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ABSTRACT

Background: Alcohol-related sexual assault is a pressing health concern on U.S. college campuses. The unrelenting prevalence of campus sexual assault has led to a greater focus on how to empower college women to resist unwanted sexual advances within alcohol-infused contexts. Alcohol-aggression expectancies have emerged as one potential barrier to women's utilization of sexual refusal strategies. The present study sought to test this hypothesized barrier using a vignette-based experimental design. Specifically, the proposed model examined the relationships between perceived perpetrator intoxication level, expectations of perpetrator reaction to sexual refusal, and willingness to refuse unwanted sexual advances. The moderating effects of prior sexual assault history and alcohol-aggression expectancies were also evaluated within this model. It was hypothesized that (1) anticipated negative partner reaction to sexual refusal would mediate the effect of perceived perpetrator intoxication on sexual refusal assertiveness, (2) sexual assault history would moderate both paths of the proposed mediation, and (3) alcohol-aggression expectancies would moderate the effect of sexual assault history on path *a*. **Methods:** Formative research with 59 college women was conducted to develop experimental vignettes for this study. In the within-subjects experimental study, 199 college women viewed five vignettes depicting either an intoxicated or sober perpetrator and responded to survey items corresponding to each construct of the proposed model. **Results:** Seventy percent of participants reported a history of unwanted sexual contact and 60% reported a history of attempted or completed rape. Perceived Partner Intoxication had a significant effect on Anticipated Negative Partner Reaction, such that those who perceived the male perpetrator as more intoxicated reported greater anticipation that he would respond negatively to sexual refusal. Anticipated Negative Partner Reaction did not mediate the relationship between Perceived Partner Intoxication and Sexual Refusal Assertiveness. No moderating effects of Sexual Assault History or Alcohol-Aggression Expectancies were observed. **Conclusion:** While the proposed conceptual model of sexual assertiveness was unsupported, rates of sexual assault were staggering in this sample, emphasizing the need for continued research on how to empower college women within the current college climate.

Keywords: sexual assault, alcohol, college, expectancies, assertiveness

Sexual Assault History and Alcohol-Aggression Expectancies as Barriers to Sexual Refusal
Assertiveness in College Women

by

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B.S., Syracuse University, 2018

M.S., Syracuse University, 2020

Dissertation

Submitted in partial fulfillment of the requirements for the degree of

Doctor of Philosophy in Clinical Psychology

Syracuse University

August 2024

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Acknowledgments

I would like to express my sincerest gratitude to my mentor, Dr. Sarah Woolf-King. I am fortunate to have had such a brilliant, kind, and supportive mentor who afforded me numerous rich research and professional experiences. Thank you for teaching me what it means to be a passionate and curious scientist who conducts rigorous research with the utmost integrity.

I would like to thank my committee members, Dr. Stephen A. Maisto, Dr. Aesoon Park, and Dr. Dessa K. Bergen-Cico, for sharing their time and expertise which helped to shape this project.

Thank you to my family for always encouraging me to aim as high as possible. I couldn't have made it this far without you. Special thanks to Ryan Strassberger for your unwavering support, patience, and encouragement. I would also like to thank Tessie, Winnie, Arie, and Nevie for all the entertainment and emotional support throughout my graduate school career.

Finally, many thanks to all the participants who took part in this study and enabled this research to be possible.

Dedication

Dedicated to all the women who are searching for their power. You are heard.

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Sexual Assault History and Alcohol-Aggression Expectancies as Barriers to Sexual Refusal Assertiveness in College Women

Sexual assault is a pervasive problem across college campuses in the United States (U.S.). Encompassing “any sexual act that is committed or attempted by another person without freely given consent of the victim” (Rape, Abuse & Incest National Network [RAINN], 2022), sexual assault can range from nonpenetrative bodily contact to forced penetration (i.e., rape). Over the past four decades, evidence has consistently shown that at least one in four cisgender, heterosexual college women experiences sexual assault during their college career (Muehlenhard et al., 2017). Alarming, almost half (40.6%) of college women who experience an initial incident of sexual assault report subsequent experiences of assault prior to college graduation, and 16.3% of rape survivors experience revictimization within two months (Decker & Littleton, 2018). Compared to all other age groups, women aged 18 to 24-years-old report the highest rates of sexual assault (Langton & Sinozich, 2014), and college women are three times more likely than their male counterparts to report an incident of attempted or completed penetrative assault (Hines et al., 2012). As such, preventing college sexual assault and mitigating the subsequent mental health impacts remains a public health priority.

Mental Health Outcomes Following Sexual Assault

Sexual assault has been recognized as among the most injurious of personal traumas (Kelley et al., 2009), with a myriad of deleterious mental health sequelae (Brown et al., 2009; Chen et al., 2010; Mason & Lodrick, 2013; Peterson et al., 2017). Within the first two weeks following a sexual assault, 94% of women experience symptoms of post-traumatic stress disorder (PTSD), including shock, fear, agitation, flashbacks, sleeping problems, and emotional detachment, with an estimated 30% of women continuing to experience PTSD symptoms nine

months following an assault (RAINN, 2022). While PTSD is the most common psychological consequence following sexual assault, a significant proportion of survivors also report symptoms of depression and anxiety. Compared to women without a history of sexual assault, women who have been sexually assaulted are almost three times more likely to develop depressive symptoms in their lifetime (adjusted odds ratio [aOR] = 2.86, 95% confidence interval [CI]: 1.42, 5.77) and two times more likely to develop anxiety (aOR = 2.26, 95% CI: 1.26, 4.06; Thurston et al., 2019). Data from 108 U.S. colleges reveal a similar trend in findings: survivors of sexual assault report more feelings of loneliness (79.8% vs. 58.7%), hopelessness (70.6% vs. 46.5%), difficulty functioning (57.6% vs. 31.2%), overwhelming anxiety (75.4% vs. 54.8%), and sleep problems (45% vs. 26.2%) relative to those who have not been sexually assaulted (American College Health Association [ACHA], 2020). Despite decades of research confirming that sexual assault elevates risk for mental health sequelae, institutes of higher education have been unsuccessful at combating this crisis. This literature has led to the identification of several key contributors to campus sexual assault, one of which is alcohol use (Abbey, 2017).

Effects of Alcohol Intoxication on Sexual Assault

Alcohol use is a well-documented risk factor for campus sexual assault. Approximately half of all campus sexual assault cases involve alcohol use by the victim, perpetrator, or both (Abbey, 2017). In a sample of 1,671 college students, 57.1% of women who had experienced any type of assault since age 14 reported that the primary method of perpetration was through incapacitation (e.g., “Taking advantage when I couldn’t say no because I was either too drunk, passed out, asleep or otherwise incapacitated”; Mellins et al., 2017). In another sample of college women ($N = 339$), 88% of those reporting forced penetration within the past eight months endorsed intoxication at the time of the assault (Messman-Moore et al., 2008), and binge

drinking (i.e., ≥ 4 alcoholic drinks over a two-hour period; National Institute on Alcohol Abuse and Alcoholism, 2011) has been shown to increase risk of experiencing sexual assault sixfold (McCauley et al., 2010). Furthermore, women who have experienced repeat sexual assaults during college report more frequent drinking, heavier alcohol consumption, and more alcohol-related problems relative to singly victimized students (Walsh et al., 2020). Among male college perpetrators, almost half (40%) report heavy alcohol use (i.e., ≥ 5 alcoholic drinks) prior to perpetration (Parkhill et al., 2009). Heavy-drinking perpetrators are more likely to employ isolating, controlling, and physically forceful behaviors during an assault compared to other perpetrators (Parkhill et al., 2009). Results from a recent meta-analysis of over 2,500 college men further confirmed the alcohol-sexual assault link, finding that a one standardized unit increase in men's alcohol consumption was associated with 13% higher odds of perpetrating sexual assault (Steele et al., 2022). Several theories on alcohol's unique cognitive and physiological influences have been identified to better understand *why* alcohol is so highly correlated with campus sexual assault.

Theoretical Framework of Alcohol-Related Sexual Assault

For perpetrators, a confluence of cognitive and physiological effects of alcohol intoxication may increase risk for sexual assault perpetration (Abbey, 2002). One of the most well-supported theories in the literature — Alcohol Myopia Theory — posits that people tend to focus more on immediate, salient cues (e.g., sexual arousal, feelings of anger and entitlement) when intoxicated rather than distal, covert cues (e.g., empathy for the victim, sense of morality, concern for future consequences; Steele & Josephs, 1990). This pharmacological state of short-sightedness may consequently result in college perpetrators acting upon salient urges (e.g., sexual arousal) despite the presence of conflicting peripheral information (e.g., victim saying

“no”). The myopic effects of alcohol are further complicated by the influence of alcohol-related expectancies on behavior. According to Alcohol Expectancy Theory (Fromme et al., 1999), alcohol influences behavior, in part, through expectancies about alcohol’s emotional, physiological, and behavioral effects. For example, men who expect women to be more sexually available when intoxicated may be more likely to misinterpret any friendly behavior as a sign that a women is interested in having sex with them (Abbey, 2011). Similarly, men who anticipate feeling more powerful, sexual, and aggressive when intoxicated may feel more comfortable using force to obtain sex (Abbey, 2011). After the fact, men may use alcohol intoxication as a justification for engaging in socially inappropriate behavior to avoid being labeled as deviant (Abbey, 2011).

For victims, alcohol may interfere with sexual assault resistance in a number of ways. First, the sedative effects of alcohol may impair motor and cognitive capacities necessary for effectively resisting assault (Abbey, 2002). Sexual assault victims who reported being at least “somewhat drunk” at the time of the assault were less likely to use physical resistance strategies (e.g., yelling, fighting) compared to non-intoxicated victims (O’Neal & Kaiser, 2015). The myopic effects of alcohol may also result in women attending more to prominent social cues rather than ambiguous risk cues (e.g., casual touching; Steele & Josephs, 1990). Results from an alcohol administration study provide support for this theory, finding that intoxicated women reported less awareness of and discomfort with risk cues in a hypothetical sexual encounter compared to sober women (Davis et al., 2009). A synergistic effect likely exists between drinking environments (e.g., college parties) and women and men’s drinking behavior, such that the convergence of intoxicated potential victims and motivated perpetrators in the absence of

capable guardians (e.g., sober friends) increases risk for sexual assault more so than either the drinking context itself or woman's drinking behavior alone (Meier & Miethe, 1993).

It is important to emphasize that the blame for sexual assault lies entirely with the perpetrator – regardless of the victim's level of intoxication. It is never the responsibility of a victim to “prevent” sexual assault. While substantial research efforts have been made to reduce sexual assault perpetration (Bonar et al., 2020), the current state of this literature has not led to significant reductions in campus sexual assault (Newlands & O'Donohue, 2016). As such, a parallel line of research focused on educating and empowering women on the most effective ways to respond in unwanted sexual situations within the current college climate has also emerged in the literature (DeGue et al., 2014). One resistance strategy commonly promoted in such interventions is the use of *assertive and decisive sexual refusal*.

Sexual Refusal Assertiveness

Sexual refusal assertiveness is defined as the ability to effectively communicate about sexual limits and refuse unwanted sexual activities (Morokoff et al., 1997). Although dangerous situations are not always avoidable and even the most effective resistance strategy will not always make a difference, use of physical (e.g., fighting, running away) or verbal (e.g., yelling “Stop!”) tactics in response to sexual assault threat may reduce the likelihood of experiencing completed rape (Brecklin, 2011; Gidycz et al., 2008; Guerette & Santana, 2010; Livingston et al., 2007). In non-assault sexual encounters, assertiveness may encompass both refusal of undesirable behaviors and initiation of desirable and pleasurable sexual activities. As such, sexual assertiveness is not only robustly associated with prevention of unwanted sexual experiences (Darden et al., 2019; Franz et al., 2016), it is also associated with promotion of several positive sexual outcomes, including greater sexual satisfaction (Santos-Iglesias & Sierra,

2010). In a recent examination of 623 college women at a large public university, it was revealed that the association between sexual assault severity before and during college was moderated by sexual refusal assertiveness, such that the risk for sexual re-assault was stronger among those with lower sexual refusal assertiveness (Oesterle et al., 2021). Despite a well-developed literature confirming the protective qualities of sexual refusal assertiveness, many young women endorse great difficulty expressing and prioritizing their sexual limits (Kelley et al., 2016), and women who report feeling knowledgeable about sexual assertiveness still may not respond assertively during an unwanted sexual situation, especially when alcohol is involved (O'Hara et al., 2016). Peggy Orenstein, acclaimed journalist on gender issues related to sex and relationships, describes this phenomenon in her book titled *Girls & Sex*, in which she states:

Nearly all the girls I interviewed were bright, assertive, ambitious. If I had been interviewing them about their professional dreams or their attitudes toward leadership or their willingness to compete with boys in the classroom, I might have walked away inspired. [One girl summed it up by saying], "I guess no one ever told me that the strong female image also applies to sex." (Orenstein, 2017, p. 58)

Tolman (2002) documented a similar theme of "it just happened" in interviews with adolescent girls about their first sexual experience, highlighting a lack of sexual agency and assertiveness observed among girls and young women within sexual encounters. It is not surprising, then, that legal theorist Catherine MacKinnon argues that the fight against rape is not only a fight against sexual violation, but also a fight for women to determine, control, and define their sexuality (MacKinnon, 1988).

Many of these observations can be understood within the context of feminist theory. Feminist theory attributes women's difficulty with sexual assertiveness to the existence of

traditional, patriarchal sexual scripts that promote gendered power asymmetry, female passivity, and male dominance within heterosexual relationships (Chung, 2007; Kalbfleisch & Cody, 1995; Wingood & DiClemente, 2000). Women behaving assertively during a sexual encounter may be viewed as undermining heterosexual intimacy. Psychological barriers to resistance derived from patriarchal sexual scripts may thus impede women's willingness to use assertive resistance strategies, including concern for relationship preservation, fear of "making a scene," and shock and confusion about the turn of events (Burton et al., 2011; Norris et al., 1996). Such appraisals may result in decisional conflict for how to respond as a woman must conduct "a multivariate cost-benefit analysis [of whether and how to resist sexual assault] involving potentially conflicting goals and concerns" (Nurius, 2000, p. 190). Since avoidance often arises in response to decisional conflict (Janis & Mann, 1979), a woman in conflict may choose less assertive, more indirect, and more passive behavioral responses to a sexually aggressive man. Importantly, most campus sexual assaults occur within alcohol-infused contexts, which may exacerbate existing power asymmetry and serve as an additional barrier to sexual refusal assertiveness.

