HE SAYS SHE SAYS: A QUANTITATIVE DATA ANALYSIS OF GENDER IDENTITY AND ACCEPTANCE OF RAPE AND CONSENT MYTHS, AND HETERONORMATIVITY WITHIN AN INTERVENTION COURSE.

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Existing research indicates support for implementing a curricular intervention course targeting the social and behavioral determinants of sexual assault, including acceptance of myths about sexual assault and consent, internalization of heteronormative attitudes and beliefs, and sexual misconduct apathy. Rape myths and consent myths can contribute to the acceptance of sexual assault and place blame on survivors for their victimization. Heteronormative attitudes and beliefs negatively restrict conceptualizations and expression of sexuality and gender. Therefore, interventions designed for sexual violence prevention and response should focus on these socialized and internalized beliefs to effectively impact students’ understanding and rejection of a culture that accepts and allows sexual assault. However, current studies fail to examine the interaction between gender and time in improving these domains with such interventions. The present study builds on work conducted by Tulane professors Katherine Johnson and Alyssa Lederer on the Gender and Sexuality Studies course Sex, Power, and Culture (GESS 1900) course to answer the question: What is the impact of a curricular intervention course(s) on rape myth and consent myth acceptance, as well as heteronormativity, among undergraduate students based on gender identity? The results indicated that rape myth acceptance, consent myth acceptance, and heteronormative attitudes and beliefs showed gender differences between men and other students, with gender influencing a decrease in heteronormative beliefs and behaviors over time.
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Introduction

Sexual violence on college campuses is a significant public health challenge that continues to pose a large threat to undergraduate students. Over one-quarter of undergraduate female students, close to 7% of undergraduate male students, and nearly one-quarter of transgender, genderqueer, and gender nonconforming students experienced rape or sexual assault in 2019 (Cantor et al., 2020; CDC, 2020). First-year students face an increased risk of victimization in part due to limited knowledge about sex and consent upon entering college, gendered expectations resulting from cultural messaging (feminine double standards and pressure on male-identifying students to be sexually active), male-controlled party culture centered on hookups, and heavy alcohol consumption (Sinozich & Langton, 2014; Mulenhard et al., 2016). Following the federal government’s mandate that campuses that receive federal funding conduct sexual assault prevention efforts, sexual violence programming has become one of the more popular strategies for sexual assault prevention (Vladutiu, Martin, & Macy, 2011). However, it is difficult to monitor or regulate how universities implement this type of programming, as there is a lack of comprehensive data looking at the effects of such intervention programs (Cass, 2007; Jozkowski, 2015). Factors including the length of the program, status of the facilitator (peer vs. professional presenters), the content of the intervention, gender of the audience, and type of audience (Greek members, general population, high risk) can influence effectiveness measured by various outcomes (Vladutiu, Martin, & Macy, 2011). Data from examinations of certain sexual assault curricular interventions on college campuses suggest that such programming can decrease students’ acceptance of rape and consent myths, which is important, as these harmful beliefs can appear across different
contexts, including media, science, religion, and the legal system (Anderson & Whiston, 2005; Vladuitiu, Martin, & Macy, 2011).

Rape myths and consent myths contribute to the acceptance of sexual assault and blame survivors for their own victimization. The concept of rape myths developed during the era of second wave feminism, with Martha Burt publishing a ground-breaking article about these cultural myths in 1980, in which she defined rape myths as “prejudicial, stereotyped, or false beliefs about rape, rape victims, and rapists” (Burt, 1980, p. 217; Payne et al., 1999). Interestingly, available literature reveals gender differences in sexual scripts, which contribute to the formation and perpetuation of rape myths and consent myths (Bernston, Hoffman, & Luff, 2013;Ryan, 2011). Consent myths describe the often ambiguous and non-direct verbal or non-verbal exchanges of consent that are part of the normative sexual script of most young adults in heterosexual pairings (Humphreys & Brousseau, 2010). Sexual scripts describe sets of culturally constructed social norms regarding sexual behavior that are internalized through socialization and actively influenced through interpersonal exchanges (Bernston et al., 2014). Sexual scripts generally perpetuate the gender hierarchy, positioning women’s sexuality as subject to control and more passive and submissive, and men as displaying masculinity through expected experimentation and multiple partners (Bernston et al, 2014). Common examples of the gendered sexual scripts, especially seen among college students, are women as sexual gatekeepers, who are to limit normative sex to committed relationships, and men as sexual initiators or aggressors, with an emphasis on physical pleasure with less focus on meaning (Bernston et al, 2014). However, studies on curricular
interventions fail to examine the interaction between gender and intervention programming on reduced acceptance of rape and consent myths.

In sexual violence prevention work, there is variation in the use of the terms survivors and victims of sexual aggression. Some individuals who experience sexual aggression choose to describe themselves as survivors at any point in their process of healing from the experience while others prefer the term victim. For the purpose of the present paper, the term survivor will be intentionally used to reference any person who has experienced sexual aggression, as it acknowledges the immense difficulty of continuing with life after such an experience (however the individual chooses to define it) and places the emphasis and power in the survivor rather than the perpetrator.

**Rape and Consent Myths**

As previously mentioned, rape stereotypes and myths are broadly defined as prejudicial, stereotyped, or false beliefs about rape, survivors, and rapists, which create a climate hostile to survivors (Burt, 1980). Rape myths exist within legal, religious, and media institutions and the decisions made on individual, social, and systemic levels (Edwards et al., 2011). The notion of rape myths developed from work by feminists (such as Brownmiller, 1975) and sociologists (including Schwendinger & Schwendinger, 1974), who define rape myths as a set of cultural beliefs that deliberately misconstrued the true reality of rape and perpetuate and allow male sexual violence against women (Payne et al., 1999). In 1980, Martha Burt wrote the first published examination of rape myth acceptance in the social sciences in her article “Cultural Myths and Supports for Rape” (Burt, 1980). The cumulative effect of rape myths results in a climate where survivors of sexual assault are blamed for their own victimization, simultaneously
denying or reducing survivors’ perceived trauma and harm (Burt, 1980). Researchers (specifically Feild, 1978; Klemmack & Klemmack, 1976) have found that rape myth acceptance/restrictive definitions and sex-role stereotyping (attitudes toward women) are positively correlated, indicating that internalized attitudes about women’s expected behavior contribute to the socially-pervasive ideology generated by rape myths that supports or allows sexual assault, especially against women (Burt, 1980). Edwards et al. (2011) argue that rape myths promote a climate in which rape is perpetuated and survivors are blamed for their status as victims, pointing to four classically-held rape myths about women as representative of contemporary beliefs that support a patriarchal system that accepts and allows rape. These include: “husbands cannot rape their wives,” “women enjoy rape,” “women asked to be raped,” and “women lie about being raped” (Edwards et al., 2011). Other rape myths exist about male survivors of sexual assault, including “men cannot be raped” and “men who are raped must be gay,” similarly blaming survivors, absolving perpetrators, and minimizing sexual violence (Davies, 2002). The Illinois Rape Myth Acceptance Scale classifies a current reflection of these rape myths under different subscales that reflect recurring themes, including she asked for it, it wasn’t really rape, she lied, he didn’t mean to, and he didn’t mean to - alcohol (Payne, Lonway, & Fitzgerald, 1999). This scale is problematic because it reinforces the heteronormative script of men as perpetrators and women as victims of sexual assault, denying the experiences of male and nonbinary victims. However, as a general tool, the scale is incredibly useful in gauging support for common rape myths, which themselves perpetuate the aforementioned heteronormative script.
Rape myths can guide the process of navigating one’s own and others’ experiences; for example, these myths can comfort some individuals because it allows them to mentally distance themselves, their beliefs, and their actions from potentially becoming a victim or a perpetrator (Ryan, 2011). Additionally, for women, rape myths caution them against acting uncareful or unguarded, invoking the notion that only certain women are raped; e.g. those who drink too much, sleep with many people and are not aware of their surroundings. Finally, perpetrators can use rape myths as guidelines for committing acts of sexual aggression; in other words, rape myths can indicate to perpetrators it is okay to assault women who engage in sexual behavior with them or “tease” men (p. 775). Overall, rape myths contribute to harmful ideologies that simultaneously place blame on victims and deny the severity of their assault while excusing or endorsing the behavior of perpetrators of sexual violence.

