which when combined with sexual self-efficacy, predicted less giving in to unwanted sexual encounters (Kennett et al., 2012). In considering the relationship between these variables, Kennett et al. (2009) concluded that the variables likely "work together and that sexual self-control is a highly interactive and complex process" (p. 350). Finally, adolescents with high sexual communication self-efficacy for discussing positive aspects

of sexuality had better relationships, more safer sex communication, and less interpersonal violence (Quinn-Nilas et al., 2016).

Relationship-Level Social-Ecological Model Variables

Sexual assertiveness is a relationship-level variable but much of what is known on this level is from studying communication for safer sex and consent. Other important considerations at this level of the social-ecological model include the type of relationship (e.g., acquaintance, committed) and the power dynamic between individuals.

Power

Power is an important factor in sexual assertiveness and communication between partners. A common theme in sexual assaults is the use of a dominant position to sexually coerce a partner either psychologically, emotionally, or physically (East & Adams, 2002). Power differentials may exist because of physical size, socioeconomic status, and intellectual ability (East & Adams, 2002). Much of this is rooted in gender, but other important considerations include race, sexual orientation, and other social inequalities. College students may also encounter unique power differentials such as age or academic standing, access to resources and space, peer networks, and sobriety (Hirsch & Khan, 2020). For example, young women are usually underage and have little experience with consuming alcohol when they come to college, thus making them rely on older male students to provide alcohol, which may then make them feel obligated to tolerate sexual advances (Muelenhard et al., 2016).

Power dynamics are often relevant in sexual compliance. A recent study concluded that women who were less sexually assertive were at the greatest risk of being sexually compliant (Darden et al., 2019), which occurs when a partner willingly engages

in an unwanted sexual experience (Impett & Peplau, 2003). While researchers universally agree that sexual coercion constitutes sexual violence, some debate the implications of compliance and view it as an important means of maintaining an "equitable relationship in which partners prioritize each other's interests (at least some of the time and reciprocally)" (Bay-Cheng & Bruns, 2016, p. 505). In a qualitative study of unwanted sexual experiences among women, almost half (49%) of the respondents normalized their experiences and described them as harmless, natural, beneficial, or functional. They ultimately complied because they felt it was necessary to keep a partner happy or from getting angry and potentially leaving the relationship (Bay-Cheng & Brun, 2016).

Others have challenged that sexual compliance is not a normal give-and-take in relationships, especially when there are power differences, such as economic instability or abuse, which make some women feel more vulnerable (Impett & Peplau, 2003). Bay-Cheng and Bruns (2016) also agreed that it is not truly consensual when contact occurs because of personal deficits, an unhealthy relationship, or gender inequality. Among women who identified their experiences as problematic, common themes included having a negative impact on self-esteem, experiencing hardship, and the influence of norms and stigma. Norms and stigma contributed to women complying so that they would be viewed positively (e.g., cool, a good girlfriend), to avoid creating conflict, or because they were no longer virgins (Bay-Cheng & Bruns, 2016).

Type of Relationship

The level of commitment and type of relationship has implications for sexual assertiveness. Encounters with an acquaintance increase the chances of unsafe sex and sexual assault. Familiarity, which can develop quickly with minimal information through

connections and interactions, is often used in assessing the risk of STIs and making decisions about safe sex. In evaluating hypothetical scenarios, students indicated that once an individual became familiar, they perceived them as less likely to have an STI, and were, therefore, more likely to engage in unprotected sex (Sparling & Cramer, 2015).

Encounters with an acquaintance also pose unique challenges in responding to sexual assault. When a positive relationship existed, it was more difficult for women to detect an early threat in a social setting, especially if alcohol was consumed during the encounter. When a threat became more obvious, women often felt confused and worried about embarrassing themselves or hurting the acquaintance's feelings, thus further inhibiting an assertive response (Macy et al. 2006; Nurius et al., 2000). Women also feared overreacting and being subjected to social isolation from peers, thus creating an "unfortunate predicament of weighing social versus safety costs" (Nurius et al., 2000, p. 203).

Sexual assertiveness is beneficial in helping women respond to a threat from an acquaintance, as well as helping men accurately interpret sexual consent communication. Sexual assertiveness was inversely related to self-consciousness and concern about harming one's relationship (Macy et al., 2006). Assertive responses were predicted by the threat of physical force, fear of injury, low concern with preserving the relationship, anger, and confidence (Nurius et al., 2000). Less assertive, more diplomatic responses were predicted by verbal coercion, feeling self-conscious about responding, and increased sadness or decreased anger (Macy et al., 2007; Nurius et al., 2000).

Finally, hooking up, which is a sexual encounter between individuals that have no expectation of a committed or romantic relationship, has been associated with sexual

assault (Garcia et al., 2012). Students that had hooked up at least one time since beginning college were more likely to have been sexually assaulted than their peers who were in committed relationships since starting college (Mellins et al., 2017). An additional study concluded that hooking up is more commonly associated with unwanted sexual contact, attempted rape, and completed rape (Bhochhibhoya et al., 2019). While the practice of hooking up is commonly associated with more experiences with sexual assault, those in committed relationships are more likely to experience sexually coercive encounters, with reasons for complying with unwanted sex including not wanting to upset their partner or getting tired of arguing (Testa & Dermen, 1999).

Communication

According to Zamboni et al. (2000), whereas general communication skills were not associated with sexual assertiveness, sexual assertiveness was the strongest predictor of condom use, suggesting good communication skills may not translate into being sexually assertive for negotiating safer sex. The authors concluded that sexual assertiveness may be a higher level of communication within sexual communication (Zamboni et al., 2000). Noar, Carlyle, and Cole (2006) shared a similar sentiment and identified sexual assertiveness as a specific style of communication in sexual encounters. In their meta-analysis, communication was more important than attitudes, perceived barriers, negative consequences, and subjective norms in predicting condom use (Noar, Carlyle, & Cole, 2006); Widman et al. (2014) discovered similar findings in their meta-analysis. Wright et al. (2012) also found that condom communication efficacy predicted safer sex negotiations. In examining the topic of conversations, those that specifically addressed condom use were a strong moderator of communication and condom use; a

weaker relationship was found for communication about sexual history or general topics relating to sexual health (Widman et al., 2014).

Researchers also examined specific types of condom negotiation strategies and learned that some strategies mediated condom use self-efficacy, measured as both the use of condoms and discussing condom use with a partner, and condom use (French & Holland, 2013). Self-efficacy was important, but the authors concluded that the ability to use specific strategies was the most important predictor and this relationship remained consistent with an unwilling partner or while under the influence of alcohol. Women with higher condom use self-efficacy were more likely to use withholding sex as a negotiation strategy, which suggested condom use self-efficacy may also be an important predictor of sexual assertiveness for condom use among women. The mediation model also supported withholding sex and direct requests as the strategies that were associated with the most consistent use of condoms. The authors argued that these were the most assertive strategies, and, thus, should be the focus of skill-development interventions (French & Holland, 2013). Widman et al. (2014) shared similar conclusions in their study when they suggested that developing the ability to negotiate and assert oneself may be a meaningful target for encouraging consistent condom use.

Communicating refusal or consent for sexual activity is an important component of sexual assertiveness, with low communication and refusal sexual assertiveness predicting attempted rape (Bhochhibhoya et al., 2019). In the development of their measure of sexual assertiveness in 1997, Morokoff et al. learned that anticipated partner response predicted both refusal and prevention sexual assertiveness. Women have also indicated that a verbal response must be clear and direct if they want men to perceive

their response as a refusal (Muelenhard et al., 2016), which was also supported in a study that examined hypothetical scenarios involving the interpretation of sexual consent communication by men where token resistance and rape myths were found to be detrimental to the correct interpretation of consent but sexually assertive communication was often associated with the correct interpretation. In their conclusions, the authors of this study argued that it is important to develop skills that will normalize communication in a way that considers the rights of one's partner (Shafer et al., 2018). Muelenhard et al. (2016) also agreed it is important to develop the vocabulary and skills to negotiate overt behaviors such as condom use and handling negative responses in a way that does not jeopardize personal safety, but it is equally important to consider more covert, interpersonal power dynamics that compromise one's perceived right to communicate with a partner.

Community-Level Social-Ecological Model Variables

The understanding of the influence of community-level variables on sexual assertiveness is limited, with student involvement being the most studied. Access to comprehensive sex education also has important implications for the development of sexual assertiveness and can provide meaningful contextual background during the development of interventions.

Sex Education

Before coming to college, most students have had abstinence-only sex education that promotes postponing sexual activity until marriage. In their commentary, East and Adams (2002) suggested the U.S.'s reliance on abstinence-only sexual health education has contributed to many young women not believing they have rights regarding their

sexual choices. Unfortunately, very few students have access to comprehensive sex education that emphasizes contraception, consent, condom use, or reproductive rights. The potential benefit of such education was apparent in a recent analysis that found women who were taught sexual refusal skills before coming to college were half as likely to be raped (Hirsch & Khan, 2020).

Student Involvement

Student involvement was a protective factor in previous studies, but it was not a significant predictor in a recent study that examined unwanted sexual contact (Bhochhibhoya et al., 2019). However, being involved in a fraternity or sorority has been associated with being more likely to experience sexual assault (Herres et al., 2018; Mellins et al., 2017). A recent study suggested student-athletes were less likely to experience sexual assault (Herres et al., 2018), but an increased risk of sexual assault has been associated with attending sporting events, as well as fraternity-sponsored events (Ullman, 2007).

Societal-Level Social-Ecological Model Variables

The development of one's sexual identity is complicated by social and cultural standards, especially those that are heteronormative and expect individuals to be a "good girl" or a "real man" (Cense, 2019a). The education system and depictions in the media further reinforce the gender expectations that women should be passive, and that sexual activity translates to masculinity (Muelenhard et al., 2016). Unfortunately, sex education in the U.S. has only reinforced racial and gender inequalities related to sexuality, as much of the efforts are rooted in religion and fear (Cense, 2019a).

Gender Roles

Gender roles have a negative influence on sexual assertiveness (Curtin et al., 2011; Morokoff et al., 1997; Zerubavel & Messman-Moore, 2013). Feminine ideologies are generally defined as the norms and expectations of what is considered acceptable womanhood (Curtin et al., 2011). Traditional gender roles encourage women to be passive (Morokoff et al., 1997; Zerubavel & Messman-Moore, 2013), as do feminine ideologies, which also encourage women to be selfless while simultaneously objectifying them and constricting their sexual identities in a way that makes it difficult to advocate for safe sexual experiences (Curtin et al., 2011).

The internalization of gender roles begins early. In a study with adolescent females, feminine ideology, which was defined as being inauthentic in relationships (e.g., silencing personal needs to reduce conflict, hiding unfeminine feelings) and body objectification, were detrimental to sexual health outcomes. Messages about being seen and not heard translated into being unable to express their own needs and desires in sexual relationships, which was evident in lower condom and contraception use (Impett et al., 2006). Adolescents who supported more traditional gender roles were also less knowledgeable about sex and had lower sexual self-efficacy, which further suggested an endorsement of traditional gender scripts of being uninformed and passive in sexual encounters (Curtin et al., 2011).