Alcohol Intoxication and Sexual Refusal Assertiveness

As previously noted, alcohol may facilitate sexual assault by hindering women's ability to behave assertively through a number of cognitive and physiological pathways. At higher doses, the myopic effects of alcohol ingestion may disrupt one's ability to process information from the environment, including subtle or ambiguous risk cues indicative of a sexual assault (Davis et al., 2004). Results from an alcohol administration study with 351 women found that highly intoxicated women had more difficulty deciding whether to go along with or resist a man's insistence on having sex compared to sober women (Stoner et al., 2007). Similar findings emerged in Parkhill and colleagues' (2016) alcohol administration study, such that alcohol

intoxication was associated with greater immobility intentions and less assertive resistance during a hypothetical sexual assault scenario. In conjunction with the myopic effects of alcohol, expectancies about the influence of alcohol on a *perpetrator's* behavior may further impede women's willingness to behave assertively within an alcohol-infused sexual encounter.

Alcohol-Aggression Expectancy Set. It is commonly believed that intoxicated men are more likely to behave aggressively than sober men (Parks et al., 2012). Indeed, survey data suggest that most women (62%) anticipate that alcohol will arouse aggression in men (Borjesson & Dunn, 2001). Such a belief may inhibit women's willingness to resist unwanted sexual advances from an intoxicated perpetrator. That is, perceiving that a perpetrator is intoxicated may elicit the belief that he will behave aggressively in response to sexual refusal and, in turn, hinder women from accessing and implementing maximally effective responses to unwanted sexual advances. Moreover, intoxicated women tend to overestimate male peers' level of intoxication (Masters et al., 2014), which may further exacerbate alcohol-aggression expectancies and limit willingness to employ resistance strategies. Importantly, evidence indicates that alcohol only increases the probability of aggression among a minority of men predisposed to act aggressively (e.g., narcissistic personality traits, low levels of anger control; Giancola, 2002). Event-level data collected over a 7-day period found that most college men (97.8%) did not endorse engaging in physical aggression when drinking (Parks et al., 2012). Indeed, by itself, alcohol consumption is insufficient to elicit aggressive behavior (Testa & Cleveland, 2017), and it has been well-documented that engaging in assertive, active resistance remains the *most effective* method for reducing the likelihood of completed sexual assault (Brecklin, 2011; Rozee & Koss, 2001; Tark & Kleck, 2014). Yet, perceiving a potential perpetrator as intoxicated may reduce women's willingness and perceived safety to refuse

unwanted sexual advances indirectly through beliefs that the intoxicated perpetrator will respond negatively (e.g., aggressively) to sexual refusal.

Experimental studies have observed a relationship between perceived partner intoxication and anticipation of a negative partner reaction to sexual refusal in relation to condom use decision-making (George et al., 2016; Masters et al., 2014). Masters and colleagues (2014) conducted an alcohol administration study with community-recruited women ($N = 436$, ages 21-30) in which participants were asked to project themselves into a scenario depicting a sexual encounter with a casual male partner. Women who perceived the male partner as more intoxicated were more likely to anticipate a negative partner reaction to condom use insistence ($\beta = .12, p < .05$) and, in turn, endorsed greater intentions to allow the partner to decide whether to use a condom ($\beta = .17, p < .05$). George et al. (2016) found a similar relationship in another alcohol administration study with community-recruited women ($N = 408$, ages 21-30), such that women who anticipated a negative partner reaction to condom use insistence were more willing to abdicate condom use decision-making to the male partner ($\beta = .25, p < .05$). It was concluded that yielding to the male partner's wish for unprotected intercourse at the expense of one's own desire, agency, and sexual safety may be seen as instrumental for avoiding potentially negative partner reactions. While both experimental studies provide a preliminary understanding of the partner perceptions that may impede sexual refusal assertiveness within drinking contexts, these results may not be generalizable to college women, or to sexual assault, and several significant gaps in the literature remain.

Gaps in the Current Literature

First, college women represent a unique population that warrant separate investigation. Unhealthy levels of alcohol use and sex while intoxicated are more prevalent among college

students compared to same-aged non-college attending peers (ACHA, 2020; Quinn & Fromme, 2011; Slutske, 2005; Timberlake et al., 2007). Consequently, sexual encounters in which one or both parties are intoxicated and unable to freely consent are more normative and common on college campuses (Stephens et al., 2016). Because there is a greater prevalence and social acceptance of alcohol-involved sexual activity on college campuses, college women may anticipate that their male counterparts will be more resistant to sexual refusal during unwanted sexual encounters compared to community-recruited men (Stephens et al., 2016). College men's level of intoxication is also likely to be greater than community-recruited men (Slutske et al., 2004), potentially resulting in college women perceiving their male peers as being more intoxicated and, consequently, more likely to exhibit aggressive behavior in response to sexual refusal. Additionally, youth (ages 15-24), encompassing college students, exhibit less well-developed emotion regulation ability compared to older adults (Cooper et al., 2006; Gillespie & Beech, 2016; Harden et al., 2017). As such, college women may perceive college men as having greater difficulty regulating negative affect (e.g., anger) when intoxicated compared to older community-recruited samples. Emotion dysregulation may also serve as a barrier to assertive responding among college women (Weinhardt & Carey, 2000). Taken together, alcohol-related partner perceptions and sexual refusal assertiveness may interact differently among college women compared to community-recruited women and thus necessitate examination.

A second gap in the current literature is the exclusive focus on condom use decision-making in response to alcohol-related partner perceptions. Sexual assertiveness is characterized by the ability to initiate desired sex, refuse unwanted sex, and communicate about safe sex (Morokoff et al., 1997). Thus far, the literature has only examined the ways in which alcohol-related partner perceptions impact one's willingness to abdicate condom use decision-making

(George et al., 2016; Masters et al., 2014). Although communication about condom use is important for the prevention of sexually transmitted infections, the ability to refuse unwanted sex has been most closely linked with reduced risk for sexual assault victimization (Brecklin, 2011; Gidycz et al., 2008; Guerette & Santana, 2010; Livingston et al., 2007). Indeed, Livingston and colleagues (2007) identified a reciprocal relationship between sexual refusal assertiveness and sexual assault, such that women with a history of sexual assault at baseline reported more difficulty refusing unwanted sexual advances when assessed 12 months later, and women who were low in sexual refusal assertiveness at baseline were more likely to have experienced a sexual assault post-baseline. As such, expanding beyond condom use decision-making by exploring barriers specific to sexual refusal assertiveness within alcohol-infused sexual encounters may elucidate avenues for effective intervention.

A final factor not considered in the current literature is the impact of prior sexual assault history on sexual refusal assertiveness. Most (67%) college women who have experienced an initial incident of sexual assault report subsequent experiences of assault prior to college graduation (Campbell et al., 2021; Herres et al., 2018). Revictimized women report greater psychological distress compared to women who have experienced a single occurrence of sexual assault, including greater rates of PTSD, depression, suicidality, and substance use (Dworkin et al., 2017). Multiple studies have documented a significant link between alcohol use and risk for revictimization (Combs-Lane & Smith, 2002; Gidycz et al., 2007; Messman-Moore et al., 2008; Valenstein-Mah et al., 2015). As described in the self-medication theory of substance use (Khantzian, 1997), alcohol may be used to cope with psychological distress following a trauma (e.g., sexual assault; Littleton et al., 2007), which inadvertently may increase risk for future revictimization (Ullman & Brecklin, 2003). Aligned with this theoretical framework, college

women with a history of sexual assault victimization are almost two times more likely to report monthly binge drinking compared to non-victimized women (Lindgren et al., 2012; Weinhardt & Carey, 2000). Prospective longitudinal studies have also shown that sexual assault history is associated with increased alcohol consumption, which in turn, is associated with greater likelihood of reporting revictimization at a later date (Bryan et al., 2016; Messman-Moore et al., 2013). As evidenced in the literature, risk for sexual assault revictimization is increased by problematic drinking.

More nascent research suggests that victimized women may perceive and respond to interpersonal cues in drinking contexts differently than non-victimized women (George et al., 2016; Masters et al., 2014), offering an alternative pathway through which alcohol-related partner perceptions may influence risk for revictimization. For example, learning theory (Olson & Ramirez, 2020) infers that women who have been previously victimized by an intoxicated perpetrator may develop a learned association between perpetrator intoxication and aggressive behavior (Gover & Wells, 2019). In other words, prior victimization history may exacerbate the relationship between perceived partner intoxication and anticipation of a negative partner reaction. Moreover, women with a history of sexual assault may also have greater difficulty employing behavioral skills necessary for sexual refusal (Livingston et al., 2007; Vogel & Himelein, 1995; Yeater et al., 2008). Prospective path analyses have found that prior sexual assault victimization is associated with reduced sexual assertiveness, and low levels of assertiveness predict subsequent sexual victimization (Livingston et al., 2007). As such, victimization history may moderate the relationship between anticipated negative partner reaction and sexual refusal assertiveness as a result of a skills-based deficit.

There is also reason to believe that the moderating effects of sexual assault history may be further influenced by alcohol-aggression expectancies. Survey data suggests that victimized women endorse stronger alcohol-aggression expectancies compared to non-victimized women (Abbey et al., 1999). As previously noted, it is possible that a learned association between alcohol intoxication and aggressive behavior has developed for women with a history of sexual assault. It might, therefore, be expected that victimized and non-victimized women anticipate a similar negative partner reaction to sexual refusal when alcohol-aggression expectancies are low, but victimized women anticipate a stronger negative partner reaction to sexual refusal compared to non-victimized women when expectancies are high. Thus, alcohol-aggression expectancies may moderate the effects of sexual assault history on path *a* of the proposed model (Figure 1). Alcohol-aggression expectancies was not included in our model as a moderator of the effects of sexual assault history on path *b* given that this pathway was theorized to result from a potential skills-based deficit in women with a prior sexual assault history rather than differences in alcohol-aggression expectancies between victimized and non-victimized college women.

Summary and Overview of the Current Study

Sexual assault on college campuses is a significant public health concern. While the blame for the occurrence of sexual assault lies entirely with the perpetrator, utilization of assertive resistance strategies may reduce the likelihood of experiencing completed sexual assault (Brecklin, 2011; Gidycz et al., 2008; Guerette & Santana, 2010; Livingston et al., 2007). Many societal, dyadic, and individual factors impact whether a woman feels safe employing such strategies, one of which may be perceptions of a perpetrator's intoxication level. Emerging research suggests that beliefs that an intoxicated partner will behave aggressively in response to sexual refusal may reduce a woman's willingness and perceived safety to refuse unwanted sexual

advances. However, the relationship between perceived partner intoxication and sexual refusal assertiveness has not been examined among college women, nor is it clear how prior sexual assault history and alcohol-aggression expectancies interact to influence college women's sexual decision-making. Thus, the primary goal of the current study was to test a proposed conceptual model of sexual refusal assertiveness (Figure 1) in a sample of college women using a vignette-based experimental design.

The research involved two phases (Figure 2). Iterative formative research was conducted to develop the five vignettes that were then used in the primary experimental study. In the experimental phase, the conceptual model of sexual refusal assertiveness was tested using the vignettes developed in the formative research phase with a 2 (partner perceived as intoxicated vs sober) X 2 (assault history vs no history) within-subjects experimental design. One hundred and ninety-nine college women with ($n = 120$) and without ($n = 79$) a history of sexual assault were recruited for the experimental phase. It was hypothesized that (1) anticipated negative partner reaction would mediate the effect of perceived partner intoxication on sexual refusal assertiveness, such that perceiving the male character as intoxicated would result in greater anticipation that he would respond negatively to sexual refusal and, in turn, reduced willingness to engage in sexual refusal assertiveness, (2) sexual assault history would moderate both paths of the proposed mediation model, such that the effects of perceived partner intoxication on anticipation of a negative partner reaction and the effects of anticipated negative partner reaction on sexual refusal assertiveness would both be exacerbated for women with a history of sexual assault compared to women without a history of sexual assault, and (3) alcohol-aggression expectancies would moderate the effect of sexual assault history on path a of the mediation model. That is, we hypothesized that victimized and non-victimized women would anticipate a

similar negative partner reaction to sexual refusal when alcohol-aggression expectancies were low, but victimized women would anticipate a stronger negative partner reaction to sexual refusal compared to non-victimized women when expectancies were high. Several theoretically-informed individual difference measures previously shown to correlate with the primary outcome (sexual refusal assertiveness) were also collected as part of this study and considered for inclusion in the proposed conceptual model as covariates (see Data Analysis Plan).

Methods & Results: Formative Research Phase

Formative research focused on the development of five vignettes for the experimental study and progressed in three phases. In *Phase I*, an initial pool of ten written vignettes was developed after a review of the literature and piloted with a sample of undergraduate college women ($N = 33$). The five vignettes (i.e., 2 vignettes from each condition and 1 anchor vignette) with the best perceived realism ratings were selected for *Phase II*. In *Phase II*, qualitative interviews with an additional sample of ten college women were conducted to collect participant-generated ideas regarding vignette content, format, and modality of the five vignettes selected from *Phase I*. The five vignettes were revised based on the survey data and qualitative feedback. In *Phase III*, the five revised vignettes were piloted with an additional sample of college women ($N = 16$) to ensure that the experimental manipulation was perceived as intended. The vignettes for the experimental study were finalized after the results of *Phase III* were analyzed, and the formative research phase was then complete.

Across all formative research and experimental phases, participants completed an electronic informed consent prior to enrolling in the study. All participants were recruited from the Syracuse University Psychology Department research participation pool (SONA), which consists of students enrolled in an introductory psychology course. Inclusion criteria for

participation in all phases included: (1) between ages 18-25 years old; (2) currently enrolled as an undergraduate student at Syracuse University; (3) understanding of written and spoken English; (4) self-identification as heterosexual (i.e., ≤ 1 on the Kinsey Scale; Kinsey et al., 1948); (5) self-identification as a cisgender female; (6) endorsement of being a current drinker (i.e., ≥ 1 drinking occasion in the past month; Substance Abuse and Mental Health Services Administration, 2020); and (7) endorsement of being sexually active (i.e., ≥ 1 lifetime sexual partner). Participants who were experiencing acute post-traumatic stress related to an incident of sexual assault (i.e., ≥ 4 on the PC-PTSD-5; Prins et al., 2016) or were unable to provide informed consent were excluded from study participation. Eligibility was determined based on a screening measure that collected information on age, gender, sexual orientation, past-month alcohol use, lifetime sexual activity, past-month trauma-related distress, and sexual assault history since age 14. Study procedures were completed remotely, and data were collected online using Research Electronic Data Capture (REDCap), a secure, web-based, data-collection system. In each formative research phase, demographic data on race, ethnicity, international student status, academic standing, residence, relationship status, and Greek life affiliation were collected. The Syracuse University Institutional Review Board (IRB) approved all study recruitment and data collection procedures.

Phase I

Recruitment and Study Procedures

Eligible participants completed a demographic profile and viewed ten written vignettes in random order. Vignettes were displayed in a video format with each sentence of the vignette shown incrementally after a ~3 second delay. Directly after the intoxication manipulation was presented in each vignette (about halfway through), participants were asked to report on their

perception of the male character and female protagonist's intoxication levels. Participants were then redirected to view the remainder of the vignette. Each vignette was followed by a series of questions (i.e., manipulation and vignette checks) that the participant was directed to answer before viewing the next vignette. After completion of the protocol, participants were debriefed and awarded one course credit.