Directly tied to rape myths are consent myths, assumptions about the healthy occurrence of consent between partners before and during a sexual interaction, which often place the burden for stopping behavior on the woman-identifying partner in a heterosexual interaction (Bernston et al., 2014). Research on college undergraduates reveals the complexity of these young adults’ conceptualizations of consent. In a study of over 300 students at a midwest university in the United States about how they hypothetically and actually give consent in sexual interactions, and found that students used verbal, non-verbal, direct, and indirect methods to indicate sexual consent to a partner (Hickman and Muehlenhard, 1999). Their findings, especially that nonverbal signals were ranked as the best indicator of a partner’s sexual consent, also supported observations by Hall (1988) that many college-aged men and women passively indicate
consent by not resisting a partner’s sexual advances, such as allowing a sexual partner to undress them (Humphreys & Brousseau, 2010).

Another sample of college undergraduates by Humphreys and Herold (2007) found that in general, men prefer to assume consent while women favored clarifying consent earlier in sexual activity. Defining and understanding consent in contextualized situations becomes challenging, especially for college students, especially those without a comprehensive education on navigating and respecting consent. Many students enter college with limited knowledge about sex, and little or no prior discussion about consent, especially for students who receive abstinence-only programs in public schools (Kantor et al., 2008). These abstinence-only programs do not allow students to consider what they are and are not comfortable with when engaging in sex, and do not address how students should and can give, ask for, or interpret sexual consent (Kantor et al., 2008).

The addition of alcohol and social power structures alters the dynamics of sexual consent; alcohol and substance use impairs a person's ability to give consent and perceive important behavioral cues from others (Muehlenhard et al., 2016). For example, Abbey et al. (2000) found that in a laboratory setting, non-intoxicated undergraduate college men distinguished women who behaved attentively to them from women who behaved inattentively (categorized by external coders), and believed that attentive women were more sexually attracted to them. In contrast, intoxicated men did not distinguish between women who behaved attentively or inattentively towards them, and their ratings of women’s sexual attractiveness did not depend on attentiveness, suggesting that alcohol may reduce attention to important behavioral cues (Abbey et al., 2000). The interaction of alcohol and drug usage, common parts of the college social scene, with students’ varying
interpretations of consent, can lead to misinterpretation or selective interpretation on one or more parties involved in a sexual encounter, leading to sexual assault (Humphreys & Brousseau, 2010).

Sexual assault educational prevention programming advocates for affirmative consent, which states that nonconsent must be assumed until consent is actively communicated. Further, when communicated, it should be ongoing, enthusiastic, freely given, and revocable at any time. By the affirmative consent standard (required by California and New York universities as of 2014 and 2015), silence or lack of resistance does not count as consent (Muehlenhard et al., 2016). However, many individuals hold sexual scripts which contrast the affirmative consent standard, in which they assume consent until nonconsent is actively communicated (Muehlenhard et al., 2016). This is evidenced in individuals incorrectly assuming that a partner’s consent for a specific sexual activity once translates into consent for that activity until otherwise expressed, and that partners in a romantic relationship do not need to obtain informed consent every time they engage in sexual activities. While context and situation are important, the assumption of consent until nonconsent is actively communicated is harmful in several ways, as it unfairly places the burden on the partner who does not consent to intervene and communicate. The traditional sexual script (involving two heterosexual partners) suggests that the man’s role is to begin the sexual activity with a woman, who is expected to resist or refuse “sufficiently” if she is not interested, which is problematic for several reasons (Clark & Carroll, 2007). Therefore, an understanding of the importance of affirmative consent among college students and other young adults is essential in
ensuring all parties are giving and receiving clear consent in sexual interactions, thus avoiding the potential for sexual violence.

**Sexual Scripts**

Sexual scripts are defined as patterns of behavior influenced by culture that inform desire, influence sexual behavior, and allow individuals to interpret their own behavior and that of their partner(s) (Ryan, 2011). Ryan (2011) theorizes that rape myths and sexual scripts work together to support rape. One evident example of this interaction is the minimization of the experience of male survivors of sexual assault. Rape myths surrounding male survivors highlight the potency and dangers of the widely accepted view of masculinity in Western cultures, which guides that men must exhibit strength, assertiveness, sexual dominance, and heterosexuality (Davies, 2002). As aforementioned, sexual scripts position men as holding the power in sexual interactions, serving as aggressors or initiators of sex (Bernston et al., 2014). Therefore, because most men have internalized the societal beliefs of men as “in-control” of sexual interactions, many male survivors struggle to accept their experience of rape and are often met with the same disbelief from others who have internalized the same beliefs (Davies, 2002). Crome and McCabe (2001) use the term rape scripts to describe beliefs about the nature of rape, the roles of the sexes in rape, the boundaries of vulnerability to rape, and the disposition of the victims (as cited by Ryan, 2011). The “real rape” script describes a sexual script that depicts several characteristics commonly accepted as necessary to deem an event rape, although these reflect common rape myths (Ryan, 2011). The “real rape” script describes a physically violent, unexpected attack on a woman, usually by a male stranger, who catches a woman alone. In this script, the woman may fight the perpetrator or may feel
too afraid to resist, and after the attack, knows that she has experienced a sexual assault and feels devastated while the perpetrator experiences little to no consequence (Ryan, 2011). This script does not coincide with the reality of acquaintance rape and may make it difficult for survivors to recognize risk cues in situations that do not fit that of the “real rape” script and impact survivors’ ability to identify what happened to them after the fact (Ryan, 2011). Rape myths and rape scripts can narrow a victim’s definition of rape and decrease the likelihood that a victim will identify their experience as rape (Edwards, 2011). However, the specific role of rape scripts in the initiation of sexual assault has not been well-studied.

From an intervention perspective, considering the ways in which gender identity and acceptance of rape scripts interact will better inform programming efforts. Gender differences are visible in research on date rape scripts among college students, as shown studied by Clark and Carroll (2008). Using a rape scenario, Clark and Carroll (2008) collected scripts from a sample of 292 undergraduate women and 125 undergraduate men attending a public university within the United States, applying a mixed-methods approach to analyze the content of script themes and looking at gender differences in underlying structures. While no singular rape script emerged, the examination of latent structures provided clear evidence of a differing conceptualization of rape between women and men (Clark & Carroll, 2008). Women wrote more scripts consistent with the real rape script (involving physical force, negative victim emotions, and a defined label of rape) and scripts in which consent for earlier sexual activity was followed by the use of physical force to coerce a woman into nonconsensual activities. Men wrote more of what Clark and Carroll deemed wrong accusation scripts (describing a man “falsely” accused
of rape because he used verbal coercion and resistance and the woman stopped resisting) and party rape scripts, in which alcohol consumption played a major role. Clark and Carroll (2008) speculate that these gender differences arise from women focusing on the victim’s emotions, while men try to understand the perpetrator’s behavior in the context of mixed signals and the absence of a definitive no. Therefore, intervention efforts will benefit from consideration of the gender roles normalized by sexual scripts, as these influence rape scripts and rape myth acceptance as well.

**Heternormative Attitudes and Beliefs**

Janice Habarth (2015) defines heteronormativity as an implicit social understanding and acceptance of heterosexual roles and assumptions about heterosexuality as normal or natural. In this way, heteronormativity can be viewed as an underlying cultural ideology that perpetuates heterosexism and heterosexist prejudice, including prejudice and discrimination against sexuality minorities, who do not fit neatly into the binary dictated by heterosexuality (Habarth, 2015). As discussed, sexual violence is culturally-framed within the United States as a heterosexual experience that is perpetuated by men against women, reflected in rape myths, consent myths, and sexual scripts. These beliefs, which become individually internalized through different forms of socialization, ignore or discredit the experience and survivorhood of men and individuals with diverse gender identities (Gretgrix & Farmer, 2022). However, Jackson (2006) notes that heteronormativity negatively influences individuals of all gender and sexual identities through its regulation of these identities. Thus, guiding college students in assessing and potentially challenging their own heteronormative attitudes and beliefs is essential in expanding their understanding of sexual violence and concepts of who might
experience sexual violence. An intentional incorporation of content focused on the impact and consequences of heteronormativity will additionally serve as a key step towards acknowledging and validating the sexual violence experiences of all people, regardless of sexual or gender identity.