The implications of gender roles have also been studied in relation to sexual compliance and sexual assault. Endorsing more traditional gender norms and expectations have been associated with sexual compliance, as women seem to believe men have uncontrollable sexual desires and are supposed to be responsive to their

partner's needs (Impett & Peplau, 2003). In a qualitative study, themes about "good girlfriends say yes" and "once yes, always yes" often laid the foundation for complying with an unwanted encounter. Gender norms were also influential during the encounter, with men "convincing a female partner" and "overriding the female body" by not only ignoring a lack of desire but also the "presence of adverse physical, nonsexual symptoms" (Bay-Cheng & Eliseo-Arras, 2008, p. 392). Likewise, Kennett et al. (2013) found that women who were more sexually compliant were also more supportive of traditional gender roles which may ultimately create a sense of learned helplessness and a sentiment that refusing is unacceptable. Finally, while Wigderson and Katz (2015) did not find support for a relationship between endorsing traditional feminine ideology and sexual assault, defined as nonconsensual vaginal or oral penetration, they found that women who were more inclined to endorse feminine deference were less sexually assertive about refusal, which was associated with increased sexual assault. However, an unexpected finding was that women rating higher on feminine purity consumed less alcohol, which served as a protective factor against sexual assault (Wigderson & Katz, 2015).

Gender socialization is particularly detrimental when a sexual assault involves an acquaintance because women are socialized to maintain relationships and be peacekeepers, which may ultimately be used against them as they are expected to be nice, to put others' needs before their own, and to appease men (Macy et al., 2006). This dynamic is further complicated when trust has been established in a relationship and women have an expectation that men will act respectfully even though they have ultimately been socialized to be more accepting of behaviors that may serve as precursors

to sexual violence such as sexual entitlement (e.g., inappropriate sexual references, harassment), power and control (e.g., dominance, rigid gender roles), hostility and anger, and the justification of violence (Rozee & Koss, 2001).

Finally, gender norms may also discourage women from being aggressive. Traditionally, women were discouraged from becoming stronger to protect themselves from assault and "to avoid rape by being accompanied by a man at all times but not if it means confronting men who invade one's personal space" (Rozee & Koss, 2001, p. 298). As a result, women are more likely to be diplomatic in how they respond, which has been found to be less effective in avoiding sexual assault (Macy et al., 2006). Gender role socialization may also play a role as women are worried about rejection from men, have a fear of judgement from others, or worry about embarrassment and stigma (Ullman, 2007).

Sexual Double Standards

Sexual double standards guide expected and valued behaviors of men and women for sexual activity. Sexual double standards traditionally encourage men to be more sexually active and the initiator of sexual activity, whereas women are expected to be less sexually active and passive in their encounters (Endendijk et al., 2020). Men are also allowed to have more sexual freedom, while women will experience "slut shaming" if they act in a similar way (Endendijk et al., 2020, p. 163). Sexual double standards have been linked to various aspects of sexuality, including sexual satisfaction, risk-taking, and sexual violence, as well as homophobia and sexism (Endendijk et al., 2020).

Although some argue that sexual double standards are no longer endorsed, evidence suggests they are still prevalent in sexual encounters (Jozkowski et al., 2017;

Muelenhard et al., 2016). It appears they may have evolved in their content (e.g., premarital sex versus casual sex), but they have had a stable presence over time, even in cultures with more gender equality, suggesting "it takes more time for egalitarian gender roles to permeate the bedroom, than in other domains of life such as the work field, because sexuality is very much a private issue" (López Alvarado et al., 2020, p. 181). Further, men and women appear to be equally likely to endorse sexual double standards, suggesting both parties are responsible and may see advantages in maintaining a status quo (López Alvarado et al., 2020).

Sexual double standards are associated with low refusal sexual assertiveness (Bouchard & Humphreys, 2019). Jozkowski et al. (2017) also found support for sexual double standards with respondents viewing sexually active women negatively and endorsing men's being sexually active. These standards were also closely linked to consent communication, with women who were overly enthusiastic in giving consent risking social repercussions. Women tended to endorse more subtle means of providing consent and were then reluctant to refuse sexual activity once a man-initiated contact because they felt obligated or were concerned about hurting his feelings. Men also discussed continuing to pursue sexual activity after a verbal refusal by arguing that the refusal was not overly assertive which they did not view this as problematic or as sexual coercion (Jozkowski et al., 2017). López Alvarado et al. (2020) also agreed sexual double standards are more prominent in experiences with sexual coercion, suggesting they are more common when there is a power differential between partners.

Racial Inequality

In Cense's (2019b) commentary, inequality was discussed as a factor that may constrain sexual agency for all women, but some may experience additional constraints due to structural inequalities. Bay-Cheng (2019) further argued that women are often typecast based on race, class, or appearance, with low-income women being perceived as "loose" and Black women as "hypersexual" (p. 466). Among college students, perceived discrimination related to socioeconomic status, race, and sexual orientation or gender identity was identified as a significant predictor of completed rape (Bhochhibhoya et al., 2019). A study among a sample of women from a community also found that Black and Hispanic women had the lowest levels of sexual assertiveness and were more likely to feel they did not have the right to refuse sex without contraception (Rickert et al., 2002).

Brown et al. (2018) specifically examined how African American youth were socialized by their families. Those from families who endorsed higher ethnic influence and lower gender traditions demonstrated the highest levels of sexual assertiveness and safer sex practices, suggesting a protective effect of this type of socialization (Brown et al., 2018). Other studies have examined how African Americans are socialized to communicate about sexuality, with Jenkins and Kennedy (2013) indicating they may rely more on indirect communication and be discouraged from sharing sensitive information due to cultural and religious expectations. This may result in deficits in problem-solving skills and compromise sexual assertiveness, as African American women are often expected to be the "protector" of African American men (Jenkins & Kennedy, 2013, p. 140).

Fletcher et al. (2015) examined how sexuality was communicated among African American college students with their families prior to attending college and among their peers while at college. While a uniform theme in messaging did not emerge, parents tended to discuss abstinence and the importance of being in a relationship, whereas peers were more likely to discuss positive aspects of sexuality and gender expectations, which encompassed sexual scripts and sexual double standards. In examining gender differences, the researchers found that females were more likely to receive gendered and abstinence-only messages from their parents, while males were more likely to hear positive messages from their peers. The differing messages ultimately placed an emphasis on women waiting for marriage or love and men being uncommitted in their sexual encounters. The researchers found that abstinence-only messages from parents coincided with less sexual experience for females, but also noted that these women were less likely to protect themselves during their limited sexual encounters. Students that recalled a strong emphasis on the importance of relationships and making healthy choices from their parents had more condom self-efficacy and were more sexually assertive. When this type of positive sexual messaging was reinforced by peers, it was associated with more consistent use of condoms and predicted sexual assertiveness for women, which the authors suggested may help normalize sex and empower women (Fletcher et al., 2015).

Summary

The high rates of STIs and sexual assaults are common concerns among a variety of campus representatives, which may include students and staff in housing and residence life, Title IX, Greek life, athletics, health services, and counseling centers. The ACHA (2020a), which strives to be the "voice of expertise in college health" advocates for

comprehensive, evidence-based approaches for addressing sexual health among college students. Further, efforts should target the primary level of prevention and address as many environments as possible so that making healthier choices is as easy as possible across all settings in which students interact (ACHA, 2020a).

Sexual assertiveness is a skill that is an essential means for preventing adverse sexual health outcomes, yet little is understood regarding the mechanisms that contribute to its development over the course of one's lifetime (López Alvarado et al., 2020). Much of what is known is limited due to different measures used across studies, which was one of the most significant gaps in the literature. Some measures were developed independently by research teams, while others were more established and widely utilized. Previous measures have varied in how they defined sexual assertiveness, but common elements have included the use of contraception, initiation of wanted or refusal of unwanted sexual experiences, and communication about sexual satisfaction or sexual history. The purpose of the Sexual Assertiveness Questionnaire (SAQ) was to develop a comprehensive measure of sexual assertiveness that included all previously identified dimensions in a way that was applicable to all women, regardless of relationship status. Similarly, rather than specifically addressing condom or contraception use, the SAQ emphasizes the importance of communicating about sexual history and risk, which are applicable to all women's health. The instrument also does not reference a specific time frame for being sexually active and avoids referring to specific types of sexual activity so that it is not limited to heteronormative sexual standards (Loshek & Terrell, 2015). The SAQ seems to be among the more versatile and reliable instruments and most relevant to the current study.

In addition, most studies did not examine sexual assertiveness as their primary outcome of interest, so much of what has been learned has been in a more indirect manner. However, developing a more comprehensive understanding of this vital but complicated skill (East & Adams, 2002) will likely require a multi-pronged, integrated approach. While the ACHA and CDC recommend addressing sexual health from a social-ecological perspective, most health education efforts have been rooted in behavior change theories that emphasize individual-level choices while dismissing the importance of interpersonal dynamics and social issues (Cense, 2019a). For example, in a review of 140 sexual violence programs, less than 10% addressed factors outside of the individual-level (DeGue et al., 2014). Although targeting individual-level change is an important consideration, it is likely limited in fostering sustainable change when such efforts fail to address the environments that are not conducive to developing healthy behaviors (DeGue et al., 2014). Banyard (2014) also advocated for an integrated framework with a better understanding of underlying factors and moderators, including alcohol consumption, gender roles, and multicultural considerations.

Sexual assertiveness has not been examined from within the framework of the social-ecological model, and through this literature review, gaps emerged at each level. At the individual-level, while not all variables are highly amenable to change, some may act as important moderators (e.g., age, history). Very little is understood about sexual assertiveness among those that identify as LGBTQ+ and this would be an important gap to address as it appears individuals in this population may face much higher rates of sexual violence. However, one of the most notable gaps at this level is the limited understanding of mental health issues and other determinants of sexuality. Mental health

appears to be an important predictor of sexual health outcomes but has not been studied extensively in relation to sexual assertiveness. Likewise, sexual self-efficacy has been identified as an important determinant of sexual assertiveness, but little is understood about how it may function within the context of the social-ecological model. It may also be useful to consider some of the more common mental health concerns among college students such as depression and anxiety, as well as issues specific to sexual functioning such as sexual fear, sexual consciousness, satisfaction, and sexual self-esteem.

At the relationship-level, the literature supported sexual communication skills as an important element of better sexual health outcomes, yet very little is understood about an important type of sexual communication (sexual assertiveness) that could serve the purpose of empowering women in their sexuality through self-advocacy. Another meaningful gap that emerged at this level was how to respond to pressure from a partner, especially when a power differential existed. Widman et al. (2014) advocated for better strategies to respond to a partner not wanting to use a condom as a part of interventions to increase sexual assertiveness. In considering power, Li and Samp (2019) also argued managing relational power is an important skill for women in developing safer sexual communication.

The understanding of variables at the community-level of the social-ecological model is very limited. An important variable that is not amenable to change, but provides important context is the type of sex education a student has before coming to college. Very few students have had comprehensive sex education, and without an education that promotes skill development to prevent pregnancy and STIs and address unwanted sexual encounters, as Hirsch and Kahn (2020) stated, beginning with messages on consent "is

like starting calculus when they've never had arithmetic" (p. 112). Similarly, religious institutions are often influential in determining acceptable sexual standards and expectations (Hirsch & Khan, 2020). If much of one's previous experiences are rooted in abstinence-only sex education and religious influences, promoting sexual assertiveness may be an overly ambitious goal.

An additional gap at the community-level of the model is the understanding of peer norms and social networks among college students and how they may also be a source of unhealthy sexual information and encounters. While the risks associated with being affiliated with the Greek system have been studied extensively, there is little known about how peer norms or involvement in other student organizations may also influence sexual violence on campus. Other important considerations at the community-level may include how supported students feel by their peers and the institution, the campus climate for sexual misconduct, and having a sense of community or belongingness.

Finally, several variables at the societal-level have implications for safer sexual practices and sexual violence, and some appear to be influential on sexual assertiveness. Several studies have established a negative impact of gender socialization, sexual double standards, and inequality, but little is understood about how these variables function on the dimensions of sexual assertiveness and how they may interact with other variables in the social-ecological model. Another important consideration to examine at this level is the potential relationship between sexual assertiveness and the enjoyment of sexualization. No known studies have examined this relationship, but some studies have suggested women may not view sexualization as oppressive and may instead enjoy sexual attention from men and find it empowering (Liss et al., 2011).