Materials & Measures

Experimental vignettes. The initial pool of ten vignettes (Appendix A) was informed by a review of the literature on campus sexual violence and college "hook-up" culture (Clark & Carroll, 2008; Littleton & Axson, 2003). Vignettes were written with first-person language (i.e., "you") to allow participants to project themselves into the scenario (Aguinis & Bradley, 2014). Each vignette depicted a potential sexual encounter between a female protagonist and male acquaintance. The male character was described as either "sober" or "intoxicated, but not completely wasted," and the protagonist was described as having had "one or two drinks that evening" (Woolf & Maisto, 2008). Two anchor vignettes depicting non-sexual encounters were also developed to maintain participant blinding to experimental hypotheses (S. C. Evans et al., 2015). Wording and structure in the ten vignettes were as close to identical as possible, and character dialogue, actions, and the overall events of the vignettes did not differ between conditions.

Manipulation and Vignette Checks. To assess the intoxication manipulation, participants were asked to rate the male character's level of intoxication on a 4-point Likert-type scale ranging from 1 (*not at all intoxicated*) to 4 (*very intoxicated*; Woolf & Maisto, 2008). Participants were also asked to rate each vignette on perceived realism using a 4-point Likert-type scale ranging from 1 (*not at all realistic*) to 4 (*very realistic*). Additionally, participants'

perceptions of the male character's assertiveness, attractiveness, masculinity, acceptability of his actions, and demographics (e.g., age, race, ethnicity) were assessed using Likert-type scales (Palmer-Hague, 2020), and participants were asked to identify content from the vignettes that informed their responses.

Data Analysis Approach

Descriptive statistics were used to summarize study variables. For continuous variables, means, medians, standard deviations, percentiles, and ranges were generated; frequencies and proportions were used for categorical and ordinal variables. A paired sample *t*-test was used to determine the success of the intoxication manipulation. The manipulation was deemed successful if participants perceived the male character in the intoxication condition as significantly more intoxicated than the male character in the sober condition. Vignettes with a mean perceived realism score ≥ 3 ("moderately realistic") were deemed sufficiently realistic for study inclusion. Moreover, paired sample *t*-tests were conducted to ensure that there were no significant differences in perceptions of the male character (i.e., assertiveness, attractiveness, masculinity, acceptability of his actions) across manipulation condition.

Results

Demographic characteristics of participants from the formative research phase can be found in Table 1. Overall, vignettes were perceived as "moderately realistic" ($M = 3.38$; $SD = 0.82$; see Table 2). There were no significant differences in the perceived assertiveness ($t[32] = -1.75$, $p = .09$), attractiveness ($t[32] = -1.19$, $p = .24$), masculinity ($t[32] = -.71$, $p = .48$), or acceptability of actions ($t[32] = -.41$, $p = .68$) of the male character across conditions. The experimental manipulation for alcohol intoxication was perceived as intended, such that the male perpetrator in the "intoxicated condition" vignettes was perceived as significantly more

intoxicated compared to the male perpetrator in the “sober condition” vignettes ($t[32] = 17.79, p < .001$). The five vignettes (i.e., 2 vignettes from each condition and 1 anchor vignette) with the highest perceived realism ratings were selected for *Phase II*.

Phase II

Recruitment and Study Procedures

Participants from *Phase I* were excluded from participating in *Phase II*. Qualitative interviews were facilitated by the graduate student researcher (MF), who had received prior training in qualitative research (Foley et al., 2021; Woolf-King et al., 2022). All qualitative interviews were completed remotely via Zoom – a HIPPA-compliant teleconferencing platform. Prior to the interview portion of the study visit, participants completed a demographic questionnaire and viewed each of the five vignettes selected from *Phase I* in random order. A semi-structured interview guide was used to explore the following topics: (1) questions about relevance of vignette content (e.g., college party setting), (2) vignette format (e.g., vignette length), and (3) vignette modality (e.g., text). Participants were also encouraged to explore content that emerged as a result of the interview process. All interviews were audio recorded using an external audio recording device. Audio recordings were immediately uploaded to a secure server following each interview and subsequently deleted from the external audio recording device. Each interview was approximately 30 minutes long and participants were compensated with a \$25 electronic Amazon gift card for their time and effort.

Data Analysis Approach

The qualitative interviews were audio-recorded, transcribed, and uploaded to the secure qualitative analysis software program “Dedoose” (<http://www.dedoose.com>). The graduate student researcher (MF) developed a codebook based on the qualitative interview guide and

areas of focus in designing and implementing experimental vignettes (Aguinis & Bradley, 2014). The codebook included codes described by a brief definition, full definition, and guidelines for appropriate use, including an illustrative example of text (MacQueen et al., 1998). Using the initial codebook, two graduate research team members (MF and AS) coded a randomly selected transcript together. Coding difficulties and discrepancies were discussed among this research team and the codebook was revised accordingly. Using the final coding structure, the same two research team members independently coded the ten interview transcripts and resolved any discrepancies with discussion.

Results

The results of the ten qualitative interviews were organized into major themes within each of the assessed categories of vignette content, modality, and format (see Table 3). Illustrative quotes were chosen for overall representativeness of the themes and sub-themes (see Table 3). Overall, interview participants indicated that the vignettes were a realistic depiction of an interaction at a college party; however, several participants expressed concerns about the protagonist being left alone at a party by her friends, stating that it was against “girl code.” In response to this feedback, we removed this section from the vignette and instead stated that the male character escorted the protagonist to a bedroom adjacent to the party. Several participants also indicated that it was difficult to gauge the protagonist’s level of interest in engaging in sexual activity with the male character, noting that her willingness to go to his apartment indicated some degree of interest in “hooking-up.” To address this feedback, we added language that explained that the protagonist was “not interested in hooking up” with the male character to clarify the protagonists’ motivations. Similarly, the lack of dialogue for the protagonist was critiqued across participants. We therefore increased the quantity of dialogue for the protagonist

to match the amount of dialogue provided by the male character. Most participants reported that the length of the vignettes was acceptable and allowed for sustained attention. Last, participants preferred the video modality for vignettes in which each sentence was shown incrementally after a ~3 second delay, and denied any concerns related to technical difficulties with the videos.

Vignettes were revised based on qualitative feedback and re-administered in *Phase III*.

Phase III

Study Procedures & Materials

The procedures for *Phase III* were identical to those from *Phase I*, with the exception that participants viewed the five revised vignettes from *Phase II*.

Data Analysis Approach

The data analysis plan for *Phase III* is consistent with the analysis plan from *Phase I*.

Results

Sixteen undergraduate women participated in the final phase of the formative research phase (see Table 4). Again, there were no significant differences in the perceived assertiveness ($t[31] = 1.94, p = .06$), attractiveness ($t[231] = 0.87, p = .39$), masculinity ($t[31] = 0.00, p = 1.00$), and acceptability of actions ($t[21] = 1.00, p = .33$) of the male perpetrator across conditions, and vignettes were perceived as “moderately realistic” ($M = 3.23; SD = 0.87$). Furthermore, the experimental manipulation was still perceived in the intended direction, such that the male perpetrator in the “intoxicated condition” vignettes was perceived as significantly more intoxicated compared to the male perpetrator in the “sober condition” vignettes ($t[31] = 16.59, p < .001$). The finalized vignettes can be found in Appendix B. No further modifications were made to the experimental procedures.

Methods: Experimental Phase

Study Procedures, Materials, & Measures

The procedures for the *Experimental Phase* mirrored those from *Phase III*, with the exception that participants also completed measures for the outcome of interest (sexual refusal assertiveness), hypothesized mediator (anticipated negative partner reaction), and hypothesized moderators (sexual assault history, alcohol-aggression expectancies). After viewing all vignettes, participants also completed several individual difference measures.

Predictor Measure

Perceived Partner Intoxication. Consistent with prior research (Woolf & Maisto, 2008), participants were asked to rate the male character's level of intoxication on a 4-point Likert-type scale ranging from 1 (*not at all intoxicated*) to 4 (*very intoxicated*). Given the similarity in vignette content within condition and randomized order of presentation, an average score of perceived partner intoxication was calculated for both intoxication and sober conditions.

Mediator Measure

Anticipation of Negative Partner Reaction. Anticipation of negative partner reaction to sexual refusal was measured using five items adapted from George and colleagues (2016) that followed the structure, "If you refuse to have sex with [male character's name], how likely will he be to...lose interest in you? Become angry? Force you to have sex anyway?" (George et al., 2016). Response options ranged from 1 (*not at all likely*) to 7 (*extremely likely*), with higher scores indicating greater anticipation of a negative partner reaction to sexual refusal. These items have previously demonstrated good internal consistency ($\alpha = .80$; George et al., 2016), and demonstrated adequate internal consistent across vignettes in this sample ($\alpha = .63-.85$). An average score of anticipated negative partner reaction was calculated for both conditions ($M_{\text{sober}} = 17.28$ [$SD = 3.87$], $M_{\text{intoxicated}} = 18.91$ [$SD = 3.56$]).

Moderator Measures

Sexual Assault History. The Sexual Experiences Survey–Short Form (SES-SF; Koss et al., 2007) assessed participants’ experiences with sexual violence since age 14 using behaviorally-specific language. Types of unwanted sexual behavior assessed included sexual contact (e.g., fondling) and attempted or completed oral, anal, or vaginal penetration. The tactics included two forms of verbal coercion including (1) telling lies, verbal threats, making promises known to be untrue, or using verbal pressure and (2) showing displeasure, criticizing, or getting angry; incapacitation (i.e., taking advantage when the participant was “too drunk or out of it” to stop what was happening); and two forms of physical force including (1) threatening physical force and (2) use of physical force. Participants were asked how often each sexual experience occurred by each tactic with response options ranging from 0 (*never*) to 3 (*three or more times*). A separated outcome (i.e., sexual contact, attempted penetration, completed penetration) and tactics (i.e., verbal coercion, intoxication, physical force) severity ranking scheme in combination with a sum of frequency of ranks was used to obtain an “objective severity” score, with 0 = no history of sexual assault and 9 = completed rape by physical force (Davis et al., 2014). Given the prevalence of sexual assault in this sample despite targeted efforts to recruit college women without a prior history, we decided to utilize the most narrow definition of sexual assault for our moderation analyses, which will minimize heterogeneity across sexual assault experiences (Davis et al., 2014). Participants who reported one or more instance of completed oral, anal, or vaginal rape (i.e., penetration) by any tactic were coded as having a past sexual victimization history (1). All others were coded as 0; the implications of this decision in the interpretation of the results will be addressed in the Discussion section.

Alcohol-Aggression Expectancies. The Aggression subscale of the Alcohol Expectancies Regarding Sex, Aggression, and Sexual Vulnerability Scale (AESASVQ; Abbey et al., 1999) was used to assess alcohol-aggression expectancies. The AESASVQ asks participants to evaluate the effects of a moderate amount of alcohol on aggression for three targets (self, women, and men). For the purpose of this study, we were only interested in women's alcohol-aggression expectancies for men. An example item includes, "when drinking alcohol, it is easy for men to become hostile." Response options were presented on a 5-point Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Items were totaled (α in this sample = .91), with higher scores indicating greater alcohol-aggression expectancies.

Individual Difference Measures

Sexual Assertiveness. Trait-level sexual assertiveness was measured using the 18-item Sexual Assertiveness Scale (SAS; Morokoff et al., 1997). Three domains of sexual assertiveness were assessed: initiation of wanted sexual experiences, refusal of unwanted sexual experiences, and prevention of pregnancy and sexually transmitted infections. Participants were asked to report how likely they are to engage in each behavior during a sexual encounter on a 4-point Likert-type scale, with response options ranging from 1 (*very unlikely*) to 4 (*very likely*). Items were totaled (α in this sample = .70), with higher scores indicating greater assertiveness.

Sexual Communication Self-Efficacy. The 20-item Sexual Communication Self-Efficacy Scale (SCSES) measures five domains of sexual communication: contraceptive communication, positive sexual messages, negative sexual messages, sexual history, and condom negotiation (Quinn-Nilas et al., 2016). Participants were asked to report how difficult it would be to engage in a range of activities with a sexual partner on a 4-point Likert-type scale, with

response options ranging from 1 (*very difficult*) to 4 (*very easy*). Items were totaled (α in this sample = .91), with higher scores indicating greater sexual communication self-efficacy.

Sexual Sensation Seeking. The Sexual Sensation Seeking Scale (SSSS) assessed inclination for diverse and new sexual experiences, and willingness to take risks for the purpose of enhancing sexual sensations (Kalichman & Rompa, 1995). Participants were asked to report the extent to which they believe eleven statements that described their personal sexual experiences on a 4-point Likert-type scale, with response options ranging from 1 (*not at all like me*) to 4 (*a lot like me*). Items were totaled (α in this sample = .78), with higher scores indicating greater propensity to engage in novel sexual experiences.

Sexual Scripts. Dominant heterosexual sexual scripts were assessed using the 33-item Sexual Script Scale (Sakaluk et al., 2014). Participants were asked to report the extent to which they agreed with several statements that assessed six domains of sexual scripts: sexual standards, sexual simplicity and complexity, sex drive, performance and orgasm, players, and emotional sex. Response options were presented on a 6-point Likert-type scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Items were totaled (α in this sample = .87), with higher scores indicating greater belief in the dominant heterosexual sexual script.

Internalized Misogyny Scale. The Internalized Misogyny Scale (IMS) is a 17-item instrument that assesses internalized sexism (Piggott, 2004). Respondents are asked to indicate the extent to which they agree to statements on a 7-point Likert-type scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Following reverse coding, items were totaled (α in this sample = .91), with higher scores indicating greater internalized misogyny.

Past Year Alcohol Consumption. The Alcohol Use Disorders Identification Test-Consumption (AUDIT-C) was used to measure past-year alcohol use. The AUDIT-C is a 3-item

alcohol screening instrument that assesses past-year frequency of drinking days, number of drinks per drinking day, and frequency of binge drinking (i.e., ≥ 6 drinks on one drinking occasion; Bush et al., 1998). Items were totaled (α in this sample = .64), with higher scores indicating greater risk for hazardous drinking and/or development of an alcohol use disorder. A cut-off score of 5 was used to categorize at-risk drinking (Campbell & Maisto, 2018; Demartini & Carey, 2012).

Trauma-Related Distress. Distress associated with an experience of sexual assault was assessed using the Impact of Event Scale (IES; Weiss, 2007). Respondents were asked to indicate if they had ever experienced sexual assault and, if they responded “yes,” to report how much they were distressed or bothered during the past seven days by each “difficulty” listed (e.g., “Any reminders brought back feelings about it”). Response options were presented on a 5-item Likert-type scale, ranging from 0 (*not at all*) to 4 (*extremely*). Items were totaled (α in this sample = .80), with higher scores indicating greater distress associated with the traumatic event.