**Intervention Programs**

Considering the role of rape myths, consent myths, heteronormative attitudes and beliefs, and sexual scripts in perpetuating and responding to sexual violence, the following section examines existing literature on intervention programs designed for sexual prevention and response on college campuses across the United States. Following the federal government’s mandate that campuses that receive federal funding conduct sexual assault prevention education efforts, college education programs have become one of the more popular strategies for sexual assault prevention. However, it is difficult to monitor or control the programming universities implement, as there is a lack of collective, comprehensive data assessing the effectiveness of these programs (Case, 2007). Importantly, effectiveness depends on the variables used to define it; most evaluations have considered attitudes, behavioral intentions, self-report behaviors, sexual victimization, observed behaviors, and sexual aggression (Breitenbecher, 2000).

Traditional programming generally includes workshops or seminars focused on issues related to sexual assault prevention, including information about the prevalence of assault among college students, the social construction of sex roles, identifying risk-reduction steps, and empathy toward survivors (Jozkowski, 2015). More recently, some colleges and universities have implemented non-traditional sexual assault prevention initiatives, which include taking a course for credit on human sexuality or on women and violence or
taking a training course to become a peer facilitator for a sexual assault prevention education program (Jozkowski, 2015).

In support of non-traditional prevention initiatives, Case (2007) found that participants in diversity and women’s studies courses exhibited greater awareness of male privilege and support for affirmative action at the end of the semester compared to the pre-test levels, suggesting that such courses may reduce less obvious forms of prejudice. In a study of 147 undergraduates enrolled in Psychology of Race and Gender course at a mid-sized state university in rural Kentucky, comparisons of the questionnaire answers from Weeks 1 and 15 revealed a significant increase in awareness of male privilege, significant decreases in modern sexism and hostile sexism, and significantly more support for affirmative action to promote equality for women in education and employment (Case, 2007). Male privilege was measured using a seven-item scale developed for the study, with items such as “Men are at an advantage because they hold most of the positions of power within society,” and support for affirmative action was measured using a seven-item scale about affirmative action policies and practices designed to combat sexism in the workplace an educational settings (Case, 2007).

Modern sexism was evaluated using seven items from the Modern Sexism Scale, which measured perceptions of sexism and equality in wider society (Swim et al., 1995). Hostile sexism was assessed with a ten-item subscale of the Ambivalent Sexism Inventory, which measured willingness to openly degrade women and justify patriarchal power (Glick & Fiske, 2001) This suggests the potential effectiveness of non-traditional prevention initiatives, specifically for-credit courses focused on topics such as human sexuality or on women and violence.
A comprehensive literature review of college-or-university-based sexual assault programs was conducted by Vladutiu, Martin, and Macy (2011). They examined literature reviews of existing programs implemented at the college- or university-level across the United States. For inclusion, the literature review had to examine empirically published peer-reviewed research data or dissertation research reporting original findings, focus on assessing the effectiveness of intervention programs implemented in college or university settings, provide recommendations for creating and implementing effective sexual assault prevention programs on the university and college level, and review studies that occurred within the United States. The inclusion criteria limited available publications to eight literature reviews published in peer-reviewed journals between 1993 and 2005 that examined 102 research articles and dissertations. The collective findings of these eight literature reviews suggested that programs targeting single-gender audiences were most effective, although this result varies based on the program outcomes assessed (Vladutiu, Martin, & Macy, 2011). Similar to the findings by Anderson and Whiston, the results indicated that longer programs (both longer session length and greater number of sessions) are more effective, especially in improving rape attitudes and reducing rape myth acceptance. Overall, the authors recommend the use of interventions targeting single-gender audiences and potentially focused on sorority or fraternity members, and acknowledge that findings on the most effective program format and program content are mixed (Vladutiu, Martin, & Macy, 2011). However, in practice, they recommend that content includes gender-role socialization, risk education, rape myths, rape attitudes, rape avoidance, perpetrators’ motivation, victim empathy, communication in relationships, controlled drinking, and/or relapse prevention.
In further support of longer programs and courses focused on specific issues related to sexual assault, Jozkowski (2015) found that students in an alternative prevention course (n=10) were more likely to acknowledge underlying determinants of sexual assault and articulate behaviors that could lead to assault than students who had received a sexual assault prevention workshop (n=10). The study was conducted at a large, public university in Indiana to examine an elective, semester-long course specifically designed to examine social and behavioral factors of sexual assault, mindful of recommendations from Lonsway et al. (1998). Lonsway and colleagues (1998) examined the effectiveness of a one-time, brief (45 minutes to 2 hour) intervention course. The semester-long, elective course is designed as an alternative to traditional sexual assault prevention efforts available at the university, and looks at real-life applications of consent and sexual assault, as well as situational factors that can contribute to misunderstandings in consent and coercion leading to assault (Jozkowski, 2015). The traditional prevention offered by the university is a 60-minute workshop, often provided during a single class session as part of other courses (Jozkowski, 2015). Study participants listened to an audio recording describing five fictitious scenes, written to include determinants of sexual assault, and responses were transcribed verbatim and analyzed using critical qualitative analytical techniques and coding procedures. Based on both the coding procedures and analytic techniques, students in the alternative elective course more consistently unpacked the contextualized scenarios and identified factors that could lead to assault than students who had completed the hour-long workshop. The ability to examine complex scenarios and successfully identify factors that contribute to
sexual assault are important first steps in challenging victim-blaming, rejecting rape-supportive attitudes, and advocating for an anti-rape-supportive environment.

These preliminary findings (Case, 2007; Jozkowski, 2015; Vladutiu, Martin, & Macy, 2011) suggest that intensive, semester-long courses may better conceptualize and analyze larger issues of sexual violence than students exposed to brief (less than two hours long), one-time workshops. Thus, further research and implementation of course-based, comprehensive sexual assault prevention programming is necessary to determine the influence of such interventions. The following section will explore the Tulane Gender and Sexuality Studies faculty’s implementation of a semester-long, for credit curricular sexual assault intervention.

**Tulane Campus Climate Survey + ARC3**

In 2017, Tulane administered the ARC3 Campus Climate Survey to assess sexual violence and harassment for undergraduate, undergraduate, and professional students. The ARC3 Campus Climate Survey was developed by the Administrator Researcher Campus Climate Collective ARC3 (ARC3, 2015). The survey is organized into modules that provide campuses with flexibility in using the survey length and content needed for each institution. An overall rate of 47% of full-time students completed the survey, consisting of 53% of undergraduates and 31% of graduate students (Tulane University, 2020). The findings indicated that 41% of undergraduate women experienced sexual assault since the time of their enrollment at Tulane, with higher rates for undergraduate LGBQ+ women (51%) than heterosexual women (39%) (Tulane University, 2020). Eighteen percent of undergraduate men reported experiencing assault, with 44% of GBQ
men reporting assault. Upon reviewing the findings, Tulane implemented Wave of Change in Fall 2018, launching new prevention and education programming, workshops, guided discussions, and panels of experts (Tulane University, 2020). As part of this initiative, the Gender and Sexuality Studies (GESS) faculty at Tulane created a team-designed and team-taught class called Sex Power Culture (GESS 1900).

**Sex Power Culture - GESS 1900**

The aim of GESS 1900 is to provide an academic discussion space and method of shifting students’ attitudes, understanding, and behavioral intentions about gender, sexuality, and sexual violence (Johnson et al., 2022). GESS 1900 is classified as a Gender and Sexuality Studies Course, originally taught by four faculty members across multiple disciplines and schools and consisting of two weekly lectures by instructors, plus smaller group discussions facilitated by graduate teaching assistants. Within the smaller discussion sections, teaching assistants worked with faculty members to employ different pedagogical methods for more in-depth discussion and analysis of class content, including videos, student-led presentations, mini-lectures, and role plays (Johnson et al., 2022). Content covers a variety of topics on gender, sexuality, and sexual violence including gender norms, heteronormativity, hookup culture, and consent.