While important gaps exist at each level of the social-ecological model in understanding sexual assertiveness, one of the most notable research gaps was an understanding of how the variables at each level relate to each other. Consistent with the approach of the social-ecological model, it is essential to understand each level individually and collectively. While some argue that this approach may be more resource-intensive, such efforts may ultimately be synergistic and create sustainable change (Orchowski et al., 2020, p. 819). The literature on sexual health also repeatedly advocated for an integrated approach to addressing sexual health, as efforts targeting individuals, while well-intentioned, are likely ineffective without also addressing contextual factors (Bay-Cheng, 2019). Sexual health is a complicated, multifaceted problem, with numerous influences that do not exist in isolation. Likewise, sexual assertiveness, while also complicated, has the potential benefit of empowering women to better advocate for their sexual health. However, before beginning to promote and develop sexual assertiveness among women, it is necessary to understand the construct from a comprehensive, theoretical framework. This study will examine sexual assertiveness from the context of the social-ecological model and determine which predictors are most influential at each level, as well as how the variables interact across levels.

CHAPTER III - METHODOLOGY

The purpose of this study was to better understand sexual assertiveness. Predictors of sexual assertiveness (communication about sexual initiation and satisfaction, refusal of unwanted sexual acts, and the ability to communicate about sexual history and risk), as defined by Loshek and Terrell (2015), were identified at each level of the social-ecological model. The construct was then examined from the context of the social-ecological model to determine how predictors influenced each other simultaneously. Finally, group differences were considered. The research questions and hypotheses were:

Research Question 1) Which variables best predict the dimensions of sexual assertiveness at the individual-, community-, and societal-levels of the social-ecological model?

Hypothesis 1: At the individual-level, sexual self-esteem/sexual communication self-efficacy variables will positively predict sexual assertiveness.

Hypothesis 2: At the community-level, a supportive campus climate will predict or moderate sexual assertiveness.

Hypothesis 3: At the societal-level, endorsing sexual script variables will negatively predict sexual assertiveness.

Research Question 2) To what extent do the variables collectively predict sexual assertiveness simultaneously?

Research Question 3) How do identified variables differ by group in the final model?

Hypothesis 1: Sexual assertiveness will differ by age, relationship status, race, sexual orientation, athletic participation, Greek-affiliation, student involvement, and enjoyment of sexualization.

A diagrammatic representation of the relationships among these variables is available in Figure 1.

Participants

A university in the southeastern United States was the reference institution for this study; institutions that were likely to be similar in terms of their social environment were considered. Eligibility criteria at the institutional-level included being a public four-year, degree-granting coeducational institution of higher education. Schools that were demographically similar in socioeconomic status, race, having a physical campus with on-campus housing, and the presence of NCAA athletic teams were compiled from the Integrated Postsecondary Education Data System (IPEDS). Institutions were further limited to those located in the southeastern region of the United States with Greek-life organizations, primarily the National Pan-Hellenic Council (NPHC) and the Panhellenic Association. A list of schools meeting these criteria is available in Appendix A.

Institutional websites were searched to identify a point of contact and recruitment emails were initially sent to The University of South Alabama, Troy University, The University of North Florida, The University of West Florida, Southeastern Louisiana University, and The University of Louisiana at Lafayette. The next round of recruitment emails was expanded to include Austin Peay State University, East Tennessee State University, and The University of Tennessee-Chattanooga. Follow-up emails were sent to each institution and the following institutions were added to the next round of recruiting:

Jacksonville State University, Nicholls State University, Northwestern State University of Louisiana, The University of Louisiana at Monroe, Middle Tennessee State, Southern Arkansas University, The University of Central Arkansas, Valdosta State, and The University of Western Georgia. Most institutions did not respond, a few declined, one was able to participate if the study procedures were modified, and one initially agreed to participate but had to withdraw.

Due to the difficulty in finding institutions willing to participate, the original plan was revised to focus on Mississippi's Public Universities. A website search identified points of contact and recruitment emails were sent to the following institutions: Alcorn State University, Delta State University, Jackson State University, Mississippi State University, Mississippi University for Women, Mississippi Valley State University, and The University of Mississippi. Similarly, most did not respond, and one could not participate in the study without needing to modify the protocol. Two institutions expressed interest but were lost to follow-up efforts.

Institutional Review Board (IRB) approval was granted (see Appendix B) and a list of all undergraduate female students attending classes full-time in the spring of 2022 was requested from the Office of Institutional Research. The sample was limited to students registered as female, given the high prevalence rates of negative sexual health outcomes among this population. Given the complexity of the proposed model and low response rates to internet surveys in general, the full list of 4,417 students were recruited to participate (Van Mol, 2017).

Instruments

Instruments were selected in a way that was inclusive of varying sexual histories and sexual orientations. Instruments that required respondents to reference a current or previous partner were excluded so that measures would be applicable to all, regardless of current relationship status. Likewise, any instrument that made a reference to using condoms or other forms of contraception during a specific sexual encounter were also avoided. The instruments assessed several domains, including demographic grouping variables and variables for each level of the social-ecological model. Given the length of the full instrument, the order of the instruments was randomized after the demographic questions and Sexual Assertiveness Questionnaire were presented. However, due to an unexpected issue with the randomization feature in Qualtrics, data were not collected for the sexual self-esteem items. Attention checks were not included as they have not been shown to improve attentiveness or alter the results in a statistically significant way when inattentive responses are omitted from an analysis (Gummer et al., 2018). A summary of how the variables related to the research questions and hypotheses is available in Appendix C. The survey instrument (available in Appendix D) was pilot tested among a small sample of students and minor revisions were made.

Individual-Level Instruments

The Sexual Self-Esteem Inventory—Short-Form (SSEI—SF) was initially validated among sexual abuse survivors but has been applied to understanding sexual experiences, marital satisfaction, body image, and personality traits. Discriminant validity was established by comparing the subscales against the Rosenberg Self-esteem Scale, with the findings suggesting that while sexual self-esteem may be a part of global self-

esteem, it is also distinct (Zeanah & Schwarz, 1996). Construct validity was supported by comparing the skill and experience subscale against a measure of sexual experience, the attractiveness subscale against dating activity level, the control subscale against a relationship commitment measure, the moral judgment subscale against sexual guilt and experience, and the adaptiveness subscale against guilt, commitment, and self-esteem (Zeanah & Schwarz, 1996).

The short-form version, which includes seven-items for each subscale, was tested among female college students and the full scale had good reliability ($\alpha = 0.92$), as did the subscales, which were as follows: Skill and experience ($\alpha = .84$), attractiveness ($\alpha = 0.88$), control ($\alpha = 0.80$), moral judgement ($\alpha = 0.80$), and adaptiveness ($\alpha = 0.80$) (Zeanah & Schwarz, 2019). Items are scored on a six-point scale of agreement. Raw score items for each scale are summed and the mean subscale score can be substituted for blank items, unless more than one-third of the items are left blank, which makes the subscale invalid. A total score for the instrument can be obtained by averaging the subscale scores, with higher scores indicating more sexual self-esteem (Zeanah & Schwarz, 2019). Permission to use the instrument was obtained and no modifications were made. The SSEI—SF was relevant in addressing hypothesis one of research question one and research question two.

Self-efficacy is also a predictor of sexual assertiveness (Kennett et al., 2013; Morokoff, et al., 1997), and Quinn-Nilas et al. (2016) recently identified sexual communication self-efficacy as an important predictor of better sexual communication. The Sexual Communication Self-Efficacy Scale (SCSE) assesses self-efficacy for sexual communication of both positive aspects of sexuality and risk-reduction. The instrument

was developed using existing measures, with additional feedback obtained from Black adolescent females in focus groups and interviews with adolescents. The measure was then tested with a sample of adolescents in the UK between the ages of 16-22 years, with most being college students and White.

The full instrument has 22-items. Reliability was good for the full instrument ($\alpha = 0.93$), as well as for the subscales for contraception communication ($\alpha = 0.89$), positive sexual messages ($\alpha = 0.88$), negative sexual messages ($\alpha = 0.87$), sexual history ($\alpha = 0.82$), and condom negotiation ($\alpha = 0.83$). The Flesch-Kincaid reading grade level was 4.5 and the Flesch Reading Ease score was 78.1. Construct validity was established by comparing the SCSE against measures of sexual communication frequency, dyadic sexual communication, intentions to communicate, sexual self-awareness, sexual pressure, intimate partner abuse, and condom self-efficacy. Responses are measured on a four-point scale of "very difficult" to "very easy" with higher scores indicating more self-efficacy (Quinn-Nilas et al., 2016). Permission to use the instrument was obtained and it was not modified for this research. The SCSE was relevant to hypothesis one of research question one and research question two.

Interpersonal Level Instrument

The Sexual Assertiveness Questionnaire (SAQ) has 18-items, with responses on a seven-point scale of agreement. The SAQ is comprised of the following subscales: Communication about initiation and satisfaction, refusal of unwanted sexual acts, and ability to communicate about history and risk. The instrument was initially tested among college women and the Cronbach alphas for the subscales were 0.79 for satisfaction, 0.78 for refusal, and 0.81 for communication about risk/history (Loshek & Terrell, 2015).

Validity was not discussed, but all items were selected from the SAS, HISA, and ASCS and either retained or modified (Loshek & Terrell, 2015). Scoring was also not discussed, but in this study, higher scores were associated with more sexual assertiveness on each of the subscales. Permission to use the instrument was obtained and no modifications were made. The SAQ was necessary to address research questions one, two, and three.

Community-Level Instrument

Subscales from the Campus Climate Survey Validation Study (CCSVS) included school connectedness ($\alpha = 0.86$), perceptions of the institution's ability to prevent and respond to sexual misconduct ($\alpha = 0.92$), and student norms for misconduct ($\alpha = 0.80$) and bystander behavior ($\alpha = 0.75$). All items were measured on four-point scales of agreement with lower scores indicating more disagreement with the subscale. An additional question asked about the content of any training efforts offered by the school; response options were "yes" or "no" and a count was used to indicate the number of topics covered. The CCSVS was developed and tested through a collaboration between RTI International, the Department of Justice's Bureau of Justice Statistics, and the Office on Violence Against Women and is freely available in the public domain (Krebs et al., 2016). No changes were made to the subscales. These measures were relevant in addressing hypothesis two of research question one and research question two.

Societal-Level Instrument

The Sexual Script Scale was developed based on focus group findings among adolescents and young adults. The instrument relates to heterosexual encounters and was tested among a sample of primarily young, White Canadian and American adults. The following six subscales are included: Sexual standards ($\alpha = 0.90$), sexual

complexity/simplicity (α = 0.81), sex drive (α = 0.84), performance/orgasm (α = 0.72), players (α = 0.74), and emotional sex (α = 0.75). Sexual standards address a single sexual standard about casual sex and the number of lifetime partners, with higher scores on the subscale supporting a negative view of both men and women who have casual sex and more partners. Higher scores on the complexity/simplicity subscale indicate more agreement with views that sexuality is complex for women but simple for men. The sex drive subscale demonstrates agreement with men having a stronger sex drive than women. The performance and orgasm subscale addresses agreement with the expectation that experiencing an orgasm is vital to having a positive sexual experience and that men are ultimately responsible for ensuring women experience an orgasm. The player subscale indicates the extent to which a male being viewed as a player is considered positive, especially among men. Finally, higher scores on the emotional sex subscale suggest more endorsement of the belief that sexual encounters are more emotional for women, and as a result, women are more likely to become emotionally attached (Sakaluk et al., 2014).