Emotion Regulation. Emotion regulation was assessed using the 36-item Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004). Participants were asked to report how they relate to their emotions on a 5-point Likert-type scale, ranging from 1 (*almost never*) to 5 (*almost always*). Following reverse coding, items were totaled (α in this sample = .85), with higher scores indicating greater emotion dysregulation.

Outcome Measure

Sexual Refusal Assertiveness. Willingness to refuse unwanted sexual advances from the male character was assessed using the Refusal subscale of the Sexual Assertiveness Scale (SAS; Morokoff et al., 1997). The SAS has demonstrated good internal consistency ($\alpha = .71-.83$) and adequate construct validity with related measures (Morokoff et al., 1997). In this sample, internal

consistency across vignettes was acceptable (α in this sample = .77-.85). Six items were administered, following the structure, “Based on the scenario you just read, how likely are you to...give in and kiss [male character’s name] if [male character’s name] pressures you? Put your mouth on [male character’s name] genitals? Have sex if [male character’s name] wants to? Say no and not let [male character’s name] touch your genitals? Refuse to have sex with [male character’s name] if you don’t want to? Refuse to let [male character’s name] touch your breasts if you don’t want that?” Response options ranged from 1 (*very unlikely*) to 4 (*very likely*), with higher scores indicating greater assertiveness. An average score of sexual refusal assertiveness was calculated for both conditions.

Data Analysis Plan

Preliminary Analyses. SPSS version 26 (IBM Corp, 2022) was used to analyze descriptive statistics and assess for bivariate associations between study variables. Two participants were screened out from analyses for completing the survey in under ten minutes (Greszki et al., 2015). An additional six participants were screened out for failing to accurately respond to the validity checks ($n = 4$) and attention checks ($n = 2$), resulting in a sample of 199 participants for the primary analyses. Univariate normality for all continuous variables was assessed via indices of skewness and kurtosis using cutoff values of ± 2.00 , as well as through visual inspections of histograms (Tabachnick & Fidell, 2018). All variables evidenced normality; thus, no data transformations were applied. Means and standard deviations were generated for continuous variables; frequencies and proportions were used for categorical and ordinal variables. Listwise deletion was used to account for missing data. Similar to the formative research phase, paired sample *t*-tests were conducted to ensure that the intoxication manipulation worked in the intended direction, as well as to compare perceptions of the male character (i.e.,

assertiveness, attractiveness, masculinity, acceptability of his actions) across experimental conditions.

Power Analysis. An *a priori* power analysis was conducted using GPOWER 3.1 to determine the sample size required to test the three-way interaction (Erdfelder et al., 1996). Based on prior research and published guidelines (George et al., 2016; Masters et al., 2014; Pan et al., 2018; Preacher et al., 2007), a sample of $N = 210$ would provide power ($\beta = .80$) to detect a “small-medium” effect size ($r^2 = .26$) at $\alpha = 0.05$ for the proposed model.

Covariates. In addition to participant demographics, covariates were theoretically informed and identified based on prior research demonstrating an association of each potential covariate with the primary outcome (sexual refusal assertiveness). Potential covariates included demographic characteristics (i.e., age, race, relationship status), sexual communication self-efficacy subscales (Brasileiro et al., 2021), sexual sensation seeking (Alayi, 2013), sexual scripts subscales (Klein et al., 2019), alcohol consumption (Abbey, 2017), trauma-related distress (Livingston et al., 2007), and emotion dysregulation (Zerubavel & Messman-Moore, 2013). Covariates were included in the model only if they were significantly ($p \leq .05$) associated with sexual refusal assertiveness in bivariate analyses (de Boer et al., 2015). Bivariate correlation coefficients for key study variables are shown in Table 4. Covariates significantly associated with sexual refusal assertiveness at the bivariate level were the Sexual Communication Self-Efficacy Scale and the Sexual Script Scale. Average scores for perceived partner intoxication and anticipated negative partner reaction to sexual refusal from the sober condition were also included as covariates.

Primary Analyses.

H1: Anticipated negative partner reaction would mediate the effect of perceived partner intoxication on sexual refusal assertiveness. The first hypothesis was tested using IBM SPSS Statistics Version 27 PROCESS Simple Mediation (Model 4) with bootstrapping (Preacher et al., 2007). Bootstrapping draws repeated samples with replacement and obtains indirect effects and confidence intervals from each resampled data set. This statistical approach has advantages over other approaches (e.g., Sobel test) because it allows for robust standard errors, does not impose the assumption of normality, and reduces the inflation of Type 1 error (Preacher et al., 2007). While multi-level modeling has previously been proposed as a way to conduct within-subject mediation for experimental data (Vuorre & Bolger, 2018), participants only viewed two vignettes from each condition in this study; thus, multilevel modeling was deemed inappropriate for these analyses as there was insufficient within-subject variability (Hoffman & Walters, 2022). A grand mean for the predictor, mediator, and outcome variables was calculated by combining both vignettes from each condition. Perceived perpetrator intoxication (continuous) constituted the independent variable, sexual refusal assertiveness (continuous) was the outcome, and anticipated negative partner reaction to sexual refusal (continuous) was tested as a mediator. The Sexual Communication Self-Efficacy Scale, Sexual Script Scale, and average scores for perceived partner intoxication and anticipated negative partner reaction to sexual refusal from the sober condition were included as covariates. Assumptions necessary for performing regression analyses were met (Preacher et al., 2007). Continuous variables that define products were mean-centered prior to analyses. Statistical significance of the indirect effects was assessed using 10,000 resamples and bias-corrected confidence intervals (CIs; Hayes, 2015).

H2: Sexual assault history would moderate both paths of the proposed mediation model. To test the second hypothesis, IBM SPSS Statistics Version 27 PROCESS Moderated-

Mediation (Model 58) with bootstrapping was utilized (Preacher et al., 2007). The mediation model from the first hypothesis was constructed with the same parameters, with the addition of sexual assault history (0 = no history; 1 = history) as a moderator of the *a* and *b* paths.

H3: Alcohol-aggression expectancies would moderate the effect of sexual assault history on path a of the mediation model. The final hypothesis, and completed conceptual model, was testing using IBM SPSS Statistics Version 27 PROCESS Moderated-Moderated Mediation (Model 68) with bootstrapping (Preacher et al., 2007). The moderated mediation model from the second hypothesis was constructed with the same parameters, with the addition of alcohol-aggression expectancies for men (continuous) as a moderator of the moderating effects of sexual assault history on the *a* path.

Results: Experimental Phase

Sample Description

Demographic characteristics of participants enrolled in the experimental phase are displayed in Table 5. Most participants ($N = 199$; $M_{\text{age}} = 18.7$, $SD_{\text{age}} = 1.1$) were White (76.8%) first-year college students (65.3%) that resided on-campus (81.4%). More than half of participants (63.8%) were not in a monogamous and/or exclusive relationship. Rates of sexual assault were higher in this sample compared to other samples of college women (Littleton et al., 2019). Full descriptives of sexual assault experiences reported in this sample can be found in Tables 6 and 7. Across the sample of 199 college women, there were 1,560 unique instances of attempted or completed rape reported. Almost three-quarters (70.6%) of women reported a history of unwanted sexual contact, 55.3% reported a history of attempted oral, anal, or vaginal rape, and 60.3% reported a history of completed oral, anal, or vaginal rape. The most common tactic used was coercion (53.2% of instances of attempted or completed rape), followed by incapacitation by intoxication (28.1%) and physical force (18.7%). Most perpetrators were

identified as male (73.9%). Descriptive statistics for individual difference measures, as well as outcome variables and manipulation checks can be found in Tables 8 and 9, respectively.

Preliminary Results: Comparing Vignettes Across Experimental Conditions

As anticipated, the experimental manipulation was perceived in the intended direction, such that the male perpetrator in the “intoxicated condition” vignettes was perceived as significantly more intoxicated than the male perpetrator in the “sober condition” vignettes ($t[198] = -39.01, p < .001$). Interestingly, and consistent with some feedback received from the qualitative interviews, participants perceived the “intoxicated condition” vignettes as more realistic compared to the “sober condition” vignettes ($t[193] = 3.75, p < .001$). An additional unanticipated finding that emerged was that participants perceived the male perpetrator in the “intoxicated condition” vignettes as significantly more masculine than the male perpetrator in the “sober condition” vignettes ($t[196] = -3.30, p < .001$). Participants also rated the acceptability of the sober male character’s actions as significantly higher than the acceptability of the intoxicated male character’s actions ($t[192] = -2.88, p < .01$). There were no significant differences in the perceived assertiveness ($t[194] = 0.48, p = .63$) and attractiveness of the male perpetrator across conditions ($t[195] = -1.83, p = .07$).

Primary Study Results: Testing the Proposed Model

H1: Anticipated negative partner reaction would mediate the effect of perceived partner intoxication on sexual refusal assertiveness. The mediation model results are shown in Table 10 and Figure 1. Results showed that Perceived Partner Intoxication had a significant effect on Anticipated Negative Partner Reaction, such that those who perceived the male perpetrator as more intoxicated reported greater anticipation that he would respond negatively to sexual refusal (a path, $B = 0.709, SE = 0.308, 95\%$ Confidence Intervals [CIs]: 0.101 to 1.318).

Anticipated Negative Partner Reaction did not have a significant effect on Sexual Refusal Assertiveness (*b* path, $B = -0.063$, $SE = 0.091$, 95% CIs: -0.242 to 0.117). Additionally, the direct effect of Perceived Partner Intoxication on Sexual Refusal Assertiveness was not significant (*c'* path, $B = 0.461$, 95% CI: -0.296 to 1.128). Tests of indirect effects of Perceived Partner Intoxication on Sexual Refusal Assertiveness via Anticipated Negative Partner Reaction were not significant using 10,000 bootstrap resamples (effect = -0.044, 95% CI: -0.204 to 0.073). Results indicated that the simple mediation hypothesis was not supported.

H2: Sexual assault history would moderate both paths of the proposed mediation model. Results of the moderated mediation model analyses are shown in Table 11. For the *a* path of the mediation model, there was no significant main effect of Perceived Partner Intoxication on Anticipation of a Negative Partner Reaction ($B = 0.757$, 95% CI: -0.182 to 1.696) and no significant main effect of Sexual Assault History on Anticipation of a Negative Partner Reaction ($B = 0.537$, 95% CI: -3.840 to 4.913). There was also no significant interaction effect ($B = -0.083$, 95% CI: -1.300 to 1.131). Similarly, for the *b* path of the mediation model, there was no significant main effect of Anticipation of a Negative Partner Reaction on Sexual Refusal Assertiveness ($B = -0.123$, 95% CI: -0.355 to 0.111) and no significant main effect of Sexual Assault History on Sexual Refusal Assertiveness ($B = -3.866$, 95% CI: -9.080 to 1.348). Again, there was no significant interaction effect ($B = 0.127$, 95% CI: -0.144 to 0.399). The direct effect of Perceived Partner Intoxication on Sexual Refusal Assertiveness was not significant (*c'* path, $B = 0.437$, 95% CI: -0.306 to 1.180), and there was a non-significant conditional indirect effect of Perceived Partner Intoxication on Sexual Refusal Assertiveness through Anticipation of a Negative Partner Reaction for participants with (effect = 0.003, 95% CI: -0.140 to 0.158) and

without a history of sexual assault (effect = -0.093, 95% CI: -0.439 to 0.086). In sum, Sexual Assault History did not moderate any pathway of the proposed mediation model.

H3: Alcohol-aggression expectancies would moderate the effect of sexual assault history on path a of the mediation model. Results of the moderated-moderated mediation model analyses are shown in Table 12 and Figure 4. There was no significant main effect of Alcohol-Aggression Expectancies on Anticipation of a Negative Partner Reaction ($B = 0.257$, 95% CI: -0.378 to 0.892) and no significant main effect of Sexual Assault History on Anticipation of a Negative Partner Reaction ($B = 4.731$, 95% CI: -9.079 to 12.541). As evidenced by a non-significant Alcohol-Aggression Expectancies x Sexual Assault History interaction term, the effect of Sexual Assault History on Anticipation of a Negative Partner Reaction did not depend on Alcohol-Aggression Expectancies ($B = -0.286$, 95% CI: -1.201 to 0.629). Results indicate that Alcohol-Aggression Expectancies did not moderate Sexual Assault History.

Post-Hoc Analyses and Results

Given that the *a* path from perceived partner intoxication to anticipated negative partner reaction from the proposed conceptual model was significant, we conducted a post-hoc analysis testing the moderating effects of sexual assault history on this path. There was no significant main effect of Perceived Partner Intoxication on Anticipation of a Negative Partner Reaction ($B = 0.647$, 95% CI: -0.506 to 2.047) and no significant main effect of Sexual Assault History on Anticipation of a Negative Partner Reaction ($B = 0.351$, 95% CI: -0.790 to 0.594). There was also no significant interaction effect ($B = 0.099$, 95% CI: -0.161 to 0.229).

Judd and colleagues (2001) propose an alternative approach to addressing mediation in two-condition within-participant designs, which has more recently been adapted as the SPSS macro MEMORE (Mediation and Moderation for Repeated Measures) by Amanda Montoya

(2017). In these designs, participants experience both possible levels of X (intoxication and sober vignettes) and have two measures of both M (anticipated negative partner reaction for each condition) and Y (sexual refusal assertiveness for each condition). This approach focuses on using change scores between experimental conditions to infer mediation. The first two steps involve conducting pairwise *t*-tests between repeated measures of both the Y variable and the M variable. The third step uses a regression to determine if the difference in M predicts the difference in Y. A pairwise *t*-test revealed a non-significant difference in sexual refusal assertiveness (Y variable) between the two conditions ($t[199] = 1.52, p = .131$). Given that the first necessary step for inferring mediation with this approach was not achieved, we did not conduct the remainder of the steps.

Discussion

This study used a vignette-based, within-subjects experimental design to test a conceptual model of sexual refusal assertiveness in college women that integrated elements of feminist theory with alcohol expectancy theory. Previous lines of research have identified anticipation of a negative partner reaction to condom use insistence as a mediator between perceived partner intoxication and condom-decision abdication (George et al., 2016; Masters et al., 2014), and has highlighted prior sexual assault history as a barrier to sexual refusal assertiveness (Livingston et al., 2007). This study extends this line of literature by examining the effects of Perceived Partner Intoxication on Anticipated Negative Partner Reaction and Sexual Refusal Assertiveness more broadly, while taking into account the possible moderating role of Sexual Assault History and Alcohol-Aggression Expectancies. This avenue of research has the potential for enhancing the design of sexual assault prevention programs by better understanding the partner-level attributes that impact sexual refusal assertiveness within the context of alcohol-involved sexual encounters.