To assess the influence and impact of the course, Tulane professors Alyssa Lederer and Katherine Johnson (2021a) conducted an initial survey using students enrolled either in the intervention course or comparison course (a large communications class) during the Fall 2018 semester to assess the attitudinal and behavioral changes resulting from the intervention course. The research team administered a questionnaire at
both the beginning and the end of the semester using the online survey platform Qualtrics, with any student enrolled in the course eligible to complete the survey. Results indicated that students in both the intervention and comparison courses exhibited within-subjects change across all measures except the Consent Myths and Bystander Efficacy Scale (Johnson et al., 2021a). Additionally, intervention students showed higher changes in heteronormativity, sexual misconduct apathy, and campus resource awareness over the semester, yet did not change in acceptance of rape myths and consent myths. Johnson and Lederer (2021a) concluded that a semester-long academic course (such as GESS 1900) has the potential to positively influence the campus climate around sexual violence. Johnson and Lederer continued to collect data on the course, with Cohort 2 in Fall 2019 and Cohort 3 in Fall 2020, which was taught in the modified form of online-only synchronous instruction, due to the COVID-19 pandemic. For all three cohorts, the content of the questionnaire remained largely the same, with eight measures from previously validated scales in empirical research on gender and sexual violence (Johnson & Lederer, 2022). The measures include: Sociosexual Orientation Inventory (SOI), Heternormative Attitudes and Beliefs Scale (HABS), the Sexual Conservatism Scale (SCS), the Illinois Rape Myth Acceptance scale (IRMA), the Bystander Efficacy Scale (BES), the Consent Myths scale, Sexual Misconduct Apathy, and Campus Resource Awareness. The current study will further explore the data collected from all three cohorts on three of these eight measures—HABS, IRMA, and the Consent Myths scale—to determine whether there are differences for students in the intervention group between the beginning and end of the semester based on gender identity.
Filling the Gaps

Previous literature highlights the impact of rape myths, consent myths, and sexual scripts on individuals’ experiences and definitions of sexual aggression (specifically rape), and the importance of working to dispel and dismantle such myths and better understand sexual scripts. The studies described here emphasize gender differences in sexual scripts and rape narratives, as well as provide different approaches for evaluating the effectiveness of sexual assault intervention courses. Evaluation of sexual assault prevention curricular programs indicates that certain programs can positively increase rape knowledge and improve rape attitudes. Yet, no existing studies consider differences in gender regarding the specific program outcomes of reduced rape myth and consent myth acceptance. The prior literature published by Johnson and Lederer (2021) sets the stage for the present study, which examines data collected after the sample used for their analysis (which is also included) and examines two specific outcomes rather than a more comprehensive range of outcomes. The current study aims to fill a gap in knowledge, providing useful information from the professors leading Tulane’s curricular intervention program, as well as other educators and advocates on campus interested in understanding students’ attitudes and beliefs.

The Present Study

Acceptance and perpetuation of rape myths and consent myths contribute socially and systematically to a climate that allows and attempts to justify sexual violence (Burt, 1980). Implications extend beyond the individual level; rape myths specifically diminish and deny the experiences and harm experienced by survivors of sexual assault, in several social and cultural arenas, including interpersonal interactions, production of mass media,
religion, science, and the legal system (Edwards, 2011). The aim of the current research is to determine the effectiveness of a curricular intervention on acceptance of such myths and explore possible gender differences in acceptance. Determining possible gender differences in outcomes will inform the faculty leading the intervention course and can lead to discussion/exploration of ways to address or reduce these differences. The available research on curricular interventions, which represent one of the most popular approaches employed by colleges to combat sexual violence, is not cohesive; different evaluations utilize different definitions of effectiveness, which might include attitudes, behavioral intentions, self-report behaviors, sexual victimization, observed behaviors, and sexual aggression (Breitenbecher, 2000; Case, 2007). Few evaluations consider the relationship between outcomes and gender identity, which holds unique social implications and impacts the way an individual navigates social constructs, including sexual scripts and resulting rape myths and consent myths.

In the present study, I investigate whether students in the intervention course differ in rape and consent myth acceptance based on time (beginning vs. end of the semester), gender identity, and heteronormative attitudes and beliefs to answer the research questions: What is the impact of a curricular intervention course(s) on rape myth and consent myth acceptance among undergraduate students based on gender identity? Do time and gender identity interact? These findings will advance academic understanding of the acceptance and function of rape myths and consent myths, inform sexual assault intervention efforts in college settings, as well as provide direction for broader social practices and policies combatting sexual assault. The current research will address two hypotheses 1) a main effect of gender identity will be observed for the a)
Illinois Rape Myth Acceptance Scale b) Consent Myths Scale and c) Heteronormative Attitudes and Beliefs, with men scoring higher on the Illinois Rape Myth Scale and Consent Myth Scale and lower on the Heteronormative Attitudes and Beliefs Scale; 2) there will be a significant interaction of gender identity and time be observed for the a) Illinois Rape Myth Acceptance Scale b) Consent Myths Scale and c) Heteronormative Attitudes and Beliefs Scale such that men show greater change than students of other gender identities from T1 to T2. The prediction of a main effect of gender identity is consistent with previous data showing gender differences between men and women’s acceptance of rape myths; studies using both student and non-student samples have repeatedly indicated that men are more accepting of rape myths than women (Ashton, 1982; Blumberg & Lester, 1991; Jenkins & Dambrot, 1987; Margolin, Miller & Moran, 1989; Ward, 1988; Grubb & Turner, 2012). Existing research also reveals that men do not appear to value sexual consent as highly as women do (Hendrick, Hendrick, Slapion-Foote & Foote, 1985; Margolin, Miller, & Moran, 1989). Given that heteronormativity places men as more active, powerful, and persistent in a hierarchical relationship with women, and thus arguably grants men more visible privilege and benefit from adhering to these beliefs, a similar trend is expected in men’s acceptance of heteronormative beliefs compared to women. Additionally, the prediction of a main effect of gender identity is based on the speculation that men will change at greater rates than women and students of other gender identities. Because men tend to begin further away from the desired direction (i.e. greater myth acceptance and more heteronormative attitudes and beliefs) than women and students of other gender identities, there is greater room for improvement and change in men.
Methods

Participants and Design

The data analyzed for the present study was collected during Fall 2018, 2019, and 2020 semesters. An online survey was administered via Qualtrics (an online survey platform) at the beginning and end of the semester for the intervention group, as well as a comparison group (in 2018 and 2020). For the focus of the present study, only data from the intervention group was included in the analysis, as the comparison group does not inform our understanding of intervention differences from the beginning to the end of the semester between genders (Johnson et al., 2021). Course instructors provided enrollment rosters to Johnson and Lederer’s research team prior to each survey administration. The team then sent advanced email communication to students before entering classrooms to conduct the survey, usually within the first week of the semester and then the last week of the semester before the final exam period. Students completed the survey on personal electronic devices, using individualized survey links. Informed consent was obtained electronically using Qualtrics; students viewed a consent form on Qualtrics, clicked “agree” to continue or “disagree” to exit.