Discriminant validity was supported in comparing the instrument against social desirability items, a feminine gender role stress scale, and a masculine gender role stress scale. Convergent validity was supported by comparing the instrument against the Sexual Double Standard Scale, with the instruments being positively correlated. The authors argued that the Sexual Double Standard Scale had poor reliability and the correlations were attenuated estimates. Responses are on a six-point scale of agreement, as the authors argued including a middle or neutral option may encourage socially desirable responses (Sakaluk et al., 2014). Scores for each subscale were considered since a higher-order

sexual script factor was not supported and the authors concluded that all dimensions are distinct (Sakaluk et al., 2014). Permission was obtained and no modifications were made to the instrument. These variables were relevant in addressing hypotheses three of research question one and research question two.

Grouping Variables

Demographic questions (e.g., sexual orientation, race) were adapted from the CCSVS. A final grouping variable of interest was the extent to which women viewed being sexualized as oppressing or empowering. The Enjoyment of Sexualization Scale (ESS) is an eight-item instrument that evaluates how women perceive sexual attention from men. The measure is unidimensional and has an internal consistency of 0.86. Convergent validity was established by comparing the instrument against measures of self-sexualization, self-objectification, and self-esteem related to feeling attractive. Responses were measured on a six-point scale of agreement (Liss et al., 2011). Permission to use the instrument was obtained and it was not modified. These variables were relevant to research question three.

Research Design

The research design for this study was a cross-sectional internet-based survey, as it was among the more appropriate approaches for collecting sensitive information related to sexuality. Although this design was inexpensive and allowed for a more rapid, streamlined approach to collecting data, it was subject to issues of nonresponse (Ruel et al., 2016).

Procedures

After obtaining IRB approval, the initial recruitment email was sent to all eligible participants using a listserv account. The email briefly explained the purpose of the study and provided a link to the survey instrument in Qualtrics. The survey instrument began with the informed consent document. Before participants could proceed with the study, they had to review the informed consent document and select the option that they agreed to participate in the study. Participation was anonymous and voluntary, and a chance to win a $25 Barnes and Noble gift card was offered as an incentive. To be entered into the drawing for the gift card, participants had to reach the end of the survey and then be redirected to a separate survey to collect their contact information. Participants were also sent two reminder emails, approximately two weeks apart.

The IRB protocol was later modified to include participant referrals. Staff and student leaders in the Student Government Association, the Office of Inclusion and Multicultural Engagement, and the Sexual Assault Prevention Ambassadors agreed to help encourage students meeting eligibility criteria to participate in the study through their organizational communication channels, which included newsletters and GroupMe messages. The survey was closed for participation four weeks after the final email reminder was sent.

Data Analysis

Variables were coded in the Qualtrics survey instrument. Frequency tables and sorts were used to clean the data. All values were within their expected range. The amount of missing data varied for all measures. The sexual assertiveness subscales each had two to four missing cases; the sexual communication self-efficacy subscales ranged

from 71-74 missing cases; the campus climate subscales ranged from 85-87; and the sexual scripts subscales ranged from 78-81. Since no single test can provide definitive evidence on the mechanism of missingness, data were assumed to be missing at random (Kline, 2011). Full-information maximum likelihood (FIML) was used to address missing data as this approach does not rely on imputing or deleting any cases, but computes estimates from the available data and has been shown to outperform classical methods such as listwise deletion or single imputation (Kline, 2011). Allison (2012) further argued that this approach is more efficient in handling even moderate amounts of missing data as it will always produce the same result (in comparison to multiple imputation methods) and eliminates the need to make a variety of decisions regarding the method used, the sampling distribution, and number of iterations.

The variables were analyzed as continuous. While some argue that not addressing Likert-type data as ordinal can lead to biased estimates, Robitzsch (2020) argued that items with three to six categories can be analyzed as continuous if they are normally distributed. While others have also argued that it is not possible to determine if the ordinal categories are equally spaced, Pasta (2009) further challenged this notion in stating that a linear relationship between continuous variables does not necessarily guarantee a one-unit change will have the same effect. The means, standard deviations, skew, kurtosis, and internal consistency reliabilities of all items and subscales were examined. Skew values less than three and kurtosis values less than ten suggest data are normally distributed (Kline, 2011). Coefficient alpha was computed for the internal consistency reliability of each subscale for this sample and 0.90 or greater was interpreted

as excellent, values above 0.80 were good, and values above 0.70 were adequate (Kline, 2011).

Multivariate analyses were utilized given the complexity of the latent variables in relation to the social-ecological model. Before addressing the research questions and hypotheses for this study, the measurement models for each construct were evaluated through confirmatory factor analyses (CFAs). All analyses were conducted using JASP's structural equation modeling (SEM) module (JASP Team, 2022). Unless otherwise specified, factors were assumed to be correlated, the estimator and model tests were automatic, and the handling of missing data was FIML. Model fit statistics were evaluated and included chi-square, the Tucker-Lewis index (TLI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). Ideally, chi-square would be non-significant, but it has been noted that it is a less reliable indicator of model fit as samples increase to over 200 participants (Myers et al., 2017). Values ranging 0.9-0.95 suggest an acceptable fit and values greater than 0.95 suggest a good fit between the model and the data when interpreting TLI and CFI. RMSEA values of 0.06 or lower suggest a good fit, while values between 0.07-0.08 suggest a moderate fit, those between 0.09-0.10 are considered marginal, and anything greater than 0.10 is unacceptable (Myers et al., 2017). If the models were respecified, the Akaike information criterion (AIC) was also examined, with lower values suggesting a better fit (Kline, 2011; Myers et al., 2017).

After reviewing the fit indices, the pattern coefficients on the factors were evaluated. Their statistical significance, as well as their standardized factor loadings were examined. Values greater than 0.3 were deemed adequate and a consideration of their

practical meaningfulness was evaluated before deciding to remove an indicator from a factor (Brown, 2015; Meyers et al., 2017). In addition, modification indices were examined to identify any error terms that could be correlated to improve model fit, provided they shared a common meaning or wording and were within the same factor (Meyers et al., 2017).

Once the measurement models were established, the research questions and hypotheses were tested using SEM, which combined the measurement model and the structural model (Meyers et al., 2017). The models were evaluated using the same fit criteria used to examine the CFAs for the measurement models. Standardized pattern coefficients would ideally be greater than 0.6, but Meyers et al. (2017) stated this may be relaxed to 0.2-0.3 during the early phases of theory development. Mediations were examined for a significant indirect effect based on bootstrap confidence intervals. If the confidence interval did not contain a value of zero, a mediation was supported (Field, 2013). Once the final model was identified, invariance testing was considered, and while there is no single rule of thumb for group sizes, Kline (2011) suggested larger group sizes of greater than 400 participants are usually necessary to have enough statistical power.

CHAPTER IV – RESULTS

Sample Description

Emails were sent to recruit 4,417 students meeting eligibility criteria at the participating institution. A total of 616 participants began taking the survey, but 101 responses were removed, as one respondent indicated they identified as a male and 100 respondents completed only the demographic variables section. The final number of responses used for the analysis was 515, for an 83.60% completion rate and an 11.66% response rate.

The respondents were mostly White, heterosexual students identifying as females 24-years of age or younger. Race was categorized into three groups with those who identified as White-only, Black-only, and those that were of another race, which included Latino, Asian, American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, or a combination of two or more races. For sexual orientation, those that identified as heterosexual were separated into one group and those that identified as gay, bisexual, or queer were combined into another group, followed by those that were asexual, questioning, other, or declined to respond into a third group. The remaining gender identities after female were combined due to the small number of responses to include those that identified as transgender, nonbinary, other, or declined to respond. Most of the respondents were either in a relationship or single and not dating.

Most respondents were not involved in a Greek-affiliated organization, with 2.33% identifying as members of NPHC and 8.93% as members of the Panhellenic Association. Very few respondents identified as an NCAA-athlete or as an international student. Over one-third of the sample reported they were not involved in any student

organizations, while 29.9% indicated they were a member of one organization and the remaining 34.95% were a member of two or more organizations. A summary of the sample characteristics is presented in Table 1.

Table 1

Sample Demographic Characteristics

	N	%
Race		
White	355	68.93
Black	93	18.06
Other	67	13.01
Class		
1st year	105	20.39
2nd year	86	16.7
3rd year	152	29.52
4th year	172	33.4
Sexual orientation		
Heterosexual	305	59.22
Gay, bisexual, or queer	157	30.49
Other	53	10.29
Relationship status		
Single, not dating	179	34.78
Single, dating	70	13.59
In a relationship	204	39.61
Cohabiting, married, or equivalent	45	8.74
Other, none	17	3.3

Measurement Models

Sexual Communication Self-Efficacy Scale

Items from the Sexual Communication Self-Efficacy Scale (SCSES) were used to predict the five factors identified by Quinn-Nilas et al. (2016): Sexual history, condom negotiation, negative messages, positive messages, and contraception communication. All items were scored on a 4-point scale of ease/difficulty, with higher values indicating more ease. No items were reverse scored. The history ($\alpha = 0.84$), condom negotiation ($\alpha = 0.87$), negative messages ($\alpha = 0.88$), and contraception communication ($\alpha = 0.89$) subscales had good reliability and the positive messages ($\alpha = 0.92$) subscale had excellent reliability in this sample. The means for all items on the scales suggested the respondents had higher self-efficacy for discussing various topics with a partner, as most responses fell in the "easy" response range. A summary of the means, standard deviations, skew, and kurtosis for each item is available in Appendix E.

The initial model had a significant chi-square and the CFI (0.94), TLI (0.93), and RMSEA (0.07 90% CI [0.07, 0.08]) were acceptable. All indicators were statistically significant, had adequate standardized loadings, and the Cronbach's alphas did not indicate any improvements if any items were removed. The modification indices indicated a substantial change in chi-square if the second and third error terms on the contraception communication subscale, which were worded similarly, were correlated. As a result of this modification, the fit improved to a CFI of 0.96, a TLI of 0.95, and a RMSEA of 0.06 90% CI [0.06 to 0.07]. A second order model was also fit and the fit worsened slightly in the TLI (0.94) and RMSEA (0.07 90% CI [0.06, 0.07]), but it was still an acceptable fit.

Sexual Assertiveness Questionnaire

Indicators from the Sexual Assertiveness Questionnaire (SAQ) predicted the three constructs identified by Loshek and Terrell (2015): Initiation, refusal, and communication. All items were measured on a 7-point scale of agreement, with higher scores indicating more agreement. Items one, two, five, ten, eleven, and twelve were reverse scored. The initiation ($\alpha = 0.86$) and refusal ($\alpha = 0.87$) subscales had good reliability and the communication ($\alpha = 0.90$) subscale had excellent reliability. Most of the means for the individual items fell in the neutral to "somewhat agree" or "disagree" response range. A summary of the means, standard deviations, skew, and kurtosis for each item is available in Appendix F.

The initial sexual assertiveness model had a significant chi-square statistic, a CFI of 0.89, a TLI of 0.88, and a RMSEA of 0.09 90% CI [0.08, 0.10]. All indicators were significant, but the first item on the initiation subscale had a lower standardized loading (0.34) and the Cronbach's alpha would improve from 0.86 to 0.88 if this item were removed. The meaning of the item overlapped the content of other items and removal of this item led to a slight improvement in the fit indices and a decrease in the AIC. Modification indices were then examined for potential correlations between error terms that could improve the fit of the model, and the following made the most theoretical sense: Items two and five, four and six, four and seven, six and seven, and fourteen and fifteen. The model fit improved to a CFI of 0.95, a TLI of 0.94, and a RMSEA of 0.06 90% CI [0.06, 0.07]. A second order model was also fit, and the fit indices remained the same.