Perceived Partner Intoxication and Anticipated Negative Partner Reaction

As hypothesized, Perceived Partner Intoxication had a significant effect on Anticipated Negative Partner Reaction, such that those who perceived the male perpetrator as more intoxicated reported greater anticipation that he would respond negatively to sexual refusal. This finding has important implications for sexual risk reduction programs. If a woman believes that an intoxicated man is more likely to behave negatively to sexual refusal, she may select and utilize sexual refusal strategies that are more indirect and passive in order to avoid potential aggressive behavior. As has been previously documented (Brecklin, 2011; Tark & Kleck, 2014), using assertive, active resistance strategies remains the *most effective* method for reducing the likelihood of completed sexual assault. Thus, it remains essential that sexual assault prevention programs not only reiterate the importance of using assertive sexual assault resistance strategies, but also emphasize using these tactics regardless of perceived or actual perpetrator intoxication level. It may also be beneficial to provide education regarding the relationship between intoxication and aggression, as alcohol has been shown to contribute to aggression, but its effect varies as a function of individual- and situational-based instigating and inhibiting factors (Duke et al., 2018; Parrott & Eckhardt, 2018). That is to say, most intoxicated men will not become violent in response to sexual refusal, reinforcing the notion that using assertive sexual assault resistance strategies is crucial. Based on these findings, sexual assault risk reduction programs may also consider including content targeting rape myths that often undermine women's use of forceful resistance strategies, such as the believe that women who defend themselves will be hurt worse (McMahon, 2010). Our finding highlights the need for sexual assault risk reduction programs to address barriers (e.g., fear of perpetrator aggression) to sexual refusal assertiveness in a way that feels accessible within the reality of a given unwanted sexual encounter.

Conceptual Model of Sexual Refusal Assertiveness

Our proposed conceptual model of sexual refusal assertiveness was not supported by our data. That is, Perceived Partner Intoxication did not predict Sexual Refusal Assertiveness, and there were no mediating effects of Anticipated Negative Partner Reaction. There are several possible explanations for these findings. First, it is possible that we did not fully account for trait-levels of sexual assertiveness at baseline. Assertiveness more broadly has been conceptualized as a trait with context-specific fluctuations, such that a person who is more assertive in one situation is expected to be more assertive in other situations, but the degree of assertiveness is context-dependent (Kammrath et al., 2015). We anticipated that the degree of sexual assertiveness would vary based on partner intoxication level; however, we did not assess sexual assertiveness prior to the experimental manipulation, and thus could not account for those within-person fluctuations from baseline. Future research may address this issue by gathering pre-manipulation data on assertiveness, and perhaps consider a multimethod approach to assessing sexual assertiveness. While the Sexual Assertiveness Scale is validated (Morokoff et al., 1997), measuring intention to behave in a sexually assertive manner in response to sexual assault threat is not synonymous with the selection and use of an effective sexual assault resistance strategy. College women may report high intention to behave assertively, but identify use of indirect or passive sexual assault resistance strategies (Masters et al., 2006). The use of an interactive behavioral skills task may address this limitation and represent an area for future research. For example, researchers may benefit from asking participants to select from a range of possible sexual assault resistance strategies in response to the intoxicated character's request for sex. Possible resistance strategies may range from forceful verbal and physical assertiveness (e.g., verbally refusing or enforcing boundaries) to non-assertive tactics (e.g., complying, freezing; Anderson et al., 2016). From this behavioral task, we may be able to determine if perpetrator intoxication level influences the type

of sexual assault resistance strategy selected by participants, with the ultimate goal of providing education to college women on the effectiveness of sexual assault resistance strategies regardless of perpetrator intoxication level.

More recently, researchers have proposed that sexual refusal assertiveness assessment can be approached from a perspective that incorporates automatic cognitions, that is, cognitions that are not necessarily accessible to an individual's introspection and are not subject to volitional control (van Lankveld et al., 2022). Van Lankveld and colleagues (2022) created an Implicit Association Test (IAT) of Sexual Assertiveness, and found that implicit and explicit sexual refusal assertiveness were not significantly correlated. This is to be expected, as separate modes of information processing are believed to underlie implicit attitudes and beliefs (Greenwald & Banaji, 1995; Hofmann et al., 2005); however, it does not exclude the possibility that implicit and explicit sexual assertiveness do not align in some participants. Indeed, the dual-process model of decision-making (Evans & Frankish, 2009) posits that both deliberate and automatic aspects of cognitive processing synergistically determine behavior. Although deliberate cognizing is able to overrule automatic behavioral inclinations, this ability is dependent on contextual factors (Strack & Deutsch, 2004), and thus might increase our understanding of sexual refusal assertiveness within alcohol-infused contexts.

Second, it is possible that our proposed conceptual model did not fully account for the "multivariate cost-benefit analysis" that women engage in when determining whether to refuse unwanted sexual advances (Nurius, 2000, p. 190). The experimental vignettes were intentionally designed to only manipulate partner intoxication level for the sake of causal testing; however, a multitude of psychological barriers to resistance may have influenced whether and how women refused unwanted sexual advances, such as relationship to the perpetrator, perpetrator perceived

demographic characteristics, concern for relationship preservation, and victim intoxication level (Kelley et al., 2016; Loshek & Terrell, 2015). Participants may have been conducting their own “multivariate cost-benefit analysis” when responding to questions about sexual refusal that was influenced more so by third variables than the intended manipulation. Indeed, Bogren and colleagues (2022) argue that intoxicated sexual encounters should be analyzed as an intersection between alcohol intoxication, entrenched sexual scripts, evolving cultures of sexuality, and gendered power dynamics. It is also possible that sexual assertiveness may not be an isolated correlate of sexual behavior, but rather a part of a larger set of individual characteristics associated with higher levels of empowerment in sexual interactions. Indeed, several psychological factors have been associated with sexual assertiveness, including higher self-reported social power (Lammers & Stoker, 2019), higher self-esteem (Ménard & Offman, 2009), lower social anxiety (Schry & White, 2013), and lower sexual perfectionism (Kluck et al., 2018). While laboratory analogues of sexual situations can never fully capture all elements of real sexual situations, future research may ask participants which factors of the sexual scenario most influenced their decisions and to elaborate on their decision-making process to determine which variables might be particularly influential of sexual refusal assertiveness.

An additional possible explanation for the null findings in our model relates to the sheer prevalence of sexual assault in this sample and the normativity of the interactions depicted in the vignettes. Thirty percent of complete rapes reported in our sample involved incapacitation by substance use, suggesting that many participants may be desensitized to, and to an extent, expect the encounter depicted in the intoxication vignettes. Sadly, a recent review of qualitative research on college women’s experiences of sexual assault revealed that sexual assault was normalized and expected as a part of the “student experience,” labelled as a “thread woven into everyday

life” (Tarzia et al., 2024). A particularly poignant quote from Bonomi et al. (2018) captures the normativity of campus sexual assault, with one participant stating: “Like, everyone experiences this [sexual assault] their freshmen year, I’m not special” (p. 56). It is likely, then, that the male character’s behavior in the intoxication vignettes was deemed normative, and even socially acceptable (Lowery et al., 2018; Merrill et al., 2023). In fact, participants in our study perceived the intoxication vignettes as more realistic than the sober vignettes, suggesting that being approached by an intoxicated man at a college party with unwanted sexual advances is more realistic than being approached by a sober man with similar intentions. Importantly, our proposed model was based on findings from two studies (George et al., 2016; Masters et al., 2014) that had recruited community samples of women, of which, less than 34% were full-time or part-time students. Not surprisingly, college students drink more than noncollege peers, and younger people drink more than older people across college and noncollege samples (Carter et al., 2010; Patrick et al., 2020), making alcohol-infused sexual encounters a more normative occurrence for college students. For example, a participant from Holland and Cortina’s (2017) assessment of campus sexual assault described the following situation as “not very serious”: “I was dancing and he pulled his penis out of his pants and rubbed up against me. I thought he was disgusting and capable of doing other things but ... I don’t think that his actions are serious enough to report.” (p. 56). From this disturbing example alone, it might not be surprising that our results varied from those documented with an older community-recruited sample, and it also raises alarms about the potential impact of the normativity of alcohol-infused sexual encounters on the acknowledgement and reporting of sexual assault (Johnstone, 2016). As Peggy Orenstein (2020) concluded, “To say that hook-up culture is lubricated by alcohol would be a gross understatement: it is dependent on it.” (p. 78).

Sexual Assault History as a Moderator

Contrary to our hypothesis, prior sexual assault history did not moderate the relationship between Perceived Partner Intoxication and Anticipated Negative Partner Reaction. This is likely a result of the lack of variability in sexual assault experiences across our sample. Notably, we intended to recruit a sample comprised of 50% of participants with a history of sexual assault and 50% without a history. At the outset, this was achieved through the use of a prescreening question (i.e., “Have you ever experienced sexual assault? That is, any experience of unwanted sexual touching, attempted rape, or completed rape.”). However, as previously noted, omnibus screeners are flawed at best, and when sexual assault experiences were assessed in more detail with the SES, it was revealed that 70% of the sample had at least one prior sexual assault experience. A participant from Atkinson’s (2021) analysis of sexual violence in university settings plainly captures the issue we encountered with assessing sexual assault history:

I wish when I was talking about this you could say ‘oh I know one person, it was this one incident that happened [...]’ But it’s not, it’s every single person, every single woman I know has had some form of inappropriate touching. (p. 196)

Given the prevalence of sexual assault in our sample, and the likelihood that these rates are consistent with rates at other universities, it may be beneficial for sexual risk reduction programs to conceptualize, design, and implement prevention efforts with the expectation that most college women will have had some prior experience of sexual assault. By approaching college women as though they have experienced sexual assault, regardless of whether they have or not, faculty, staff, administrators, and health professionals can begin each interaction with a student prepared to support them where they are (McCauley & Casler, 2015). With the recognition that college women have likely had a myriad of unwanted sexual experiences prior to receiving a sexual

assault risk reduction program, a trauma-informed approach that emphasizes providing college women with choice and promotes agency and recovery is highly recommended for researchers and organizers designing and implementing preventative programs (Campbell et al., 2019; DePrince & Gagnon, 2018).

Prevalence of Sexual Assault in this Sample

Prevalence of sexual assault in our sample was alarmingly higher than other documented prevalence rates in similar samples (Stoner & Cramer, 2019). In our sample of college women, 60% of participants reported at least one experience of completed rape since age 14. Given that most of our participants were college freshmen (65%) at the time of survey completion, it is likely that these sexual assault experiences occurred prior to college or early in the first semester of college, consistent with the “Red Zone” phenomenon that has emerged in public conversations. The “Red Zone” refers to the period of time between the start of the Fall semester and Thanksgiving break in which college women are thought to be at elevated risk for sexual assault (Follingstad et al., 2023). While earlier studies have documented that more than half of college sexual assaults occur between August and November (Cranney, 2015; Flack et al., 2008; Kimble et al., 2008; Krebs et al., 2009), a recent review of the literature critiqued the empirical support for this phenomenon, noting that too few studies have directly assessed the temporality of sexual assault to provide substantive support for the “Red Zone” phenomenon (Follingstad et al., 2023). Since participants were asked to report on sexual assault experiences since age 14, it is possible that some reported on experiences that occurred prior to entering college. Estimates suggest that risk for sexual assault is concentrated in late adolescence, with the rate of sexual assault rising from 16.8% for 15-year-old females to 26.6% for 17-year-old females (Finkelhor et al., 2014). While temporality of sexual assault cannot be determined from this study, our data

document a prevalence of sexual assault that far exceeds the commonly cited rate of “one in four college women” (e.g., Mellins et al., 2017). Perhaps when we ask women more intentionally about their experiences of sexual assault, we are more likely to hear something similar to what Atkinson (2021) found in interviews with college women: “I have six close female friends, and out of six, five of them have been sexually assaulted or raped while at university.” (p. 190).

We believe that the prevalence of sexual assault documented in this study is an accurate estimation of sexual assault among college women who drink at Syracuse University, and we also recognize that it is important to comment on the unique aspects of our methodology that may, in part, explain the elevated prevalence compared to other samples. In fact, the measurement of sexual assault continues to be a leading methodological issue in the field of sexual violence, with researchers (Cook et al., 2011; Krebs, 2014; Rennison & Addington, 2014) and institutions (e.g., Bureau of Justice Statistics) alike having documented concerns regarding commonly employed methods for collecting sexual assault statistics. Consistent with the Sexual Experiences Survey (SES; Koss et al., 2007), our study assessed sexual assault experiences since the age of 14, whereas other studies have assessed sexual assault experiences over the lifetime, since enrolling in college, or over the past academic year (Stoner & Cramer, 2019). Moreover, the SES pioneered the use of behaviorally specific descriptions to assess sexual assault acts and tactics, which has undoubtedly strengthened the assessment of sexual assault (Cook et al., 2011; de Heer & Jones, 2017; Fisher, 2009; Koss et al., 2007; Krebs, 2014). Unfortunately, it is still common practice for surveys, including campus climate surveys, to rely on a “gate strategy” for screening respondents. That is, an omnibus screener that acts as a gate question to cue recall of sexual assault experiences, such as “have you ever been raped?” An answer of “yes” will set off specific follow-up questions to determine essential aspects of the sexual assault; whereas a

response of “no” to the gate item will result in additional items related to sexual assault being skipped (Cook et al., 2011; Koss, 1992). One of many problems with the use of an omnibus screener for assessing sexual assault is that women’s internal working definition of sexual assault may be restricted by a set of ideas of what “real” sexual assault looks like. Women may construct a script for how rape looks, typically involving physical violence from an unknown perpetrator, and then measure their own experiences of sexual assault as falling short of this script (Peterson & Muehlenhard, 2011; Tarzia et al., 2024). A participant from Atkinson’s (2021) study clearly explains the problem with omnibus screening questions:

When most people, if you said to them, well ‘have you been raped?’ They would probably say no. If you say to them, ‘has someone coerced you into something that you didn’t want to do, did you feel pressured, or you couldn’t say no’, then loads of people will be like ‘oh yeah that happened last week’. (p. 198)

In contextualizing the prevalence of sexual assault documented in this sample, it is important to consider that our sample of college women reported heavier alcohol use compared to other samples of college women — a well-documented risk factor for sexual assault (7.80 [$SD = 1.87$] vs. 6.00 [$SD = 5.00$]; (Madson et al., 2020). The average AUDIT score indicated that, while not advertising to do so, we recruited a sample of hazardous drinkers, who represent a cohort of college women at greater risk for sexual assault. Indeed, data from a three-year longitudinal study found that risk for sexual assault increased threefold among women who were classified as alcohol abusers or alcohol dependents, based on definitions from the Diagnostic and Statistical Manual for Mental Disorders (4th ed.), compared to women who were categorized as non-abusers/dependent (Caamano-Isorna et al., 2021). Prevalence rates of sexual assault from comparable samples of college women drinkers have also been documented to be higher than the

commonly cited “one in four” estimate (DeCou & Skewes, 2021; Reynolds et al., 2023), suggesting that, while still alarming, our rate of sexual assault may be moderately consistent with similar samples of college women drinkers. It is also worthwhile to consider the impact that the #MeToo movement may have had on reporting of sexual assault, such that college women may be more likely to label and acknowledge their experiences of unwanted sexual contact, particularly within alcohol-infused contexts, as a “sexual assault” in the post-#MeToo era (Jaffe et al., 2021). Taken together, our data have identified a cohort of college women who have been remarkably impacted by sexual violence, challenging previously assumed notions of the extent of campus sexual assault.