Participants were enrolled in the intervention course during the Fall 2018 (n=95), Fall 2019 (n=65), which were both taught in-person, or Fall 2020 (n =89) semester. The Fall 2020 semester was taught entirely online, synchronously, due to the COVID-19 pandemic. The intervention course targeted first-year students and academic advisors were encouraged to promote the course to first-years as an opportunity to fulfill core requirements. Most students self-identified as women (68.3%) and as straight (62.7%). Only 12.9% of students identified as men, with even smaller percentages of students identifying as other gender identities, with 1.2% of students identifying as genderqueer.
or gender non-conforming, and 0.4% of students identifying as transmen or a gender

### Table 1. Demographic Characteristics

<table>
<thead>
<tr>
<th></th>
<th>(n = 249)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>95</td>
<td>38.2</td>
</tr>
<tr>
<td>2019</td>
<td>65</td>
<td>26.1</td>
</tr>
<tr>
<td>2020</td>
<td>89</td>
<td>35.7</td>
</tr>
<tr>
<td>Gender Identity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>32</td>
<td>12.9</td>
</tr>
<tr>
<td>Woman</td>
<td>170</td>
<td>68.3</td>
</tr>
<tr>
<td>Transman</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Genderqueer/gender non-conforming</td>
<td>3</td>
<td>1.2</td>
</tr>
<tr>
<td>Gender not listed</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Sexual Orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gay</td>
<td>4</td>
<td>1.6</td>
</tr>
<tr>
<td>Heterosexual</td>
<td>156</td>
<td>62.7</td>
</tr>
<tr>
<td>Lesbian</td>
<td>2</td>
<td>0.8</td>
</tr>
<tr>
<td>Queer</td>
<td>9</td>
<td>3.6</td>
</tr>
<tr>
<td>Bisexual</td>
<td>28</td>
<td>11.2</td>
</tr>
<tr>
<td>Asexual</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Not listed</td>
<td>7</td>
<td>2.8</td>
</tr>
</tbody>
</table>

*p=n=42 missing from 249 for gender identity and sexual orientation*

identity not listed. The two most common sexual orientations for students besides heterosexual were bisexual, 11.2%, and queer, 3.6%, with even smaller percentages of students with other sexual orientations (see Table 1). Table 1 provides an overview of key demographics for the participants involved in the present study, with a visual breakdown in Appendix A. As mentioned, the intervention course was designed and taught as a team by four faculty members across multiple disciplines and schools, and is registered as a Gender and Sexuality Studies course. The course structure involved two weekly lectures with the whole section by instructors, followed by smaller discussion sections led by graduate teaching assistants and related to that week’s course content. Course content covers various topics related to gender, sexuality, and sexual violence, including gender norms, heteronormativity, hookup culture, and consent.
Measures

All measures included in the survey instrument were selected from previously validated scales in gender attitudes and sexual violence research. For the purpose of this study, only responses to the Heteronormative Attitudes and Beliefs Scale, Illinois Rape Myth Acceptance Scale, and Consent Myths scales are analyzed. Consent myths are examined in addition to rape myths as a dependent variable, since rape myths operate implicitly as well as explicitly, which presents a limitation to using self-report rape myth measures, which may not detect more subtle rape myths (Edwards et al. 2011).

Illinois Rape Myth Acceptance Scale (IRMA): A 22-item scale with four scales that address prominent rape myths, which are: 1) she lied, 2) he didn’t mean to, 3) it wasn’t really rape, 4) she asked for it. The items are rated on a 5-point Likert scale, which was reversed so that higher scores represent greater myth acceptance, with a rating of “1” corresponding to “strongly disagree” and “5” corresponding to “strongly agree” (Payne, Lonsway, & Fitzgerald, 1999). This results in a hypothetical range of 22 to 110. However, for the purposes of this study, I used a scale constructed with the average of all available items, based on past scoring in the TC3 Project, which gave a hypothetical range of 1, with lowest possible rape endorsement) and 5, with highest possible rape endorsement (Johnson et al., 2021).

Consent Myths: A 7-item scale measuring myths about consent in sexual encounters (e.g. mixed signals sometimes mean consent), with 5 response categories. The score for each of the seven items was added, as with traditional scoring, resulting in a theoretical minimum score of 7 and a maximum score of 35 where higher scores indicate greater myth acceptance (ARC3, 2015).
Heteronormative Attitudes and Beliefs Scale (HABS): A 16-item scale that evaluates gender essentialism and intimate relationships, with a seven-point response scale, ranging from strongly disagree to strongly agree. A higher score indicates less heteronormative views of gender and sexual diversity and intimacy. (Habarth, 2015). This response scale results in a theoretical minimum score of 16 and a theoretical maximum score of 112. However, similar to the coding for IRMA, scores were calculated from the mean of all available items, producing a theoretical range of scores from 1-7 (Johnson et al., 2021)
Analysis

Table 1 provides descriptive statistics for students in the intervention course across the first three cohorts. As noted, 24 students out of the total sample of students who responded to other baseline data did not respond to questions regarding their sexual orientation or gender identity, resulting in data about gender identity and sexual orientation for 207 students.

Analytic Strategy

A two-way mixed model ANOVA using a dataset of the combined responses for all three years (2018, 2019, 2020) of data for intervention students. The within-subjects variable was time, with two levels: Time 1 (questionnaire administered in the first week of the semester) and Time 2 (questionnaire administered during the last week of the semester, before the final exam period), and the between-subjects variable is gender identity, with two groups: Woman and Other Gender Identity as one group, and Man as the second group.

Students identifying as Women and as Other Gender Identity were combined into one group, based on the assumption that students with these identities hold more similar beliefs and viewpoints than those students identifying as men. Given the discrimination and hostility experienced by many genderqueer and non-binary individuals, especially the higher rates of sexual violence experienced by transgender and nonbinary folks, it is reasonable to assume that students in these categories would hold similar attitudes, beliefs, and behavioral intentions to women, who in the gender binary, are placed in a position submissive to men. While less research has historically examined the experience of sexual violence by diverse populations beyond young, heterosexual cisgender White
women, such gender and sexual minority students (GSM), emerging research reveals that this population of students experiences an increased risk of sexual violence compared to cisgender heterosexual (CH) peers (Kammer-Kerwick et al., 2021). The dominant cisgender and heteronormative culture frame sexual discourses around LGBTQ and gender-nonconforming individuals by perpetuating the “real rape” myth discussed earlier and other myths that describe a script in which sexual violence occurs between a man and woman, ascribing gender identity to sex assigned at birth (Mortimer, Powell, & Sandy, 2019). Social understandings of sexual violence through these normative frameworks perpetuate false stereotypes about what bodies, genders, and sexualities can experience sexual violence, which leads to dismal of sexual violence and victim-blaming on gender diverse survivors. However, it is important to note that non-heterosexual men also experience homophobia and stigma around sexual violence, and the present analysis does not examine Sexual Orientation within the Gender Identity category “Man,” so some men may have similar viewpoints to Other Gender Identity Students.

The small sample size for students self-identifying as men compared to those identifying as women poses potential challenges for statistical analyses, given the higher variability of smaller samples. Central limit theorem indicates larger samples lead to more accurate estimates; as a sample size from the population increases, its mean more closely reaches the population mean with a decrease in variance (Kim, 2015).

Results

To confirm the grouping of female students and students of other gender identities, I ran analyses to compare the scores for these students. Table 3 above shows the comparison of the scores on all three measures for women, men, and students of other
gender identities, revealing slight differences in the average scores of women and gender diverse students, but similar overall patterns, providing theoretical support to the theoretical decision to group these students and confirming the decision to group these students together. For IRMA Mean scores at Time 1, women’s average scores were much closer to those of the five students with other gender identities (1.46 and 1.27, 1.21, 1.32 for transmen, genderqueer/gender non-conforming students, and students with a gender identity not listed, respectively) compared to men, who had an average score of 2.025. The same pattern is readily observed with mean scores on the HABS, with a mean score of 6.17 for women and mean scores of 7, 6.85, and 6.88 for transmen, genderqueer/gender non-conforming students, and students with a gender identity not listed, respectively. Men had an average score of 4.82 for HABS, and for both IRMA and HABS mean scores, men had higher standard deviations than all other students, as seen in the table.

The first hypothesis addressed in the present study was that a main effect of gender will be observed across all three measures. To address the first hypothesis and its components a-c, I looked at within groups differences (Time) and between groups differences (Gender), shown in the rightmost columns of Table 2. Average scores for two measures—rape myth acceptance (IRMA) and heteronormative attitudes and beliefs (HABS)—were statistically significant (p<.001) with respect to both Time and Gender. Average scores for Consent Myths were marginally significant (p<.10) with respect to Gender.