Campus Climate

Campus climate included items addressing training on sexual assault, school connectedness, prevention of and response to sexual assault, and norms related to sexual misconduct and bystander behavior. All items, except for the training items, were scored on a 4-point scale of agreement, with zero indicating "strongly disagree." The seventh item on the school connectedness subscale and all items on the misconduct norms subscale were reverse scored. The training items ($\alpha = 0.91$) were dichotomous and the frequency the respondents indicated they attended a training that covered the following topics was as follows: The legal definition of sexual assault (49.71%); the definition of consent and how to obtain it (54.37%); the school's policy on sexual assault (53.98%); how to report sexual assault (57.09%); services available for survivors of sexual assault (51.07%); bystander intervention (40%); and other strategies for preventing sexual assault (42.72%). The reliability for the school connectedness subscale was good ($\alpha = 0.87$), excellent for the prevention/response subscale ($\alpha = 0.94$), adequate for misconduct norms ($\alpha = 0.74$), and poor for bystander norms ($\alpha = 0.65$). The means for the items on the school connectedness, prevention/response, and norms subscales suggested some neutrality, as most responses fell between a value of one ("disagree") and two ("agree"). A summary of the means, standard deviations, skew, and kurtosis for each item is available in Appendix G.

The initial campus climate model had a significant chi-square and demonstrated a poor fit on the CFI (0.78), the TLI (0.77), and RMSEA (0.09 90% CI [0.09, 0.10]). All standardized factor loadings were significant, but the loadings were low on the second (0.28) and seventh (0.28) items of the connectedness subscale. The Cronbach's alpha

would also improve if the two items were removed from the connectedness subscale. Item two was redundant, and item seven was reverse scored and the only question to address alcohol consumption within the subscale. After removing the items one at a time, the model fit improved slightly. The modification indices that made the most theoretical sense for correlating error terms were for training items one with two and six with seven, as well as prevention/response items six with seven, and school connectedness items one with three, three with four, and eleven with twelve. Correlating these error terms led to a larger improvement in the fit of the model, with a CFI of 0.92, a TLI of 0.91, and a RMSEA of 0.06 90% CI [0.06, 0.06]. The final model fit was the second order model and the fit statistics remained unchanged.

Sexual Scripts Scale

The factors on the Sexual Scripts Scale (SSS) included sexual standards, complexity, sexual drive, performance, players, and emotional sex. All items were measured on a 6-point scale of agreement, with higher values indicating more agreement. Items three and four of the players subscale and item three of the emotional sex subscale were reverse scored. The sexual standards ($\alpha = 0.94$) and sexual drive ($\alpha = 0.92$) subscales had excellent reliabilities and the complexity ($\alpha = 0.88$), performance ($\alpha = 0.81$), players ($\alpha = 0.85$), and emotional sex ($\alpha = 0.79$) subscales had good reliabilities. Respondents tended to "agree" more with items addressing complexity, be more in the middle with items addressing sexual performance and emotional sex, and "disagree" with items about standards and drive. A summary of the means, standard deviations, skew, and kurtosis for each item is available in Appendix H.

Fit statistics began with a significant chi-square, a CFI of 0.88, a TLI of 0.87, and a RMSEA of 0.07 90% CI [0.07, 0.08]. All loadings were significant but the third item on the players subscale had a standardized loading of 0.18 and further evidence in support of removing the item was provided in the Cronbach's alpha suggestions. Removing this indicator improved model fit; the modification indices that made the most theoretical sense included correlating the error terms on complexity item one with two, standards items two with four, five with six, and six with nine. Model fit improved to a CFI of 0.92, a TLI of 0.91, and a RMSEA of 0.06 90% CI [0.06, 0.07]. The second order model led to a slight decrease in the fit statistics.

Research Questions and Hypotheses

Research Question One

The first research question examined which variables best predicted sexual assertiveness at the individual-, community-, and societal-levels of the social-ecological model. The first hypothesis was that high sexual self-esteem/sexual communication self-efficacy variables at the individual-level would positively predict sexual assertiveness. A second order model was fit using the measurement models identified for sexual assertiveness and sexual communication self-efficacy. The model had a significant chi-square statistic and demonstrated an acceptable fit. The most appropriate modification index was for correlating the error terms of the sexual communication self-efficacy positive messages subscale items four and six. The model fit improved slightly, to a CFI of 0.91, a TLI of 0.90, and a RMSEA of 0.06 90% CI [0.06, 0.06]. As hypothesized, SCSE was a significant positive predictor of sexual assertiveness (standardized

coefficient = 0.97, unstandardized coefficient = 2.11 with a standard error of 0.24, $p < .001$).

The second hypothesis for research question one was that campus climate would predict or moderate sexual assertiveness at the community-level. The relationship between campus climate and sexual assertiveness was examined by fitting the second order models. The model demonstrated acceptable to good fits with a CFI and TLI of 0.92 and RMSEA of 0.04 90% CI [0.04, 0.05] and supported campus climate as a significant predictor of sexual assertiveness (standardized coefficient = 0.28, unstandardized coefficient = 1.56 with a standard error of 0.43, $p < .001$).

The final hypothesis for research question one was that endorsing sexual scripts would negatively predict sexual assertiveness at the societal-level. The second order models were fit to examine this relationship, which had a significant chi-square statistic, a CFI of 0.92, a TLI of 0.92, and a RMSEA of 0.04 90% CI [0.04, 0.05]. None of the modification indices were theoretically justifiable when considering the content (i.e., comparing males to females, reverse wording) so no further changes were made to the model. As hypothesized, the model indicated that sexual scripts negatively predicted sexual assertiveness (standardized coefficient = -0.20, unstandardized coefficient = -0.22 with a standard error of 0.08, $p = .004$).

Research Question Two

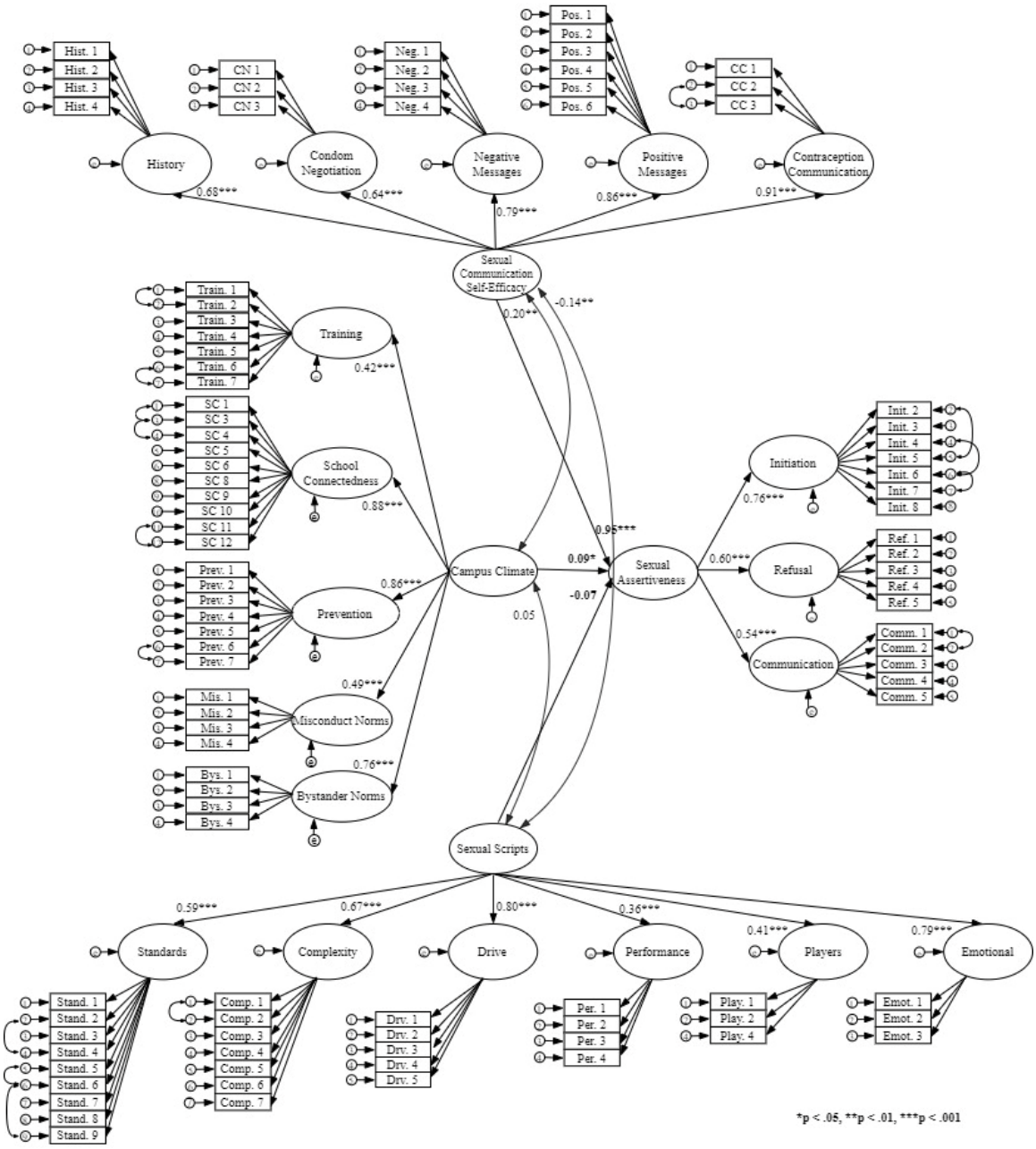
The second research question examined to what extent the variables collectively predicted sexual assertiveness simultaneously. Sexual standards were initially examined as a mediator of sexual communication self-efficacy and sexual assertiveness. The path between sexual communication self-efficacy was significant (standardized coefficient = -

0.14, unstandardized coefficient = -0.28 with a standard error of 0.12, p = 0.02) but the path between sexual standards and sexual assertiveness was not significant (standardized coefficient = -0.06, unstandardized coefficient = -0.07 with a standard error of 0.05, p = 0.20). A mediation was also not supported due to a nonsignificant indirect effect (standardized coefficient = 0.01, unstandardized coefficient = 0.02 with a standard error of 0.02, p = 0.22, 95% CI [-0.01, 0.07]).

A model was fit with the second order models for all constructs, with SCSE, campus climate, and SSS predicting SAQ. The CFI and TLI were 0.89 and the RMSEA was 0.04 90% CI [0.04, 0.04]. No further modifications were made. The path between sexual assertiveness and sexual scripts was not significant (standardized coefficient = -0.07, unstandardized coefficient = -0.08 with a standard error of 0.05, p = 0.15) but the paths between sexual assertiveness and sexual communication self-efficacy (standardized coefficient = 0.95, unstandardized coefficient = 2.06 with a standard error of 0.24, p < .001) and campus climate (standardized coefficient = 0.09, unstandardized coefficient = 0.52 with a standard error of 0.27, p = 0.05) were significant. The r-squared was 0.97, suggesting the model explained 97% of the variance in sexual assertiveness. The final model is available in Figure 1.

Figure 1

Final Model



Research Question Three

The final research question addressed how identified variables differed by group in the final model. Unfortunately, due to small group sizes, it was not possible to conduct invariance testing on the final model.