A curious finding that emerged from our data was the prevalence of sexual assault that was perpetrated by women (26%). Not surprisingly, most extant literature focuses on, and implicitly assumes, a victimization dyad in which a female victim is assaulted by a male perpetrator (Stemple et al., 2017). Estimates of female-perpetrated sexual assault are not well known, and less is known about female perpetration of sexual assault on female victims (Munroe & Shumway, 2022). Recent data from a community-recruited sample of adults (67% female) found that 61% reported experiences of childhood female-perpetrated sexual assault and 18% reported experiences of adulthood female-perpetrated sexual assault. Victims of female-perpetrated sexual assault reported high levels of lifetime trauma, revictimization, and adverse mental health, indicating that this population is significantly burdened despite widespread unsubstantiated beliefs that female-perpetrated sexual assault is less violent, severe, or damaging (Munroe & Shumway, 2022). It is possible that the prevalence of female-perpetrated sexual assault in our sample was partly a result of the measurement timeframe utilized (since age 14), which may have captured childhood experiences of female-perpetrated sexual assault as opposed

to those that occurred during college. Regardless, the nascency of research on female-perpetrated sexual assault is disquieting, and highlights a crucial area for future research to focus efforts in order to better support an underrecognized population.

Strengths

The current study advances the literature by experimentally testing barriers to sexual refusal assertiveness in college women which can be further explored and integrated into existing sexual assault prevention programs. While our full model was unsupported, our finding that Perceived Partner Intoxication had a significant effect on Anticipated Negative Partner Reaction is novel, with implications for the content included and emphasized in risk reduction programs. The use of a novel vignette-based experimental approach that allowed for exploration of causal relationships is a critical strength of this study. The vast majority of research on college women's sexual refusal assertiveness has relied on cross-sectional data (López Alvarado et al., 2020). While cross-sectional data can signal that two variables are related, they do not provide information about causal relationships. By utilizing an experimental design, we were able to causally test whether perceived partner intoxication influenced sexual refusal assertiveness.

The extensive formative research conducted prior to conducting the experimental study is another critical strength of this project. Using a mixed-methods approach, the formative research allowed for the development of experimental vignettes that could successfully induce the intended intoxication manipulation. Furthermore, qualitative data collected during the formative research phase both confirmed our initial hypotheses and added to a growing body of qualitative research exploring factors that impact college women's assertiveness within sexual encounters (Tarzia et al., 2024). Qualitative data not all provide rich insight into the lived experiences of college women, but gives a voice to the numbers that is often overlooked in clinical research

(Campbell et al., 2017). As acclaimed researcher on gender and violence, Claire Renzetti, Ph.D., states: “Good social science is that which seeks to give voice to and improve the life conditions of the marginalized.” (Renzetti, 1997, p. 143). For a population that is often silenced by society (Sweeney et al., 2019), it may be particularly salient to provide sexual assault survivors with a voice within the sexual violence literature through qualitative methods. Chantel Miller, author of *Know My Name: A Memoir*, illustrates this sentiment in an interview with BBC News, stating “There is a lot of power in being able to craft the narrative again.” (Turner, 2019). A mixed-methods approach is one such platform for new narratives to be fashioned and silenced voices to be heard.

Limitations

The results of the study should be considered in the context of its limitations. As previously noted, since baseline data on sexual assertiveness were not collected, we could not control for trait-level assertiveness prior to the experimental manipulation, perhaps limiting our ability to capture changes in assertiveness following the intoxication manipulation. Although not the primary focus of this project, data on *when* experiences of sexual assault occurred were not collected, preventing us from determining the prevalence of sexual assault experiences since enrolling in college, as well as elucidating the temporality of occurrences. It is also noteworthy that our sample was fairly homogenous (i.e., white Freshmen) due to recruitment through introductory psychology courses. Rates of sexual assault and alcohol use have both been shown to decrease throughout students’ college careers (Haardörfer et al., 2021; Mellins et al., 2017), suggesting that older college students may be less infused with campus party culture. As such, it might be anticipated that the scenario depicted in the vignettes is *slightly* less normative for an older college student sample, and might elicit responses more similar to those found in George et

al.'s (2016) and Masters et al.'s (2014) samples. Additionally, the intoxication level of the protagonist in the vignettes was held constant to prevent potential confounding; however, women's level of intoxication affects both their ability to effectively select and implement resistance strategies, as well as how perpetrators approach potential targets (Bogren et al., 2023). Future research might consider the use of an alcohol administration design to determine how college women's level of intoxication influences their perceptions of a potential perpetrator's intoxication level and, in turn, their willingness to refuse unwanted sexual advances. It is also possible that our study was underpowered to detect a three-way interaction, as our recruited sample was slightly lower than the *a priori* power estimate following elimination of low quality data (e.g., completed study in under five minutes).

Clinical Implications

The goal of this line of clinical health research is to reduce the epidemic of sexual assault. Although sexual assault prevention programs are routinely implemented on college campuses (Bonar et al., 2020), few risk reduction programs have been rigorously evaluated in college populations or shown marked improvements in campus sexual assault rates (Bonar et al., 2020; Wright et al., 2020). A notable exception in the literature is the Enhanced Assess, Acknowledge, Act (EAAA) Sexual Assault Resistance program, which consists of four group sessions delivered by female facilitators aiming to: 1) decrease the time needed to assess a situation as dangerous and take action, 2) reduce emotional obstacles to taking the action necessary to get away, and 3) maximize use of verbal and physical self-defense tactics most likely to be effective (Senn et al., 2015). A multisite RCT in Canada found that the EAAA program increased women's perception of their risk of acquaintance rape, knowledge, self-efficacy, and willingness to use self-defense strategies in hypothetical situations (Senn et al., 2017). As illustrated by the success of the

EAAA program, the effectiveness of sexual assault risk reduction programs can be maximized when designed to address theoretically informed and evidence-based malleable correlates of alcohol-related sexual assault.

It is also worthwhile to consider the implications of these findings for prevention efforts with college men. Perspective-taking, a form of empathy, is associated with lower risk for sexual assault perpetration (Hudson-Flege et al., 2020), and has been identified as a theoretical mediator between prevention efforts and reductions in sexual assault perpetration (Salazar et al., 2014, 2019). Examples of enhanced perspective-taking in the context of sexual assault may include decreased negative attitudes toward date rape, decreased rape myth acceptance, and increased empathy for rape victims. While not directly assessed in this study, our finding that Perceptions of Perpetrator Intoxication level impacts Anticipation of a Negative Partner Reaction to sexual refusal, may suggest an additional facet of perspective-taking that can be addressed in perpetrator prevention programs. College men may benefit from learning how their own intoxication level, real or perceived, can hinder college women's willingness to reject sexual advances, and potentially position men to erroneously interpret a lack of sexual refusal as consent. Some researchers have even begun to use immersive virtual reality to allow perpetrators of domestic abuse to be in the body of a victim as a means to increase empathy and perspective-taking (Seinfeld et al., 2018). Although virtual reality is not yet widespread, it provides an avenue to increase perspective-taking among college men, with the goal of modifying sociocultural processes thought to underlie sexual violence perpetration.

We draw the same conclusion from our data that Koss and colleagues documented in 1987: "The most important conclusion suggested by this entire line of research is that rape is much more prevalent than previously believed." (p. 170). Ending the crisis of campus sexual

assault will require comprehensive prevention from a public health perspective that addresses risk and protective factors across the social ecology: individual, bystander, institution, community, and, most importantly, society. That patriarchal ideology forms the basis of rape culture within society and men dominant the “drafting, refinement, interpretation, ratification, and implementation of international human rights” (Rao, 1993, p. 508), presents the biggest barrier to ameliorating this crisis. This sentiment has been documented for over forty years, and dates back centuries, as Johnson (1980) eloquently surmises, “That sexual violence is so pervasive supports the view that the locus of violence against women rests squarely in the middle of what our culture defines as 'normal' interaction between men and women.” (p. 146). While the notion of shifting a culture can feel both daunting and discouraging, we propose that the first step for university staff, faculty, and administrations is to *listen*. If women’s voices are not heard or believed, then nothing can change and violence goes on. Tuning in to the silent screams of those who have experienced sexual violence might reveal novel ways to foster meaningful change and empower a formidable community of women.

Conclusion

The present study was the first experimental study to test the effects of alcohol-related perceptions and expectancies on college women’s willingness to engage in sexually assertive behavior. While the proposed conceptual model of sexual refusal assertiveness was unsupported by these data, Perceived Partner Intoxication had a significant effect on Anticipated Negative Partner Reaction, indicating that alcohol-related partner perceptions may impact college women’s willingness and ability to use sexual assault resistance strategies. Alarming, prevalence of sexual assault in this sample far exceeded the commonly cited rate of “one in four college women,” raising significant concerns about *how* sexual assault is assessed and *why* such

inadequate methodologies have historically been used by colleges. The focus of this research project was to identify ways through which we can empower college women with knowledge and skills to act on their own behalf to defend their sexual rights, yet it would be overly simplistic to suggest that sexual refusal assertiveness will entirely protect women from sexual violence. Ending the crisis of campus sexual assault will require a comprehensive approach that situates violence as a community issue wherein all members of the community have a role to play in intervention, rather than solely addressing individual behavior (McMahon et al., 2021). Multiple parallel lines of research exploring how to stop sexual assault perpetration, empower bystanders to intervene on others' behalf, and improve institutional leadership's handling of sexual misconduct are equally necessary. However, many of the systems designed to ameliorate the crisis of campus sexual assault have failed to do so. As such, continued research on how to empower college women within the current college climate is a crucial step for increasing safety on college campuses.

Table 1. Characteristics of participants enrolled in the formative research phase

	Total	Phase 1^a	Phase II^b	Phase III^c
	n (%)	n (%)	n (%)	n (%)
Mean age (<i>SD</i>)	19.23 (1.08)	18.48 (0.91)	18.60 (0.70)	20.62 (1.63)
Race				
Caucasian/White	34 (57.6%)	19 (57.6%)	7 (70.0%)	8 (50.0%)
Black/African American	4 (6.8%)	3 (9.1%)	1 (10.0%)	0 (0.0%)
Asian/Pacific Islander	10 (16.9%)	4 (12.1%)	0 (0.0%)	6 (37.5%)
Mixed race/other	11 (18.6%)	7 (21.2%)	2 (20.0%)	2 (12.5%)
Ethnicity				
Hispanic or Latino	8 (13.6%)	4 (12.1%)	1 (10.0%)	3 (18.7%)
Not Hispanic or Latino	51 (86.4%)	29 (87.9%)	9 (90.0%)	13 (81.3%)
International student				
Yes	10 (16.9%)	4 (12.1%)	0 (0.0%)	6 (37.5%)
No	49 (83.1%)	29 (87.9%)	10 (100.0%)	10 (62.5%)
Academic standing				
Freshman	34 (57.6%)	25 (75.8%)	7 (70.0%)	2 (12.5%)
Sophomore	12 (20.3%)	6 (18.2%)	3 (30.0%)	3 (18.8%)
Junior	5 (8.5%)	1 (3.0%)	0 (0.0%)	4 (25.0%)
Senior	8 (13.6%)	1 (3.0%)	0 (0.0%)	7 (43.8%)
Residential status				

On-campus (e.g., dormitory)	42 (71.2%)	28 (84.8%)	9 (90.0%)	5 (31.3%)
Off-campus (e.g., apartment)	16 (27.1%)	4 (12.1%)	1 (10.0%)	11 (68.8%)
Relationship status				
Single/non-monogamous relationship	44 (74.6%)	24 (72.7%)	9 (90.0%)	11 (68.8%)
Monogamous relationship	14 (23.7%)	8 (24.2%)	1 (10.0%)	5 (31.3%)
History of Sexual Assault				
Yes	23 (39.0%)	13 (39.4%)	5 (50.0%)	5 (31.3%)
No	36 (61.0%)	20 (60.6%)	5 (50.0%)	11 (68.8%)

Note. $N = 59$, ^a $n = 33$, ^b $n = 10$, ^c $n = 16$. M = mean, SD = standard deviation; Percentages may not add up to 100% due to rounding and missing data (i.e., participants declining to respond to certain measures).

Table 2. Summary of qualitative feedback from Phase II of the formative research phase and associated changes to the experimental vignettes

Sub-theme	Feedback	Illustrative Quote	Changes
I. Content			
Realistic College Party Scene	<ul style="list-style-type: none"> All participants reported that vignettes realistically depicted a typical college party. 	<p><i>“It sounded like completely normal, I could imagine, like, some of the situations happening to me.”</i></p>	<ul style="list-style-type: none"> No changes were made.
Sober at a College Party	<ul style="list-style-type: none"> Some participants reported that it was unrealistic for a college student to attend a party while sober. 	<p><i>“And just in my mind, I would think the majority of the time, the guy would also be drinking, but I assume that was intended, also.”</i></p>	<ul style="list-style-type: none"> Given that the sober condition was necessary for the experimental manipulation, no changes were made.
“Girl Code”	<ul style="list-style-type: none"> Several participants reported that it was unrealistic for the protagonist’s friends to leave her alone at the party. 	<p><i>“I was really hung up on the fact that she didn’t leave with her friends. If I only had one or two drinks, I would 100 percent leave with my friends.”</i></p>	<ul style="list-style-type: none"> Vignettes were modified so that the protagonist’s friends no longer left the party, and the male character escorted the protagonist to a separate bedroom at the same party.
Alcohol-Aggression Link	<ul style="list-style-type: none"> Almost all participants reported that the level of intoxication of the male character influenced their perception of whether he would behave aggressively in response to sexual refusal. 	<p><i>“And then, for the males, like, how intoxicated they were definitely played a role in how aggressive they were, in my mind. Like, the more intoxicated they were, the more intoxicated they came off, like, their words in the vignette came off as more aggressive.”</i></p>	<ul style="list-style-type: none"> No changes were made.
Additional Factors Influencing Aggression	<ul style="list-style-type: none"> Some participants noted that additional factors influenced their perceptions of the male character’s potential for sexual aggression, such as 	<p><i>“I also took into account whether the roommates were home or not, when you, like, left the party or not. I thought that whether the guy was sober or had a few drinks, I think there was a lower chance</i></p>	<ul style="list-style-type: none"> No changes were made.

	level of isolation and Greek Life affiliation.	<i>that he would be aggressive or pressure you to do anything, knowing that there were other people in, like, rooms next-door or something.”</i>	
Willingness to Engage in Sexual Activity	<ul style="list-style-type: none"> Some participants reported that it was unclear based on the protagonist’s behavior whether she was interested in having sexual intercourse with the male character. 	<p><i>“And then, I mean, I guess kind of seeing the part where they're, like, "He's kissing you and then he pulls back and he says that he wants to have sex with you," I feel like it would be helpful to have a response from the protagonist, there. 'Cause I feel like that – or leaving it open-ended, or stopping there and stopping the questioning there might be better, because then it leaves it kind of more open-ended and it lets you have your own opinion.”</i></p>	<ul style="list-style-type: none"> Vignettes were modified so that the protagonist explicitly states that she is not interested in “hooking-up” with the male character.
Post-Traumatic Stress Response	<ul style="list-style-type: none"> No respondents reported that the vignettes would elicit a post-traumatic stress response for participants who had a prior history of sexual violence. 	<p><i>“Like, although I haven't had any crazy traumatic experience or anything, I don't think they would've been, like, that triggering for certain people. They weren't very, like, intense or anything. I thought that all of the dialogue that was in it was very normal, nothing too aggressive or anything, so, I don't know, I thought they were pretty good.”</i></p>	<ul style="list-style-type: none"> No changes were made.
II. Modality			
Video Modality	<ul style="list-style-type: none"> All participants reported that the video modality of the vignettes was acceptable. 	<p><i>“No, I liked how it was in a video rather than just a written vignette, 'cause I feel like the speed was good and it also gave you enough time to read it and process it. So you weren't just, like, flying through it,</i></p>	<ul style="list-style-type: none"> No changes were made.