The second hypothesis stated that a main effect of gender and time, which would suggest that the intervention impacts students significantly based on their gender identity,
would be observed for all three measures. To address this hypothesis, I considered the interaction effect \((time \times gender\ identity)\), shown in the final column of Table 2, which tests for significantly different rates of change over time for men versus women and students of other gender identities. One measure showed a significant effect; average heteronormative attitudes and beliefs scale (HABS) scores were significant \((p<.01)\), indicating that the course influenced students significantly based on their gender identity, and thus influenced men differently than women and gender diverse students. The scores for neither rape myth acceptance (IRMA) nor Consent Myths were even marginally significant, suggesting that there was no interaction between gender and time.
### Table 2. ANOVA Results Comparing Effect of Gender Identity and Time

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>T1 Mean</th>
<th>T2 Mean</th>
<th>n</th>
<th>T1 Mean</th>
<th>T2 Mean</th>
<th>p</th>
<th>F</th>
<th>p</th>
<th>F</th>
<th>p</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Illinois Rape Myth</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acceptance Scale (IRMA)</strong></td>
<td>20</td>
<td>1.8591</td>
<td>1.6614</td>
<td>153</td>
<td>1.4626</td>
<td>1.3695</td>
<td>&lt;.001***</td>
<td>15.143</td>
<td>&lt;.001***</td>
<td>13.649</td>
<td>0.163</td>
<td>1.962</td>
</tr>
<tr>
<td><strong>Consent Myths</strong></td>
<td>13</td>
<td>10.2308</td>
<td>9.7692</td>
<td>115</td>
<td>9.0348</td>
<td>8.4522</td>
<td>0.151</td>
<td>2.086</td>
<td>0.054†</td>
<td>3.771</td>
<td>0.867</td>
<td>0.028</td>
</tr>
<tr>
<td><strong>Heteronormative Attitudes</strong></td>
<td>15</td>
<td>5.4083</td>
<td>6.0092</td>
<td>118</td>
<td>6.2655</td>
<td>6.4344</td>
<td>&lt;.001***</td>
<td>29.032</td>
<td>&lt;.001***</td>
<td>11.954</td>
<td>.003**</td>
<td>9.145</td>
</tr>
<tr>
<td><strong>and Beliefs Scale (HABS)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

†p < 0.10. *p < 0.05. **p < 0.01. ***p < 0.001

### Table 3. Baseline Scores on Each Measure Across Gender Identities

<table>
<thead>
<tr>
<th>Gender Identity</th>
<th>IRMA Mean</th>
<th>Consent Myths</th>
<th>HABS Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Mean</td>
<td>Std. Dev</td>
</tr>
<tr>
<td><strong>Woman</strong></td>
<td>163</td>
<td>1.46</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Man</strong></td>
<td>26</td>
<td>2.025</td>
<td>0.61</td>
</tr>
<tr>
<td><strong>Transman</strong></td>
<td>1</td>
<td>1.27</td>
<td>-</td>
</tr>
<tr>
<td><strong>Genderqueer/gender non-conforming</strong></td>
<td>3</td>
<td>1.21</td>
<td>0.33</td>
</tr>
<tr>
<td><strong>Gender Not Listed</strong></td>
<td>1</td>
<td>1.32</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>194</td>
<td>1.46</td>
<td>0.4</td>
</tr>
</tbody>
</table>
Discussion

The present study investigated whether gender identity of students within a semester-long course influenced students’ acceptance of myths related to rape and consent, as well as acceptance of gender and sexual diversity. The results indicated that all three measures (rape myth acceptance, consent myth acceptance, and heteronormative attitudes and beliefs) showed gender differences between men and students of other gender identities, including women. Students’ rape myth acceptance and heternormative attitudes and beliefs decreased significantly as a result of the course. However, the data indicates that gender influenced this decrease over time for only heteronormative attitudes and beliefs.

The results indicate that men begin with lower scores on the IRMA Scale and Consent Myths Scale (indicating higher rape myth acceptance) and higher scores on HABS than women and other students. Men also change at greater rates than women and other students, which drives the main effect of gender identity and interaction between time and gender. For IRMA, men had a higher average score at both the beginning and end of the semester (T1 = 1.86, T2 = 1.66) compared to women and gender diverse students (T1 = 1.46, T2 = 1.37). For the Consent Myths scale, men also began and ended with higher average scores (T1=10.23, T2 = 9.77) compared to women and students with other gender identities at those same times (T1 = 9.04, T2 = 8.45). Finally, for HABS, in which lower scores represent more heteronormative and less accepting views of gender and sexual diversity and intimacy, men began and ended the semester with lower average scores (T1 =5.41, T2=6.01) than women and students of other gender identities (T1=6.27, T2=6.43). Both groups showed a change in average scores in the expected direction;
higher average scores at T2 compared to T1, indicating more accepting views of gender and sexual diversity. To isolate the effect of the intervention on each of these measures, which is not within the scope of the current study, the comparison group would be used (see Johnson et al., 2021a).

Figure 1
IRMA Mean Scores Over Time

![Image of a line graph showing IRMA Mean Scores Over Time with different markers for Men and Women + Other Gender Identities. The graph indicates a decrease in mean scores from Time 1 to Time 2, with a comparison between Men (blue line) and Women + Other Gender Identities (red line). The specific values shown are 1.86 at Time 1 for Men and 1.66 at Time 2, and 1.46 at Time 1 for Women + Other Gender Identities and 1.37 at Time 2.]
Figure 2

Consent Myth Scores Over Time

![Graph showing Consent Myth Scores Over Time with two lines: one for Men and one for Women + Other Gender Identities. The x-axis represents Time Measurement, and the y-axis represents Scores (out of 35).]

Figure 3

HABS Mean Scores Over Time

![Graph showing HABS Mean Scores Over Time with two lines: one for Men and one for Women + Other Gender Identities. The x-axis represents Time Measurement, and the y-axis represents Mean Scores (Out of 7).]
Looking at the minimum and maximum scores for each measure based on the sample, rather than merely the theoretical means, allows for a more meaningful interpretation of the results. Table 4 indicates the observed minimum and maximum for each measure out of the total number of students in the intervention who completed that measure at baseline.

<table>
<thead>
<tr>
<th>Minimum</th>
<th>IRMA Mean</th>
<th>Consent Myth</th>
<th>HABS Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum</td>
<td>2.86</td>
<td>23</td>
<td>7</td>
</tr>
<tr>
<td>Mean</td>
<td>1.37</td>
<td>8.57</td>
<td>6.37</td>
</tr>
<tr>
<td>Std. Dev</td>
<td>0.4</td>
<td>2.5</td>
<td>0.73</td>
</tr>
<tr>
<td>N</td>
<td>139</td>
<td>141</td>
<td>145</td>
</tr>
</tbody>
</table>

At the beginning of the semester, the 13 men who completed the IRMA scale at both time points had a mean score of 1.86 at Time 1 and 1.66 at Time 2, which is relatively low compared to the highest possible score of 5.00 and the sample maximum of 2.86. Women and students of other gender identities who completed the IRMA scale at both time points had initial and final scores of 1.46 and 1.37 at Time 1 and Time 2 respectively, slightly closer to the minimum (1.00) and mean (1.37) than men. However, all students scored relatively low on rape myth acceptance at both the beginning and end of the semester, indicating that students came into the course with relatively lower endorsement of rape myths or at least some exposure to what rape myths were socially unacceptable to express. Both groups of students who completed the Consent Myths scale at Time 1 and Time 2 also scored relatively low on acceptance of consent myths upon entering and finishing the intervention course, with mean scores closer to the minimum.
(7.0) and mean (8.57) score observed in the sample than the observed maximum (23) or theoretical maximum (35). Consent myth acceptance did not show a statistically significant change over time for either group (men vs. all other students in the intervention), suggesting that the intervention did not significantly affect students’ understandings and rejection of consent myths, which were already low upon entering the intervention. Finally, students in both groups who completed the HABS at both time points began and ended the semester with relatively high scores, which indicate less heteronormative beliefs and thus more accepting views of gender and sexual diversity. The mean for all intervention students at baseline was 6.37, with both a theoretical and observed sample maximum of 7.00. The men who completed the HABS at both time points entered with average lower scores (reflecting more heteronormative beliefs and attitudes) than did women and other students, but like women and gender diverse students, men’s scores increased significantly over time. This was reflected in the statistical significance of the interaction between Time and Gender that appeared in the ANOVA (see Table 2).