CHAPTER V – DISCUSSION

The participants in this study were mostly White, heterosexual females 24 years of age or younger. Most respondents were not involved in a Greek-affiliated organization, an international student, or an NCAA athlete. When examining the items on the Sexual Assertiveness Questionnaire subscales, there was variability across the scales. Most of the means for responses to the items on the initiation subscale were between the midpoint of "neither agree nor disagree" to "somewhat agree" on the seven-point scale. The items that had the highest means were those that addressed being open with their partner about their sexual needs, letting their partner know if they wanted to have sex, and it being easy for them to discuss sex with their partner. The lowest mean for this subscale was for the item indicating they felt shy when it comes to sex, which was closer to a neutral response. For the refusal subscale, the means for the items indicating they refused to have sex if they did not want to and it being easy to say no fell within the "somewhat agree" response range, while the means for the items addressing situations where they found themselves having sex when they did not want to and giving in when pressured in the "somewhat disagree" response range. Finally, the means for the items addressing communication were typically within the "somewhat agree" to "agree" range. Overall, the means were the highest for the communication subscale, followed closely by the refusal subscale and then the initiation subscale. However, in examining sexual assertiveness as a higher order construct, initiation was the strongest predictor, suggesting the women in this sample feel more comfortable initiating wanted sexual encounters and less comfortable asserting themselves when refusing unwanted contact and communicating about sexual history and risk with their partners.

The means for the responses to the items on the Sexual Communication Self-Efficacy Scale suggested the respondents had a higher degree of self-efficacy for sexual communication. The means consistently fell within the "easy" to "very easy" response range across all subscales. In considering sexual communication self-efficacy as a higher order construct, contraception communication and positive messages were among the strongest predictors, followed closely by negative messages, and then communication about sexual history and condom negotiation. Having more self-efficacy for contraception communication and positive messages closely aligns with sexual assertiveness for the initiation of wanted sexual encounters, as these items address telling a partner they want to have sex and discussing how to use a condom correctly. Similarly, the items from the negative messages and condom negotiation subscales (i.e., telling a partner an activity is uncomfortable, refusing sex without a condom) seem to be precursors to sexual assertiveness for refusing unwanted activity and communicating about sexual risk and history. The relationship between sexual communication self-efficacy and sexual assertiveness was also examined, with sexual communication self-efficacy significantly predicting sexual assertiveness, with a one standard deviation increase in SCSE resulting in a 0.97 increase in sexual assertiveness. In addition, sexual communication self-efficacy was the strongest predictor of sexual assertiveness in the full model.

The responses to the items on the campus climate subscales tended to be more neutral with the exception of a higher level of agreement with the items from the school connectedness subscale that addressed being happy to be a student at this school and students leading campus efforts to raise awareness for bystander norms. Respondents

expressed more disagreement with the school doing a good job of investigating and holding people accountable for sexual assault on items from the prevention/response subscale. Overall, school connectedness, prevention/response, and bystander norms were among the strongest predictors of campus climate, with misconduct norms and training being weaker predictors. Campus climate was a significant predictor of sexual assertiveness and remained significant, although much weaker in the full model, with school connectedness consistently being the strongest predictor.

Finally, the means for the items on the sexual scripts subscales suggested respondents did not tend to strongly endorse sexual scripts. The lowest means, which ranged in the middle to "somewhat disagree" response range, were on the sexual standards subscale. These items addressed viewing individuals engaging in casual sex and/or having a lot of sexual partners negatively. Responses to items on the drive and players subscales, which addressed men having a stronger need for sex and how they viewed being labeled as a "player," were more neutral. There was a tendency to "somewhat agree" with items on the complexity, performance, and emotional sex subscales, which addressed women being more complex and emotional about sex, as well as the importance of experiencing an orgasm during a sexual encounter. Sex drive, complexity, and emotional sex were the strongest predictors of sexual scripts, while sexual standards, players, and performance were among the weakest. As hypothesized, sexual standards negatively predicted sexual assertiveness, with a one standard deviation increase in SSS resulting in a 0.28 decrease in sexual assertiveness. However, sexual scripts were not a significant predictor in the full model.

Implications

It is encouraging that the women in this sample seem comfortable initiating wanted sexual contact, but it also appears there is room for improvement with their ability to refuse unwanted sexual contact and communicate about risk with a partner, as these are the two components of sexual assertiveness that have the greatest implications on STIs and sexual assault. In examining the relationship between the SCSE subscales and sexual assertiveness, continuing to address the self-efficacy for sexual communication about positive messages and contraception communication could reinforce sexual assertiveness for initiation with an added emphasis on condom use. Although the SAQ items do not address condom use, having self-efficacy for communicating about using them is among the strongest predictors of use during sexual encounters (Widman et al., 2014; Wright et al., 2012) and the best means of preventing STIs in sexually active college students. In addition, intervention efforts might also consider ways to enhance sexual communication self-efficacy for negative messages, condom negotiation, and sexual history. Being able to communicate about negative messages could function as a precursor to better refusal assertiveness. Stronger condom negotiation self-efficacy may help improve both refusal and communication assertiveness by equipping women with the confidence to demand a condom be used and to refuse a sexual encounter if their partner will not abide. Finally, self-efficacy for communicating about sexual history could function as a precursor to increasing assertiveness in communicating about sexual history and risk, which could help reduce rates of STIs.

While feeling connected to one's school as a part of campus climate may not seem to have an obvious connection to sexual assertiveness, it seems plausible that improving students' feeling that they belong among their peers and are valued at the school could foster a supportive environment that enhances other factors that impact individuals, such as mental health. The importance of mental health has been implicated in preventing sexual assault, with resilience functioning as a protective factor and symptoms of depression and PTSD as risk factors (Conley et al., 2017). The next strongest predictor of campus climate was the school's prevention of and response to sexual assault which may potentially have a stronger connection to sexual assertiveness, and more specifically, refusal of unwanted sexual contact, as it appears that efforts to increase awareness about sexual assault and consent communication may help increase sexual assertiveness. However, while it is encouraging that it appears more women (57.09%) on campus know how to report sexual assault than was previously suggested in a recent campus climate survey (Strunk et al., 2015), it is also important to consider the implications of students feeling like the school is not doing a good job of investigating and holding perpetrators of sexual assault accountable, as it may counteract such efforts.

While sexual scripts have evolved with time, previous researchers have argued that sexual scripts are still relevant in sexual encounters, so it was surprising that sexual scripts were not a significant predictor of sexual assertiveness in the final model among this sample of women (Jozkowski et al., 2017; Lopez Alvarado et al., 2020; Muelenhard et al., 2016). Respondents were less likely to view casual sexual encounters and having more partners as negative, which is consistent with hookup culture, and potentially a cause for concern when considering hooking up is associated with an increased risk of

sexual assault (Bhochhibhoya et al., 2019; Garcia et al., 2012; Mellins et al., 2017). Another consideration relevant to sexual scripts is the changing narrative on gender beyond a binary system to view gender as being fluid and existing on a spectrum (Nowicki, 2019). Much of this began with Millennials (those born between the years 1981-1996), but Generation Z (those born between the years 1997-2012) appears to be front runners in changing notions of gender identity, with over one-third of individuals saying they personally know someone who prefers to identify with gender-neutral pronouns (Parker & Igielnik, 2020). As a result, cultural expectations associated with gender are being challenged, even among those who are content to identify as the gender that is consistent with their biological sex. Recent narrative has also centered around toxic masculinity, which has been associated with aggression and violence, and the #MeToo movement has been empowering women and furthering the acceptance of gender nonconformity and fluidity (Savin-Williams, 2021).

Limitations

A key limitation of this study is that only one university participated. While institutions of higher education often face a variety of competing demands, it is important to also consider that much of the recruiting occurred during a surge in the COVID-19 pandemic, which likely placed further strain on resources at most institutions. As a result, the findings of this study are limited to a convenience sample of mostly White, undergraduate women at a university in the southeastern United States.

A limitation of the study design was the low response rate associated with internet-based surveys. A significant limitation of the survey instrument was the loss of the Sexual Self-Esteem Inventory data due to an issue with the randomization feature in

Qualtrics. Other limitations with the survey measures included some heteronormative bias and having been selected in a way that would be applicable to a wide range of respondents. For example, respondents did not necessarily need to be sexually active or reference a specific partner or encounter to respond but given the dyadic nature of sexual communication and sexual assertiveness, it may have been more appropriate to select instruments that required such a reference point to assess sexual assertiveness more accurately.

Finally, the timing of the research may have introduced some bias into responses. During the Fall of 2021, there were several protests about the handling of sexual assault cases and a call for a zero-tolerance policy for perpetrators found to be responsible (Lutrell, 2021). Much of the data were also collected during Sexual Assault Awareness Month in which several exhibits (e.g., Why I Didn't Report, What Were You Wearing), forums (e.g., Toxic Masculinity, Sexual Assault in the LGBTQ+ Community), and a Walk a Mile in Her Shoes event were widely publicized on campus.

Future Research

Based on these findings, future interventions that address developing sexual assertiveness should consider emphasizing sexual communication self-efficacy, especially as it relates to refusal and communication about sexual history and risk. Future research might also examine other influences at the individual-level, including sexual self-esteem, mental health, and fear. More work is also necessary to identify additional community-level predictors, which may include norms and peer influence.

More important, it may be beneficial to consider other interpersonal influences such as relationship dynamics and power, as there are unique power differentials among college students due to age and access to alcohol (Hirsch & Khan, 2020; Muelenhard et al., 2016). Likewise, interactions with acquaintances pose differing challenges by reducing the ability to detect a threat and react effectively (Macy et al., 2006; Nurius et al., 2000). Research to understand the role of power dynamics in relation to sexual assertiveness, particularly in sexual encounters involving an acquaintance and/or coercion, is necessary to better manage relational power for safer sexual communication (Li & Samp, 2019). Finally, it appears some gender roles and sexual scripts are becoming less salient among college students, so a better understanding of societal-level influences through qualitative studies would likely be beneficial. This sample suggested some conflicting views, with more acceptance of casual sex and multiple partners while still viewing women as being more complex and emotional about sex. As society shifts into a more nonbinary view of gender, it may become necessary to reevaluate the implications on traditional gender roles and sexual scripts at the societal-level.

APPENDIX A – Proposed Institutions

Table A1

Institutional Characteristics

City	State	Institution	n	Pell (%)	Female (%)	Black (%)	White (%)	Football
Mobile	AL	University of South Alabama	9,601	38	60	22	61	Y
Troy	AL	Troy University	12,995	47	63	30	53	Y
Jonesboro	AR	Arkansas State University-Main Campus	8,928	43	60	13	74	Y
Conway	AR	University of Central Arkansas	9,134	42	60	15	67	Y
Russellville	AK	Arkansas Tech University	11,015	55	55	6	75	Y
Jacksonville	FL	University of North Florida	14,734	34	57	9	63	N
Pensacola	FL	The University of West Florida	9,521	32	57	11	66	Y
Fort Myers	FL	Florida Gulf Coast University	13,722	32	56	7	62	N
Hammond	LA	Southeastern Louisiana University	13,257	45	62	20	64	Y
Lafayette	LA	University of Louisiana at Lafayette	14,603	40	57	20	64	Y
Hattiesburg	MS	University of Southern Mississippi	11,594	50	63	29	61	Y
Boone	NC	Appalachian State University	17,518	28	56	4	82	Y
Wilmington	NC	University of North Carolina Wilmington	14,785	23	63	4	78	N
Cullowhee	NC	Western Carolina University	10,469	37	55	5	79	Y
Charleston	SC	College of Charleston	9,600	21	64	7	77	N
Conway	SC	Coastal Carolina University	9,760	35	55	18	67	Y
Clarksville	TN	Austin Peay State University	9,971	58	58	21	59	Y
Johnson City	TN	East Tennessee State University	11,153	44	59	6	81	Y
Chattanooga	TN	The University of Tennessee-Chattanooga	10,297	33	56	10	75	Y
Cookeville	TN	Tennessee Technological University	8,957	38	55	4	84	Y
Radford	VA	Radford University	7,967	43	61	17	64	N
Huntington	WV	Marshall University	9,415	46	58	5	83	Y
Greensboro	NC	North Carolina A & T State University	11,039	61	58	81	5	Y