		<i>which I liked – yeah, I feel like it was set up well.”</i>	
Option to Review Vignettes	<ul style="list-style-type: none"> In addition to the vignette in video form, some respondents noted that it would be helpful to be provided with the written vignette alongside the survey items as a reference. 	<i>“The only thing I could say that would make it easier is being able to go back to the vignette after you skip forward, 'cause I definitely would've gone back to almost every single one of them, to ensure my answers.”</i>	<ul style="list-style-type: none"> The written vignette will be included at the top of each survey instrument for participants’ reference.
III. Format			
Sustained Attention	<ul style="list-style-type: none"> All participants reported that the length of the vignettes was acceptable for sustaining attention. 	<i>“I thought they were pretty clear, and they were short, so it wasn't like you were getting bored or uninterested, 'cause it ends it and then it went to the questions.”</i>	<ul style="list-style-type: none"> No changes were made.
Dialogue	<ul style="list-style-type: none"> Some participants reported that it would be helpful to include more dialogue from the protagonist to gauge her level of interest in the male character. 	<i>“I guess kind of seeing the part where they're, like, "He's kissing you and then he pulls back and he says that he wants to have sex with you," I feel like it would be helpful to have a response from the protagonist, there. 'Cause I feel like that – or leaving it open-ended, or stopping there and stopping the questioning there might be better, because then it leaves it kind of more open-ended and it lets you have your own opinion.”</i>	<ul style="list-style-type: none"> Dialogue was included from the protagonist to indicate that she is not interested in “hooking up” with the male character.

Table 3. Descriptive statistics for experimental vignettes from Phase III of the formative research phase

Variables	Intoxication Condition		Sober Condition		Anchor
	V1	V5	V3	V4	V2
Perceived realism ^a	3.13 (0.89)	3.19 (0.83)	3.13 (0.89)	3.25 (0.78)	3.44 (0.96)
Perceived intoxication ^b	3.69 (0.74)	3.50 (0.82)	1.06 (0.25)	1.19 (0.40)	1.00 (0.00)
Perpetrator assertiveness ^c	4.56 (0.51)	3.94 (0.77)	3.94 (1.12)	3.88 (0.89)	2.69 (0.87)
Perpetrator attractiveness ^c	2.31 (1.01)	2.88 (1.26)	2.50 (1.10)	2.38 (1.03)	3.69 (0.79)
Perpetrator masculinity ^c	3.88 (1.03)	3.69 (0.70)	3.94 (0.68)	3.63 (0.81)	3.50 (0.52)
Acceptability of actions ^c	1.19 (0.40)	1.50 (0.52)	1.38 (0.62)	1.44 (0.51)	4.81 (0.54)
Perpetrator age	20.53 (1.06)	20.13 (1.30)	20.33 (1.35)	20.79 (1.25)	20.33 (1.72)
Perpetrator race					
White	15 (93.8%)	15 (93.8%)	14 (87.5%)	10 (62.5%)	13 (81.3%)
Black	0 (0.0%)	0 (0.0%)	1 (6.3%)	2 (12.5%)	0 (0.0%)
Asian	0 (0.0%)	0 (0.0%)	1 (6.3%)	0 (0.0%)	3 (18.8%)
Hispanic/Latinx	1 (6.3%)	1 (6.3%)	0 (0.0%)	3 (18.8%)	0 (0.0%)
Other	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (6.3)	0 (0.0%)
Perpetrator class year					
Freshman	2 (12.5%)	4 (25.0%)	3 (18.8%)	3 (18.8%)	5 (31.3%)
Sophomore	4 (25.0%)	5 (31.3%)	3 (18.8%)	4 (25.0%)	5 (31.3%)
Junior	8 (50.0%)	7 (43.8%)	8 (50.0%)	6 (37.5%)	(12.5%)
Senior	2 (12.5%)	0 (0.0%)	2 (12.5%)	3 (18.8%)	4 (25.0%)
Perpetrator Greek life					
Yes	11 (68.8%)	11 (68.8%)	11 (68.8%)	9 (56.3%)	3 (18.8%)
No	5 (31.3%)	5 (31.3%)	5 (31.3%)	7 (43.8%)	13 (81.3%)

Note. N = 16

^a = response options ranged from 1 (not at all realistic) to 4 (very realistic)

^b = response options ranged from 1 (not at all intoxicated) to 4 (very intoxicated)

^c = response options ranged from 1 (very unassertive/unattractive/very feminine/very unacceptable) to 5 (very assertive/attractive/very masculine/very acceptable)

Percentages may not add up to 100% due to missing data (i.e., participants declining to respond to certain measures)

Table 4. Bivariate associations between key study variables and trait-level sexual refusal assertiveness from the experimental phase

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. SRA	—									
2. Age	.03	—								
3. SCSES	.27**	.14	—							
4. SSSS	.07	.08	.05	—						
5. SSS	.16*	-.13	-.04	.07	—					
6. IMS	.00	-.01	.03	.01	.27**	—				
7. AUDIT-C	.06	-.14	-.15*	.13	.13	.01	—			
8. IES	-.01	.18	-.13	-.14	.00	.13	-.05	—		
9. DERS	.01	.00	-.13	.17*	.27**	.13	-.07	.33*	—	
10. Expectancies	.04	-.05	.02	-.07	-.08	.07	.07	-.16	-.25**	—

Note. $N = 199$; SRA = Sexual Refusal Assertiveness; SCSES = Sexual Communication Self-Efficacy Scale; SSSS = Sexual Sensation Seeking Scale; SSS = Sexual Script Scale; IMS = Internalized Misogyny Scale; AUDIT-C = Alcohol Use Disorder Identification Test – Consumption; IES = Impact of Event Scale; DERS = Difficulties in Emotion Regulation Scale; Expectancies = Total Score for Alcohol-Aggression Expectancies from the Alcohol Expectancies Regarding Sex, Aggression, and Sexual Vulnerability Scale

$p < .05$ * $p < .01$ **

Table 5. Characteristics of participants enrolled in the experimental phase

	<i>N</i> (%)
Mean age (<i>SD</i>)	18.7 (1.1)
Race	
Caucasian/White	149 (76.8)
Black/African American	3 (1.5)
Asian/Pacific Islander	25 (12.9)
Mixed race/other	17 (8.7)
Ethnicity	
Hispanic or Latino	24 (12.1)
Not Hispanic or Latino	171 (85.9)
International student	
Yes	17 (8.5)
No	176 (88.4)
Academic standing	
Freshman	130 (65.3)
Sophomore	34 (17.1)
Junior	20 (10.1)
Senior	12 (6.0)
Residential status	
On-campus (e.g., dormitory)	162 (81.4)
Off-campus (e.g., apartment)	33 (16.6)
Relationship status	
Single/non-monogamous relationship	125 (63.8)
Monogamous relationship	70 (35.2)
History of Sexual Assault ^a	
Yes	120 (60.3)
No	79 (39.7)

Note. *N* = 199. Percentages may not add up to 100% due to rounding and missing data (i.e., participants declining to respond to certain measures).

^a Reported as a completed rape (i.e., oral, vaginal, or anal) by any means (i.e., coercion, intoxication, or force) on the Sexual Experiences Survey–Short Form

Table 6. Frequency of endorsement of sexual assault in the experimental phase

Type of victimization	<i>n</i> (%)
Any experience	
Unwanted touching	141 (70.6)
Attempted rape	118 (55.3)
Completed rape	120 (60.3)
Most serious victimization	
Unwanted touching	18 (9.0)
Attempted rape	17 (8.5)
Completed rape	120 (60.3)

Note. Total N = 199. Percentages may add up to greater than 100% due to participants reporting multiple experiences of sexual assault (e.g., unwanted touching and attempted rape).

Table 7. Frequency of attempted and completed rape instances by tactic

	Attempted			Completed		
	Oral	Anal	Vaginal	Oral	Anal	Vaginal
Coercion	226 (57.5)	40 (48.8)	197 (54.0)	179 (56.8)	40 (42.6)	148 (47.6)
Incapacitation	102 (26.0)	21 (25.6)	104 (28.5)	87 (27.6)	24 (25.5)	100 (32.5)
Force	65 (16.4)	21 (25.6)	64 (17.5)	49 (15.6)	30 (31.9)	63 (20.3)
Total	393	82	365	315	94	311

Note. N = 1,560 instances of attempted or completed rape reported across the sample of 199 college women; Presented as *n* (%); Percentages may add up to greater than 100% due to rounding

Table 8. Descriptive statistics for individual difference variables from the experimental phase

Variable	Mean	SD	Range	Skewness	Kurtosis	α
Alcohol expectancies for men						0.87
Aggression	14.79	5.15	7-32	0.48	0.22	
Sexual affect	13.96	3.95	6-30	0.54	1.18	
Sexual drive	8.30	3.22	6-20	1.22	0.76	
Vulnerability to sexual coercion	17.10	5.95	6-30	0.35	-0.31	
Alcohol expectancies for women						0.90
Aggression	19.91	5.80	7-35	0.29	0.26	
Sexual affect	10.86	3.91	6-22	0.38	-0.54	
Sexual drive	11.50	4.03	6-24	0.42	-0.10	
Vulnerability to sexual coercion	8.64	3.87	6-30	1.94	1.99	
Sexual communication self-efficacy						0.91
Contraceptive communication	8.62	2.18	3-12	-0.17	-0.27	
Positive sexual messages	18.30	3.50	11-24	-0.01	-0.80	
Negative sexual messages	11.62	2.87	4-16	0.02	-0.55	
Sexual history	10.77	2.97	4-16	0.05	-0.66	
Condom negotiation	9.77	2.22	3-12	-0.80	-0.11	
Sexual sensation seeking	22.47	5.48	11-39	0.35	0.19	0.78
Sexual scripts						0.87
Sexual standards	24.73	9.18	9-50	0.16	-0.59	
Sexual simplicity and complexity	31.76	5.85	7-42	-0.54	1.32	
Sex drive	17.62	5.63	5-30	0.04	-0.28	
Performance and orgasm	17.30	4.32	5-27	-0.18	-0.20	
Players	12.35	3.73	2-22	-0.61	0.44	
Emotional sex	11.96	2.50	3-17	-0.53	1.25	
Internalized Misogyny	44.94	17.08	17-114	0.56	0.17	0.91
Alcohol use	7.84	2.04	4-15	0.38	-0.2	0.64

Trauma-related distress	40.88	15.60	22-85	0.88	0.26	0.80
Emotion dysregulation	49.19	12.02	22-86	0.22	-0.52	0.85

Note. $N = 199$; Alcohol use was assessed with the Alcohol Use Disorders Identification Test – Consumption; Trauma-related distress was assessed with the Impact of Event Scale; Emotion dysregulation was assessed with the Difficulty with Emotion Regulation Scale

Table 9. Descriptive statistics for outcome variables and experimental vignettes from the experimental phase

Variables	Intoxication Condition		Sober Condition		Anchor	t-test ^e
	V1	V5	V3	V4		
Negative partner reaction ^a	19.66 (3.73)	18.18 (4.38)	17.56 (4.03)	16.98 (4.32)	—	-6.95***
Sexual refusal assertiveness ^a	20.05 (3.70)	19.85 (3.86)	19.62 (4.02)	19.88 (3.85)	—	1.52
Perceived realism ^b	3.18 (0.83)	3.27 (0.75)	3.12 (0.82)	3.03 (0.81)	3.75 (0.54)	3.75**
Perceived intoxication ^c	3.63 (0.70)	3.40 (0.98)	1.10 (0.40)	1.22 (0.55)	1.08 (0.42)	-39.01***
Perpetrator assertiveness ^d	4.05 (1.02)	4.12 (0.94)	4.18 (0.90)	4.04 (0.94)	2.31 (1.16)	0.48
Perpetrator attractiveness ^d	2.61 (1.07)	2.63 (1.07)	2.75 (1.03)	2.69 (0.95)	3.39 (0.73)	-1.83
Perpetrator masculinity ^d	3.84 (0.71)	3.69 (0.75)	3.74 (0.72)	3.59 (0.75)	3.35 (0.59)	-3.30**
Acceptability of actions ^d	1.39 (0.70)	1.51 (0.81)	1.57 (0.96)	1.54 (0.84)	4.73 (0.84)	-2.88**
Perpetrator age	19.49 (0.97)	19.37 (1.01)	19.59 (1.11)	19.34 (1.01)	18.98 (1.07)	0.68
Perpetrator race						
White	189 (95.0%)	183 (92.0%)	171 (85.9%)	126 (63.3%)	152 (76.4%)	
Black	4 (2.0%)	3 (1.5%)	9 (4.5%)	34 (17.1%)	16 (8.0%)	
Asian	0 (0.0%)	1 (0.5%)	5 (2.5%)	4 (2.0%)	3 (1.5%)	
Hispanic/Latinx	0 (0.0%)	2 (1.0%)	0 (0.0%)	11 (5.5%)	1 (0.5%)	
Other	5 (2.5%)	9 (4.5%)	11 (5.5%)	19 (9.5%)	20 (10.1%)	
Perpetrator class year						
Freshman	20 (10.1%)	48 (24.1%)	46 (23.1%)	47 (23.6%)	97 (48.7)	
Sophomore	89 (44.7%)	97 (48.7%)	68 (34.2%)	84 (42.2%)	67 (33.7)	
Junior	69 (34.7%)	38 (19.1%)	67 (33.7%)	50 (25.1%)	27 (13.6)	
Senior	21 (10.6%)	13 (6.5%)	16 (8.0%)	16 (8.0%)	6 (3.0)	
Perpetrator Greek life						
Yes	184 (87.4%)	131 (65.8%)	109 (54.8%)	108 (54.3%)	63 (31.7%)	
No	25 (12.6%)	65 (32.7%)	90 (45.2%)	89 (44.7%)	135 (67.8%)	

Note. N = 199

^a = items totaled

^b = response options ranged from 1 (not at all realistic) to 4 (very realistic)

^c = response options ranged from 1 (not at all intoxicated) to 4 (very intoxicated)

^d = response options ranged from 1 (very unassertive/unattractive/very feminine/very unacceptable) to 5 (very assertive/attractive/very masculine/very acceptable)

^e = T-tests compared grand means for the experimental and sober conditions

* $p < .05$

** $p < .01$

*** $p < .001$

Percentages may not add up to 100% due to missing data (i.e., participants declining to respond to certain measures)

Table 10. Direct and Indirect Effects for Mediation Model of Perceived Partner Intoxication on Sexual Refusal Assertiveness via Anticipated Negative Partner Reaction

	Effect	SE (Boot)	<i>t</i>	<i>p</i>	Boot LLCI	Boot ULCI
Direct Effect	0.460	0.383	1.200	0.231	-0.296	1.218
Indirect Effect	-0.044	0.069	–	–	-0.204	0.073

Note. N = 189. SE = standard error; LLCI = lower level confidence interval; ULCI = upper level confidence interval. Boldface text indicates significant effect.