Men likely show greater change than women and students of other gender identities given their initial higher acceptance of myths and higher heteronormativity, which creates more room for potential change in the desired directions. As discussed earlier, sexual scripts disseminated through media promote violence and aggression against women and male dominance (Ward, 2003). Rape myths further this acceptance of violence by men against women by perpetuating the narrative that men have higher sex drives and are unable to control themselves when women behave in certain ways that “tease” (Ryan, 2011, p. 775). The socialization of men in a heteronormative society
additionally encourages men to enter a dominant and assertive role in sexual and
romantic relationships with women, making rape myths consistent with the scripts that
men encounter as they develop and mature and suggesting a potential link between
acceptance of rape and consent myths and promotion of heteronormative beliefs and
attitudes Kim and colleagues (2007) combined scripting theory and feminist theory to
identify the Heterosexual Script, as a script which permits and encourages boys and men
to act on their sexual needs, prioritize their own desire and pleasure, perceive their own
hormones as uncontrollable, and offer women power and status in return for sex. Kim et
al. (2007) applied the Heterosexual Script to 25 primetime television series viewed most
frequently by adolescents between the ages of 12-17 years old, and found that male
characters most frequently enacted the Heterosexual Script by actively and aggressively
seeking sex. The main message across all television series studied was that obtaining
sexual experience with women is important, wanted, and an even essential aspect of
masculinity, encouraging boys and men to use whatever means necessary to obtain
heterosexual sexual experience (Kim et al., 2007). These findings emphasize that the
messaging and content boys and men receive and consume constantly reinforces the
importance of adhering to a desirable heterosexual script in their personal and sexual
relationships.

Men also benefit more significantly from adherence to traditional gender roles in
heterosexual romantic relationships, as doing so promotes dominant and self-entered
sexual behavior for men, and decreases women’s sexual satisfaction and autonomy
(Sancez, Fetterolf, & Rudman, 2012). However, men are at the same time negatively
limited by such sexual scripts and heteronormativity, as the definitions of masculinity in a
heterosexual framework limit acceptable behavior for men and create conflict and discomfort for men whose values conflict with the male socialization process (Berkowitz, 2002). Misperceptions among men about other men’s degree of sexual activity, adherence to rape myths, and level of discomfort objectifying women might encourage men to keep their true feelings hidden about sexual violence and harmful sexual and social scripts (Berkowitz, 2000a). The aforementioned factors likely contribute to the pattern observed in men of generally higher rape myth acceptance, consent myth acceptance, and heteronormative attitudes and beliefs than women and students of other gender identities.

Considering the specific attitudes and beliefs assessed by each scale also helps us understand the significance patterns revealed by the ANOVA, specifically the similarities between significance of time and gender on IRMA scale and HABS scores (see Table 2). The Consent Myths Scale measures both attitudinal and behavioral intentions and practices related to consent, without introducing heteronormativity. Instead of asking about male or female roles or expected behaviors, the Scale uses “partner” to refer to the other participant in the described sexual encounters. Statements are phrased so that the gender identity and sexual orientation of both partners are dependent on the participant’s perception, demonstrated by statements such as “I feel confident that I could ask for consent from a new sexual partner” and “I feel it is the responsibility of both partners to make sure sexual consent is established before sexual activity begins” (Humphreys & Brousseau, 2009). In contrast, the IRMA Scale assessed acceptance of sexist and heteronormative rape myths, with statements asking about the perceived responsibility or involvement of a “girl” or a “guy” in different scenarios involving sexual assault (Payne, Lonsway, & Fitzgerald, 1999). Sample items include “girls who are caught cheating on
their boyfriends sometimes claim it was rape” and “rape happens when a guy’s sex drive gets out of control” (Payne, Lonsway, & Fitzgerald, 1999). The heteronormative beliefs inherent in rape myths such as those assessed by the Illinois Rape Myth Acceptance Scale provide a strong explanation for why a decrease in heteronormative attitudes and beliefs would also reflect a decrease in acceptance of rape myths rooted in heteronormativity.

The intervention’s apparent effect in producing a significant change in heteronormative attitudes and beliefs over time, with significant differences in effect based on students’ gender identities, is encouraging in that it also appears to contribute to a decrease in rape myth acceptance over time. In other words, in the more limited scope of the present study, the intervention is accomplishing its goal of enacting change in student attitudes, beliefs, and behaviors by positively reducing acceptance of false narratives about rape and reducing adherence to heteronormative attitudes and beliefs that drive such harmful societal beliefs.

**Limitations**

Looking at secondary data collected from students enrolled in an intervention at a course level led to the limitations of a small, unbalanced sample in terms of students belonging to each of the three categories of gender identities (Man, Woman, and Other Gender Identity). However, there is not a method to procedurally or ethically increase the sample size while maintaining the structure of the intervention course, which is capped at a certain number of students and offered during certain times of the week. The benefits of the applied data collected in the present study weighed with the limitations, which are not always avoidable or able to be fully addressed, and determined to still provide an essential understanding of an actual intervention.
Looking at the descriptives, the sample size of male identifying students at baseline (n=32) represents only 12.9% of the total sample. Not only is the sample size for male-identifying alone small, the significantly larger sample size of comparison students, students identifying as women and other gender identities (n=175) makes the comparison imbalanced. Additionally, out of the 32 men who completed the baseline survey (T1), only 13 men (n=13) actually completed the T2 IRMA and Consent Myth Acceptance Scale at T2, making our sample size for these students even smaller. We ran descriptives at baseline to collect the most available information about students enrolled in the intervention course before any attrition occurs. I acknowledge the uneven comparison and small sample size for male identifying students serves as a limiting factor in the ability to extend our data to broader samples. Two factors that potentially contributed to the smaller sample size of men across all three years are self-selection effects limiting the number of men who enrolled in the intervention course and attrition between the Time 1 and Time 2 survey.

Socialization frames sexual violence often as a “women’s issue” or a responsibility on the victim to prevent such violence from occurring, which means that men may not view a class on these topics as relevant to them. Men may also agree partially with sexist and violence-supportive norms because these norms grant them privilege, may overestimate other men’s attitudes in support of rape, or may have negative misunderstandings of sexual violence prevention or feminist topics, and thus are less likely to self-select into a course where those beliefs would be challenged (Flood, 2018). Self-selection poses a challenge in generalizing these findings to the broader community of students at Tulane, as students, especially men, self-selecting into the
course potentially are more receptive to the material or are beginning with prior knowledge and understandings of sexual violence that other students in the broader college community may not possess. However, students who intentionally select this course still demonstrate gender differences upon entry (see Tables 2 and 3). Therefore, the present study's findings generalize to understanding that the intervention differentially affects students in terms of their gender identities and the gender differences observed even with a self-selection effect. It becomes more difficult to generalize these findings regarding the significance of the change over time, as students who do not self-select into a course such as GESS-1900 might show greater resistance to change. Additionally, men’s sexual orientation was not controlled for, which may also affect ability to generalize these findings to other male students. Men in non-heterosexual romantic or sexual relationships may already be less accepting of heternormative attitudes and beliefs, and may also already have lower rape myth acceptance when rape myths are framed in a heterosexual context.