APPENDIX B – IRB Approval Letter

Office *of*
Research Integrity

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident submission on InfoEd IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER:	22-052
PROJECT TITLE:	Using the Social-ecological Model to Better Understand Sexual Assertiveness
SCHOOL/PROGRAM	Health Services Center
RESEARCHERS:	PI: Lisa Wright Investigators: Wright, Lisa Ann~Shelley, Kyna~
IRB COMMITTEE ACTION:	Approved
CATEGORY:	Expedited Category
PERIOD OF APPROVAL:	04-Apr-2022 to 03-Apr-2023

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

APPENDIX C – Linkages Between Variables and Hypotheses

Table A2

Linkages Between Variables and Hypotheses

Level	Construct	Indicators	# Items	α	Linkage
Individual	Sexual Self-Esteem	Skill/experience	7	0.84	RQ1: H1- H2;
		Attractiveness	7	0.88	RQ2
		Control	7	0.80	
		Morality	7	0.80	
		Adaptiveness	7	0.80	
	Sexual Communication	Sexual history	4	0.82	
	Self-Efficacy	Condom negotiation	3	0.83	
		Negative messages	4	0.87	
		Positive messages	6	0.88	
		Contraception communication	3	0.89	
Relationship	Sexual Assertiveness	Satisfaction	8	0.79	RQ1-RQ3
		Refusal	5	0.78	
		Risk/history	5	0.81	
Community	Campus Climate	Connectedness	12	0.86	RQ1: H2
		Climate	7	0.92	RQ2
		Misconduct norms	4	0.80	
		Bystander norms	4	0.75	
		Training	1		
Social	Sexual Scripts Scale	Standards	9	0.90	RQ3: H1-H3
		Complexity	7	0.81	
		Sex drive	5	0.84	
		Sexual performance	5	0.73	
		Players	4	0.74	
		Emotional sex	3	0.75	

APPENDIX D – Survey Instrument

Informed Consent

Dear Student,

I would like to ask you to consider participating in a study seeking to better understand different factors that may influence sexual assertiveness and sexual health outcomes among undergraduate women. You are invited to participate because you are a current undergraduate student over the age of 18.

If you decide to participate, you will be presented with some questions about your attitudes and behaviors regarding your own sexuality and how you view others' sexual choices. You do not need to be currently sexually active to answer the questions. While some of the questions were developed from a heterosexual lens, you are encouraged to answer them based on your authentic personal experiences, whether that be with masculine, feminine, or gender non-conforming partners. You will also be asked some questions about how you feel about your campus and how they address sexual assault.

Participation will require about 15 minutes of your time. You can leave the survey at any time and return to complete it at another time. Although there are no direct benefits to you, participation in this study may help with future programming efforts related to sexual health among college students. If you choose to participate, upon reaching the end of the survey, you will be redirected to a separate survey where you can provide your contact information so that you may be entered into a drawing to win a $25 Barnes and Noble gift card.

Participation involves minimal anticipated risk. There is the possibility that participation in this study may cause you some distress or discomfort when answering some of the questions. You are encouraged to contact Student Counseling Services at 601-266-4829 during business hours or at 601-606-4357 if you are experiencing a mental health crisis after hours. Additional information

about campus resources is available at www.usm.edu/help. You may also contact the National Sexual Assault Hotline at 800-656-HOPE. Responses to all questions are voluntary and you may skip any questions you do not want to answer. Please feel free to decline participation or to discontinue participation at any point without concern over penalty, prejudice, or any other negative consequence.

All data collected will be anonymous and no information collected will be able to identify you. In addition, IP addresses will not be collected (every computer that communicates over the Internet is assigned an IP address that uniquely identifies the device). The findings will be summarized and reported in aggregate (group form) and the results may be used for presentation at a professional conference and/or published in a scholarly journal.

This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. The protocol number for this study is 22-052. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5125, Hattiesburg, MS 39406-0001, 601-266-5997. If you have questions concerning this research, please contact Lisa Wright at 601-266-5340 or lisa.a.wright@usm.edu.

Select "Yes, I consent to participate" below if you consent to this study, and then click the arrow button to continue. If you do not wish to consent to this study, please close your browser window at this time.

Sincerely,

Lisa Wright, MPH, CHES

○ **Yes, I consent to participate.**

First, we'd like to ask you a few questions about your background.

How old are you?

What is your class year in school? Answer on the basis of the number of credits you have earned.

- ◯ 1st year
- ◯ 2nd year
- ◯ 3rd year
- ◯ 4th year or higher

Are you Hispanic or Latino?

- ◯ Yes
- ◯ No

Select one or more of the following races that best describes you (Mark all that apply):

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Native Hawaiian or other Pacific Islander
- ☐ White

☐ Other (Please specify)

☐ Decline to state

Do you consider yourself to be (Mark all that apply):

☐ Heterosexual or straight
☐ Gay or lesbian
☐ Bisexual
☐ Asexual
☐ Queer
☐ Questioning
☐ Not listed. I consider myself (Please specify)
☐ Decline to state

What is your gender?

◯ Woman
◯ Man
◯ Transgender
◯ Non-binary/non-conforming
◯ Other (please specify)
◯ Decline to state

Are you a member of an NCAA athletic team?

◯ Yes
◯ No

Are you a member of any of the following Greek-affiliated organizations? (Mark all that apply):

- [ ] Multicultural Greek Council
- [ ] National Pan-Hellenic Council
- [ ] Panhellenic Association
- [ ] Professional Fraternity Council/Honor Society
- [ ] Other (Please specify): [ ]
- [ ] None

Since you have been a student at this university, have you been a member of or participated in any of the following? (Mark all that apply):

- [ ] Academic group (e.g., math club, philosophy club)
- [ ] Community service club (e.g., Madison House, Habitat for Humanity)
- [ ] Governing body (e.g., Student Council, Honor Committee, University Judiciary)
- [ ] Honor society
- [ ] Media group (e.g., campus newspaper, radio station)
- [ ] Multicultural group
- [ ] Performing group (e.g., school band, dance team)
- [ ] Political group (e.g., Young Republicans, College Democrats)
- [ ] Recreational group (e.g., chess club, bike club, rock climbing club)
- [ ] Religious (e.g., Korean Campus Ministry, World Peace Buddhist Club)
- [ ] Residence Life staff
- [ ] Sexual Assault Prevention group
- [ ] Wellness group
- [ ] Other campus-based group or organization (Please specify) [ ]
- [ ] None of the above

Which of the following best describes your current relationship status?

- ◯ Single, not dating
- ◯ Single, dating
- ◯ In a relationship
- ◯ Cohabiting
- ◯ Married or equivalent
- ◯ Other ongoing relationship involving physical or sexual contact
- ◯ None of the above

Are you an international student?

- ◯ Yes
- ◯ No

Are you a permanent resident of Mississippi?

- ◯ Yes
- ◯ No

Did you graduate from high school or complete a GED in Mississippi?

- ◯ Yes
- ◯ No

Please indicate your level of agreement with each of the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I feel uncomfortable telling my partner what feels good.	○	○	○	○	○	○	○
I feel uncomfortable talking during sex.	○	○	○	○	○	○	○
I am open with my partner about my sexual needs.	○	○	○	○	○	○	○
I let my partner know if I want to have sex.	○	○	○	○	○	○	○
I feel shy when it comes to sex.	○	○	○	○	○	○	○
I approach my partner for sex when I desire it.	○	○	○	○	○	○	○
I begin sex with my partner if I want to.	○	○	○	○	○	○	○
It is easy for me to discuss sex with my partner.	○	○	○	○	○	○	○
I refuse to have sex if I don't want to.	○	○	○	○	○	○	○
I find myself having sex when I do not really want it.	○	○	○	○	○	○	○
I give in and kiss if my partner pressures me, even if I already said no.	○	○	○	○	○	○	○
I have sex if my partner wants me to, even if I don't want to.	○	○	○	○	○	○	○
It is easy for me to say no if I don't want to have sex.	○	○	○	○	○	○	○
I would ask my partner about his or her risk of HIV.	○	○	○	○	○	○	○
I would ask my partner if he or she has had sex with someone who shoots drugs with needles.	○	○	○	○	○	○	○
I ask my partner if he or she has practiced safe sex with other partners.	○	○	○	○	○	○	○
I ask my partners about their sexual history.	○	○	○	○	○	○	○
I ask my partners whether they have ever had a sexually transmitted infection/disease.	○	○	○	○	○	○	○

Please indicate the extent to which you agree with the following statements:

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
I think negatively of a man who has had a lot of sexual partners	○	○	○	○	○	○
I have a hard time respecting a girl who has casual sex	○	○	○	○	○	○
I have a hard time respecting a guy who has casual sex	○	○	○	○	○	○
I think negatively of a woman who has had a lot of sexual partners	○	○	○	○	○	○
I think men who have had a lot of sexual partners are shallow	○	○	○	○	○	○
A man who has a lot of casual sex partners doesn't respect women	○	○	○	○	○	○
I think women who have had a lot of sexual partners have low self-esteem	○	○	○	○	○	○
I would respect a woman more if she didn't have sex early in a relationship	○	○	○	○	○	○
Men who have had a lot of sexual partners are manipulators	○	○	○	○	○	○
It's easy for a girl to turn a guy on	○	○	○	○	○	○
Men are easily turned on	○	○	○	○	○	○
It's easy for men to have orgasms	○	○	○	○	○	○
Men are more easily aroused than women	○	○	○	○	○	○
Men are simple when it comes to sex	○	○	○	○	○	○

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
Women's sexuality is more complicated than men's	○	○	○	○	○	○
It's easy for a woman to be good at sex because men are easy to arouse	○	○	○	○	○	○
Men have stronger urges for sex than women	○	○	○	○	○	○
Men need sex more than women	○	○	○	○	○	○
Men have a higher sex drive than women	○	○	○	○	○	○
Men have a stronger biological need for sex	○	○	○	○	○	○
Women aren't as sexually driven as men	○	○	○	○	○	○
For it to be good sex, both partners need to orgasm	○	○	○	○	○	○
If a man wants a woman to sleep with him again, he has to give her an orgasm	○	○	○	○	○	○
A man's ability to give a woman an orgasm is an indicator of his sexual skill	○	○	○	○	○	○
Women can still enjoy sex without having an orgasm	○	○	○	○	○	○
Having an orgasm is really important to women	○	○	○	○	○	○
Men like being called a player	○	○	○	○	○	○
Men think being a "player" is a positive thing	○	○	○	○	○	○
It's an insult to be called a "player"	○	○	○	○	○	○
Men dislike being called a "player"	○	○	○	○	○	○
Women are more likely than men to get emotionally attached during sex	○	○	○	○	○	○
Sex is more emotional for women than men	○	○	○	○	○	○

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
Men are as likely as women to get attached after sex	○	○	○	○	○	○

Campus Climate

The next series of questions will ask about your feelings and experiences as a student at this school.

Have you ever attended an assembly, workshop, or received any other type of training or classes offered by this school that covered...

	Yes	No
The legal definition of sexual assault?	○	○
What the definition of "consent" is and how to obtain it from a sexual partner?	○	○
This school's policy on sexual assault?	○	○
How to report sexual assault?	○	○
What services are available for survivors of sexual assault?	○	○
How to intervene as a bystander to protect other students from sexual assault?	○	○
Other strategies for preventing sexual assault?	○	○

Please indicate how much you agree or disagree with each of the following statements. Please provide an answer that best reflects how you feel.