For all students, attrition between pre- and post-test surveys significantly impacted data collection, which is an observed phenomenon among college students. In a study of seven universities across four experiments evaluating the effect of widely-used and innovative recruitment and retention strategies, the highest survey participation was observed at the university which mandated students to complete the intervention but not the survey itself, although participation rates were low across experiments (Guastaferro et al., 2022). Students largely agreed that research should be conducted early in the school year, without overburdening students with other demands, such as the demands of orientation. Additionally, students noted that emails about the study sent by recruiters
accumulated in their inboxes and remained unread, and suggested using alternative methods, such as using social media effectively and actively to reach students and communicate about the study. For men specifically, ongoing literature acknowledges that male-identifying participants are more difficult to recruit for surveys and interviews generally, regardless of topic (Slauson-Belvins & Johnson, 2016). Ekholm and colleagues (2010) note that part of the challenge is difficulty in contacting male participants, rather than a refusal to participate. Slauson-Belvins & Johnson (2016) examine possible explanations for why men are absent from certain forms of research, especially reproductive-related research, noting that surveys require participants to disclose highly personal information, which through gender socialization, has become seen as culturally and historically tied to women and femininity (Cancian, 1986). Thus, future research is needed to determine how to frame this specific study as relevant to the students asked to participate, while using methods besides email (such as social media) to avoid overburdening students while keeping them informed and engaged. The survey instrument includes a question asking for students’ motivation for enrolling in the given course, allowing students to check as many options as apply and including options of: the description/topic looked interesting, recommended by a friend/peer, recommended by an advisor/faculty member, fulfills a general curricular requirement, working towards the Gender Based Violence Certificate, and some other reason, with an option to specify. Future work could examine the most common motivations for enrollment and determine whether certain motivations (such as finding the topic interesting/personally relevant) leads to more significant outcomes in desired behavioral and attitudinal directions.
Future research is also needed to determine why consent myths showed less significant change over time than rape myths and heteronormativity. The observed absence of significant change on Consent Myth scores suggest that the course did not significantly impact students’ beliefs related to exchanging consent. While all students began with relatively low scores on the IRMA Scale and Consent Myths Scale (indicating low myth acceptance) and relatively high scores on HABS (indicating less acceptance of heteronormative attitudes and beliefs), the observed change in both rape myth acceptance and heteronormativity suggests that students still show room for growth and change in the positive direction, and suggest that lower myth acceptance upon entering the course does not fully explain why consent myths did not change. Understanding why these beliefs are more resistant to change is important for improving the effectiveness of the intervention across all areas.

Additionally, the observed main effect of gender identity in both IRMA and HABS scores, as well as the significant interaction between gender identity and time for HABS suggests that the course is successfully reducing students’ heteronormative attitudes and beliefs, which appear to also decrease rape myth acceptance for rape myths that describe heteronormative, heterosexual interactions between a man and a woman. As the IRMA Scale does not assess rape myths that fall outside the heterosexual framework or that are ambiguous by referring to involved agents as “partners” void of sexual orientation or gender identity, future research is also needed to determine whether a change would occur in non-heterosexual rape myths.

However, the data still provides important information regarding the effectiveness of the intervention course. Suggestions for increasing retention rates based on empirical
data, as well as psychological motives and norms for responding, especially among male students, are explored in the subsequent section.

*Implications*

Even with self-selection effects into the intervention course, a gender difference appears across the average scores for all three measures. This finding indicates that even students who intentionally select this course still demonstrate gender differences upon entry, likely based on socialization. Only one of the measures of interest in the present study - heteronormative attitudes and beliefs - showed a decrease in the predicted direction as a result of students’ gender identity interacting with the course itself, raising the question of whether separating students by gender would be useful. Berkowitz (2002) cites literature on evaluation studies on sexual assault prevention programs that utilized separate-gender groups, noting feedback from participants in favor of all-male programs. Such feedback includes that men felt more comfortable, less defensive, and more honest in all-male groups, men felt safe disagreeing or putting pressure on each other in single-gender groups, and men reported feeling more confident talking openly and participating in the absence of women (Berkowitz, 2002). Berkowitz (2002) also notes the majority of men will indicate a preference for co-educational workshops, but after having a positive experience in an all-male workshop where they felt supported to share openly and honestly, indicate a preference for single-gender discussions. In mixed-gender interventions, hegemonic masculinity and femininity, may hinder male and female students’ willingness to abandon sexual scripts and social scripts, such as heteronormativity, that contribute to sexual violence. Schippers (2007) defines hegemonic femininity as characteristics defined as womanly that support and validate a
hierarchical and complementary relationship to hegemonic masculinity, and in doing so, ensure a dominant position of men and a subordinate position of women. Hegemonic masculinity similarly establishes a hierarchical relationship to femininity that positions women as subordinate and men as dominant (Schippers, 2007). In a mixed-gender classroom setting, the expected performance of norms of masculinity and femininity (in the forms of hegemonic masculinity and femininity) by men and women serve as a likely explanation for why the men involved in Berkowitz’ single-gender workshop felt able to speak more honestly and openly. Of course, men might still feel pressure to perform masculinity amongst each other. Piccigallo and colleagues (2012) conducted in-depth interviews with men involved in all-male anti-rape groups, and found that when men were approached by other men in a nonconfrontational manner with the goal of alliance-building, they reported desired outcomes of increased knowledge about sexual assault, empathy toward survivors of sexual assault, and motivation to participate actively in preventing sexual violence. The overall themes of the interviews led Piccigallo and colleagues (2012) to consider male-led and male-center programs as part of a multi-level intervention approach, as these programs are beneficial in engaging men in the discussion surrounding sexual violence, especially given that, for true prevention and response, men must choose to become informed, engaged, and active in challenging social norms that perpetuate sexual assault.

Therefore, an evidence-based suggestion for increasing male participation and retention in GESS-1900, which the data indicates has a significant impact on decreasing rape myth acceptance for all students over the intervention and decreases heternormative attitudes and beliefs for students over time based on their gender, is the addition of a
discussion section for the third class meeting per week that is male-centered and male-led. The discussion section would create a learning environment that would produce the benefits described by the men interviewed by Piccigallo and colleagues (2012) and surveyed by Berkowitz (2002) without completely restructuring the two synchronous class meetings. The male-centered discussion section for male-identifying students would give men a space to engage with each other in a way that is supportive but challenging without a fear of saying the wrong thing or worrying they are not knowledgeable enough, which men cited was a challenge in mixed-gender intervention programs.

The scope of the present project involved analyzing a subset of the data already collected within the TC3 research project to gain a deeper understanding of the influence of the way gender identity is socialized and internalized and how these processes interact with and influence the effectiveness of the intervention course. The findings encouragingly indicated that the intervention course Sex, Power, and Culture (GESS 1900) is achieving its goal of positively influencing students’ attitudes, beliefs, and behaviors that contribute to a culture that endorses sexual violence in two of the three ways examined: decreased acceptance of rape myths and reduced acceptance of heteronormativity. The results supported Hypothesis 1a and 1c, indicating a main effect of gender identity for IRMA and HABS, as well as Hypothesis 2c, revealing a significant interaction between gender identity and time. These findings align with previous research illustrating that men . The observed changes in both the IRMA Scale and HABS scores over the course, with different rates of change based on gender identity, as well as the significant interaction between gender identity and time for HABS, suggest that the course is successfully targeting heteronormative attitudes and beliefs, which are embedded
in many common rape myths, especially those assessed by the IRMA Scale. Additional research is needed to determine whether a similar pattern of significant change in both IRMA and HABS would occur when rape myths concern non-heteronormative situations or are worded ambiguously, without specifying the gender or sexual orientation of the agents involved. An absence of significant change on Consent Myth scores suggest that the course did not significantly impact students’ beliefs related to exchanging consent. It is important to note that across the intervention course, students’ average scores already began relatively low on rape myth acceptance and consent myth acceptance, and high (less accepting of heteronormativity) on the heterosexual attitudes and beliefs. This alone could explain why students did not show significant change in their acceptance of consent myths, but the change in both rape myths and heteronormativity over the semester suggests that consent myths are more resistant to change or the course is not effectively targeting the beliefs underlying these myths. Given that the exchange of clear and affirmative consent is essential for ensuring consensual sexual exchanges, and acceptance of consent myths and rape myths support and allow sexual violence, research on understanding why students’ consent myths are not influenced by this intervention is an important step in increasing the efficacy of the intervention. Additionally, future research should examine and test methods for better recruiting and retaining male students, as the number of male students in the intervention and the number who participated in both the pre-test and post-test components of the study was significantly smaller compared to the number of women students. However, the results indicated that the intervention was effective in changing rape myth acceptance and heteronormative attitudes and beliefs over the semester for both men and women and students of diverse
gender identities is an essential next step in increasing the impact of the intervention course on Tulane’s campus climate.
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Appendix

Figure A.1 - Participant Characteristics Across Cohorts, Gender Identity, and Sexual Orientation