	Strongly disagree	Disgree	Agree	Strongly agree
I feel valued as an individual at this school	○	○	○	○
I feel close to people at this school	○	○	○	○
I feel like I am a part of this school	○	○	○	○
I am happy to be a student at this school	○	○	○	○
I feel safe when I am on this school's campus	○	○	○	○
I believe there is a clear sense of appropriate and inappropriate behavior among students at this school	○	○	○	○
I believe alcohol abuse is a big problem at this school	○	○	○	○
I believe this school is trying hard to protect the rights of all students	○	○	○	○
I believe this school is trying hard to make sure that all students are treated equally and fairly	○	○	○	○
I believe this school is trying hard to make sure that all students are safe	○	○	○	○
I believe that students at this school trust one another	○	○	○	○
I believe that students at this school respect one another	○	○	○	○

Please indicate how much you agree or disagree with each of the following statements. Please answer as best as you can when thinking about your school.

	Strongly disagree	Disagree	Agree	Strongly agree
Sexual harassment is not tolerated at this school	○	○	○	○
This school takes training in sexual assault prevention seriously	○	○	○	○
This school is doing a good job of educating students about sexual assault (e.g., what consent means, how to define sexual assault, how to look out for one another)	○	○	○	○
This school is doing a good job of trying to prevent sexual assault from happening	○	○	○	○

	Strongly disagree	Disagree	Agree	Strongly agree
This school is doing a good job of providing needed services to victims of sexual assault	○	○	○	○
This school is doing a good job of investigating incidents of sexual assault	○	○	○	○
This school is doing a good job of holding people accountable for committing sexual assault	○	○	○	○

Please indicate how much you agree or disagree with each of the following statements. As you consider these statements, please think about the overall population of students at this school and try to answer as best as you can.

	Strongly disagree	Disagree	Agree	Strongly agree
At this school, it is common for students to spread sexual comments, photos, or videos that people don't want shared, either in person or by text, email, or social media	○	○	○	○
At this school, it is common for students to call people who are gay or lesbian a negative name	○	○	○	○
At this school, when students make sexual comments, jokes, or gestures, other students stand up to them	○	○	○	○
A lot of sexual assault happens among students at this school when students are unable to provide consent because they are incapacitated, passed out, unconscious, blacked out, or asleep	○	○	○	○
Many students at this school initiate or lead campus efforts to raise awareness about sexual assault	○	○	○	○
Most students at this school are knowledgeable about the topic of sexual assault, including how it is defined, how often it occurs, and what the legal consequences are	○	○	○	○
At this school, it is common for students to make jokes about sexual assault or rape	○	○	○	○
At this school, if students see someone trying to have unwanted sexual contact with someone, they will try to stop them	○	○	○	○

When communicating about sex with a partner, how easy or difficult would it be for you to…?

	Very difficult	Difficult	Easy	Very easy
Ask how many partners they have had?	○	○	○	○
Ask if they have ever shared needles?	○	○	○	○
Ask if they are having sex with other people?	○	○	○	○
Ask if they have ever had a sexually transmitted infection?	○	○	○	○
Ask if a condom could be used for sex with them?	○	○	○	○
Demand that a condom be used?	○	○	○	○
Refuse to have sex if they won't use a condom?	○	○	○	○
Tell them a certain sexual activity hurts you?	○	○	○	○
Tell them if a certain sexual activity makes you uncomfortable?	○	○	○	○
Tell them that a certain sexual activity is not making you feel good?	○	○	○	○
Suggest a new sexual activity (e.g., a new sexual position)?	○	○	○	○
Tell them you do not want to have sex?	○	○	○	○
Tell them you would like to have sex more often?	○	○	○	○
Tell them that a sexual activity feels good?	○	○	○	○
Talk about how it feels to use a condom?	○	○	○	○
Talk about how to put on a condom?	○	○	○	○
Talk about whether a condom is on correctly?	○	○	○	○
Tell them that you want to have sex?	○	○	○	○
Tell them that you like a specific sexual activity?	○	○	○	○
Initiate sex?	○	○	○	○

Please indicate the extent to which you agree with the following statements:

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
It is important to me that men are attracted to me.	○	○	○	○	○	○
I feel proud when men compliment the way I look.	○	○	○	○	○	○
I want men to look at me.	○	○	○	○	○	○
I love to feel sexy.	○	○	○	○	○	○
I like showing off my body.	○	○	○	○	○	○
I feel complimented when men whistle at me.	○	○	○	○	○	○
When I wear revealing clothing, I feel sexy and in control.	○	○	○	○	○	○
I feel empowered when I look beautiful	○	○	○	○	○	○

Resources

Resources

- Student Counseling Services
  - 601-266-4829
  - 601-606-4357 (after hours)
- www.usm.edu/help
- National Sexual Assault Hotline

- 800-656-HOPE (4673)
- RAINN.org

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APPENDIX E – SCSE Descriptive Statistics

Table A3

Descriptive Statistics for Sexual Communication Self-Efficacy Scale Items

Subscale/item	M	SD	Skew	Kurtosis
Sexual history				
History 1	3.12	0.84	-0.58	-0.48
History 2	3.11	0.95	-0.72	-0.54
History 3	3.25	0.86	-0.86	-0.20
History 4	3.23	0.83	-0.81	-0.15
Condom negotiation				
Negotiate 1	3.59	0.64	-1.52	1.92
Negotiate 2	3.44	0.80	-1.37	1.15
Negotiate 3	3.34	0.87	-1.03	-0.07
Negative messages				
Negative 1	3.32	0.80	-0.89	-0.12
Negative 2	3.21	0.84	-0.66	-0.61
Negative 3	3.09	0.90	-0.46	-0.83
Negative 4	3.24	0.79	-0.78	-0.02
Positive messages				
Positive 1	3.01	0.92	-0.48	-0.77
Positive 2	3.06	0.88	-0.54	-0.59
Positive 3	3.40	0.74	-1.09	-0.75
Positive 4	3.14	0.85	-0.65	-0.44
Positive 5	3.23	0.84	-0.86	-0.02
Positive 6	2.90	0.94	-0.39	-0.85
Contraception communication				
Contraception 1	3.21	0.80	-0.70	-0.22
Contraception 2	3.14	0.85	-0.62	-0.48
Contraception 3	3.13	0.87	-0.64	-0.50

APPENDIX F – SAQ Descriptive Statistics

Table A4

Descriptive Statistics for Sexual Assertiveness Questionnaire Items

Subscale/item	M	SD	Skew	Kurtosis
Initiation subscale				
Initiation 1 (R)	4.55	2.09	-0.33	-1.32
Initiation 2 (R)	4.87	1.84	-0.46	-0.96
Initiation 3	5.16	1.56	-0.72	-0.22
Initiation 4	5.51	1.47	-1.01	0.46
Initiation 5 (R)	3.86	1.92	0.18	-1.08
Initiation 6	4.85	1.61	-0.63	-0.22
Initiation 7	4.43	1.80	-0.34	-0.83
Initiation 8	5.20	1.67	-0.76	-0.34
Refusal subscale				
Refusal 1	5.73	1.48	-1.21	0.71
Refusal 2 (R)	5.12	1.76	-0.52	-0.96
Refusal 3 (R)	5.16	1.81	-0.61	-0.91
Refusal 4 (R)	5.29	1.74	-0.65	-0.90
Refusal 5	5.45	1.61	-0.96	-0.09
Communication subscale				
Communication 1	5.85	1.47	-1.35	1.04
Communication 2	5.49	1.71	-0.95	-0.19
Communication 3	5.75	1.53	-1.27	0.77
Communication 4	5.56	1.62	-1.09	0.28
Communication 5	5.76	1.54	-1.18	0.41

APPENDIX G – Campus Climate Descriptive Statistics

Table A5

Campus Climate Descriptive Statistics

Subscale/item	M	SD	Skew	Kurtosis
School connectedness				
Connected 1	1.73	0.75	-0.20	-0.24
Connected 2	1.60	0.88	-0.12	-0.69
Connected 3	1.68	0.75	-0.33	-0.11
Connected 4	2.04	0.68	-0.56	0.75
Connected 5	1.84	0.75	-0.52	0.26
Connected 6	1.86	0.74	-0.74	0.28
Connected 7 (R)	1.61	0.76	-0.76	-0.14
Connected 8	1.69	0.79	-0.79	-0.19
Connected 9	1.82	0.80	-0.80	-0.06
Connected 10	1.82	0.84	-0.84	-0.12
Connected 11	1.55	0.78	-0.78	-0.38
Connected 12	1.70	0.74	-0.74	0.10
Prevention and response				
Prevent 1	1.78	0.91	-0.31	-0.69
Prevent 2	1.61	0.88	-0.16	-0.68
Prevent 3	1.54	0.90	-0.08	-0.76
Prevent 4	1.48	0.89	-0.08	-0.72
Prevent 5	1.60	0.86	-0.32	-0.51
Prevent 6	1.37	0.90	0.00	-0.82
Prevent 7	1.22	0.94	0.19	-0.95
Misconduct norms				
Misconduct 1 (R)	1.73	0.78	-0.46	-0.02
Misconduct 2 (R)	1.82	0.81	-0.41	-0.21
Misconduct 3 (R)	1.27	0.80	0.22	-0.39
Misconduct 4 (R)	1.76	0.86	-0.35	-0.45
Bystander norms				
Bystander 1	1.42	0.77	-0.04	-0.41
Bystander 2	2.09	0.73	-0.56	0.25
Bystander 3	1.90	0.79	-0.40	-0.20
Bystander 4	1.78	0.67	-0.42	0.39

APPENDIX H – SSS Descriptive Statistics

Table A6

Sexual Scripts Scale Descriptive Statistics

Subscale/item	M	SD	Skew	Kurtosis
Sexual standards				
Standard 1	2.99	1.50	0.35	-0.84
Standard 2	2.22	1.33	1.08	0.44
Standard 3	2.47	1.42	0.83	-0.22
Standard 4	2.42	1.43	0.82	-0.23
Standard 5	2.78	1.54	0.53	-0.82
Standard 6	2.83	1.45	0.49	-0.64
Standard 7	2.43	1.45	0.91	-0.11
Standard 8	2.28	1.51	1.07	-0.01
Standard 9	2.43	1.35	0.85	0.04
Complexity				
Complex 1	4.07	1.34	-0.46	-0.37
Complex 2	4.43	1.23	-0.68	0.19
Complex 3	4.56	1.19	-0.73	0.27
Complex 4	4.40	1.32	-0.70	-0.08
Complex 5	3.84	1.42	-0.25	-0.76
Complex 6	4.18	1.50	-0.51	-0.69
Complex 7	3.30	1.44	0.16	-0.79
Drive				
Drive 1	3.42	1.62	0.09	-1.13
Drive 2	2.72	1.58	0.68	-0.63
Drive 3	3.30	1.60	0.30	-1.06
Drive 4	2.90	1.55	0.37	-0.96
Drive 5	2.87	1.45	0.35	-0.81
Performance				
Perform 1	3.91	1.60	-0.24	-1.06
Perform 2	3.00	1.49	0.43	-0.74
Perform 3	3.44	1.58	-0.07	-1.08
Perform 4	4.17	1.19	-0.59	0.29
Player				
Play 1	2.84	1.45	0.51	-0.65
Play 2	3.28	1.48	0.06	-0.97
Play 3 (R)	2.63	1.20	0.74	0.40
Play 4 (R)	3.49	1.24	0.07	-0.37
Emotional				
Emotion 1	3.93	1.46	-0.39	-0.72
Emotion 2	3.92	1.49	-0.42	-0.73
Emotion 3 (R)	3.05	1.32	0.31	-0.62

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