Table 11. Model Coefficients and Conditional Indirect Effects for Moderated Mediation Model

Predictor Variable	Dependent Variable					
	Model 1			Model 2		
	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>
	Anticipated Negative Partner Reaction (M)			Sexual Refusal Assertiveness (Y)		
Perceived Partner Intoxication (X)	0.757	0.476	0.113	0.437	0.376	0.247
Anticipated Negative Partner Reaction (M)	–	–	–	-0.123	0.118	0.301
Sexual Assault History (W1)	0.537	2.218	0.809	-3.866	2.642	.145
Perceived Partner Intoxication x Sexual Assault History (X x W1)	-0.083	0.615	0.893	–	–	–
Anticipated Negative Partner Reaction x Sexual Assault History (M x W1)	–	–	–	0.127	0.138	0.356
Constant	5.676	2.338	<.05	14.810	2.758	<.001
	<i>R</i>² = 0.654			<i>R</i>² = 0.429		
Conditional Indirect Effects of Sexual Assault History						
Sexual Assault History	Effect	<i>SE</i> (Boot)	Boot LLCI		Boot ULCI	
Yes	0.003	0.071	-0.138		0.158	
No	-0.093	0.137	-0.439		0.086	
Index of Moderated Mediation						
Mediator	Index	<i>SE</i> (Boot)	Boot LLCI		Boot ULCI	
Anticipated Negative Partner Reaction	0.0960	0.143	-0.121		0.442	

Note. N = 189. X = independent variable; M = mediator; W = moderator; Y = dependent variable; B = unstandardized beta coefficient; SE = standard error; LLCI = lower level confidence interval; ULCI = upper level confidence interval. Boldface text indicates significant effect.

Table 12. Model Coefficients and Conditional Indirect Effects for Moderated-Moderated Mediation Model

Predictor Variable	Dependent Variable					
	Model 1			Model 2		
	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>
	Anticipated Negative Partner Reaction (M)			Sexual Refusal Assertiveness (Y)		
Perceived Partner Intoxication (X)	1.905	1.245	0.128	0.446	0.381	0.244
Anticipated Negative Partner Reaction (M)	–	–	–	-0.119	0.119	0.322
Sexual Assault History (W1)	4.731	6.996	0.500	-3.741	2.670	0.163
Alcohol-Aggression Expectancies (W2)	0.257	0.322	0.425	–	–	–
Perceived Partner Intoxication x Sexual Assault History (X x W1)	-1.023	1.923	0.596	–	–	–
Perceived Partner Intoxication x Alcohol-Aggression Expectancies (X x W2)	-0.081	0.087	0.353	–	–	–
Sexual Assault History x Alcohol-Aggression Expectancies (W1 x W2)	-0.286	0.463	0.538	–	–	–
Perceived Partner Intoxication x Sexual Assault History x Alcohol-Aggression Expectancies (X x W1 x W2)	0.059	0.127	0.645	–	–	–
Anticipated Negative Partner Reaction x Sexual Assault History (M x W1)	–	–	–	0.123	0.139	0.380
Constant	2.083	4.594	0.651	14.732	2.791	<.001
		<i>R</i>² = 0.668			<i>R</i>² = 0.426	

Conditional Indirect Effects of Alcohol-Aggression Expectancies

	Effect	SE (Boot)	Boot LLCI	Boot ULCI
Sexual Assault History				
Low, -1 <i>SD</i>	0.003	0.106	-0.251	0.216
Mean	0.002	0.062	-0.121	0.142
High, +1 <i>SD</i>	0.002	0.083	-0.146	0.212
No Sexual Assault History				
Low, -1 <i>SD</i>	-0.139	0.195	-0.574	0.201
Mean	-0.082	0.134	-0.429	0.099
High, +1 <i>SD</i>	-0.034	0.136	-0.388	0.174

Note. N = 189. X = independent variable; M = mediator; W = moderator; Y = dependent variable; B = unstandardized beta coefficient; SE = standard error; LLCI = lower level confidence interval; ULCI = upper level confidence interval. Boldface text indicates significant effect.

Figure 1

Proposed Model of Sexual Refusal Assertiveness

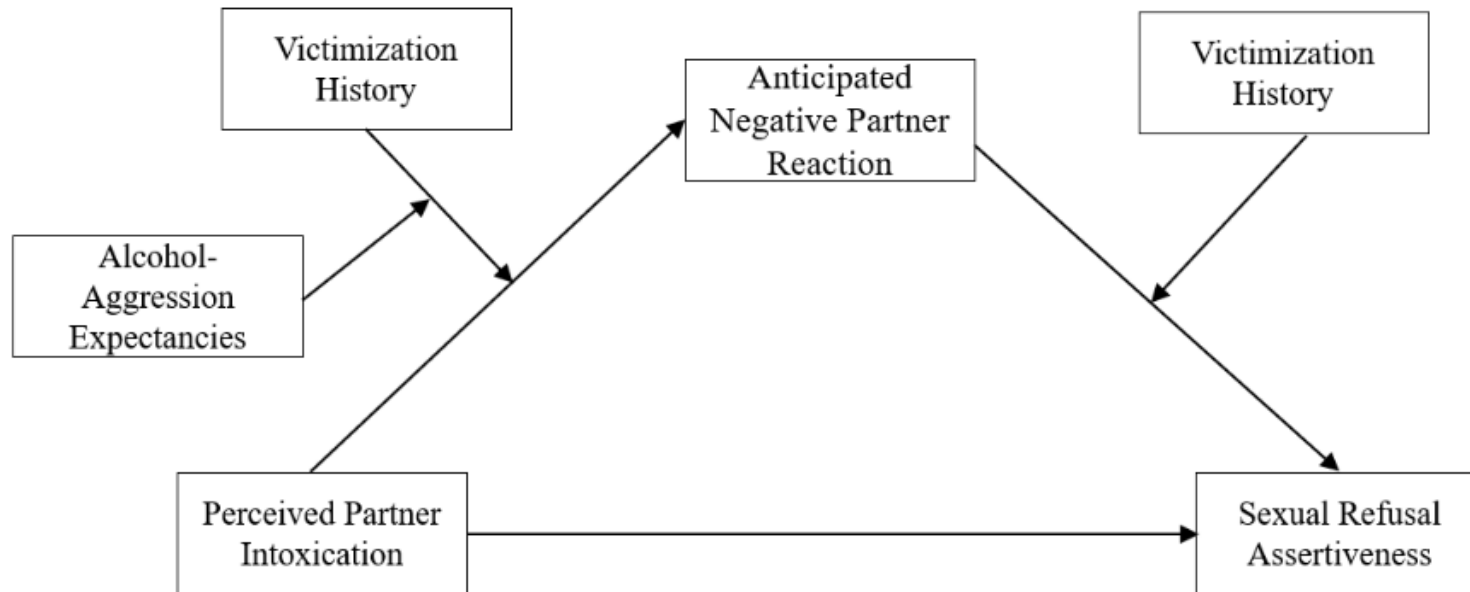


Figure 2

Overview of Study Phases

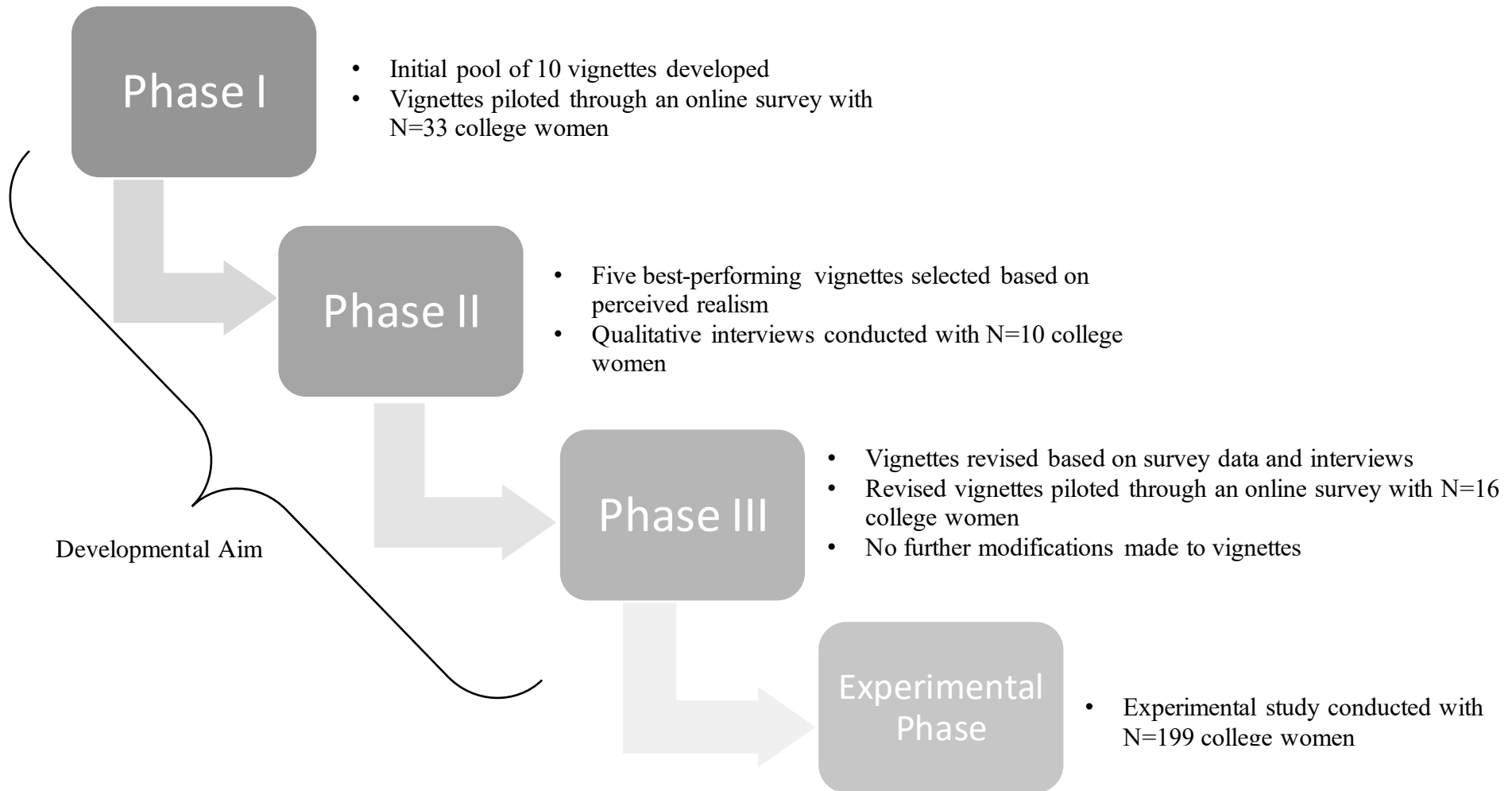
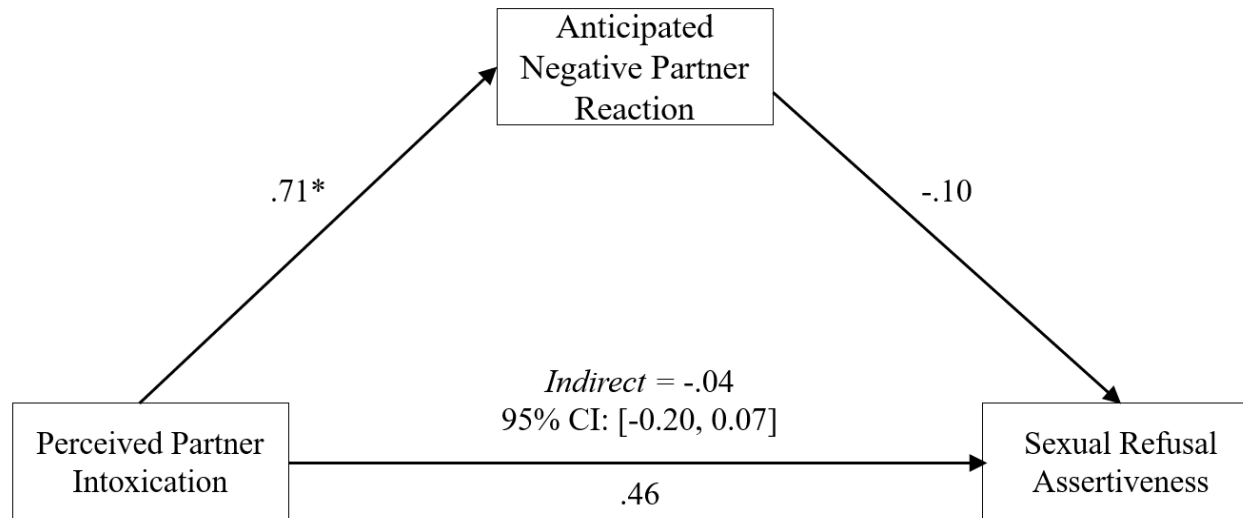


Figure 3

Mediation Model of Sexual Refusal Assertiveness

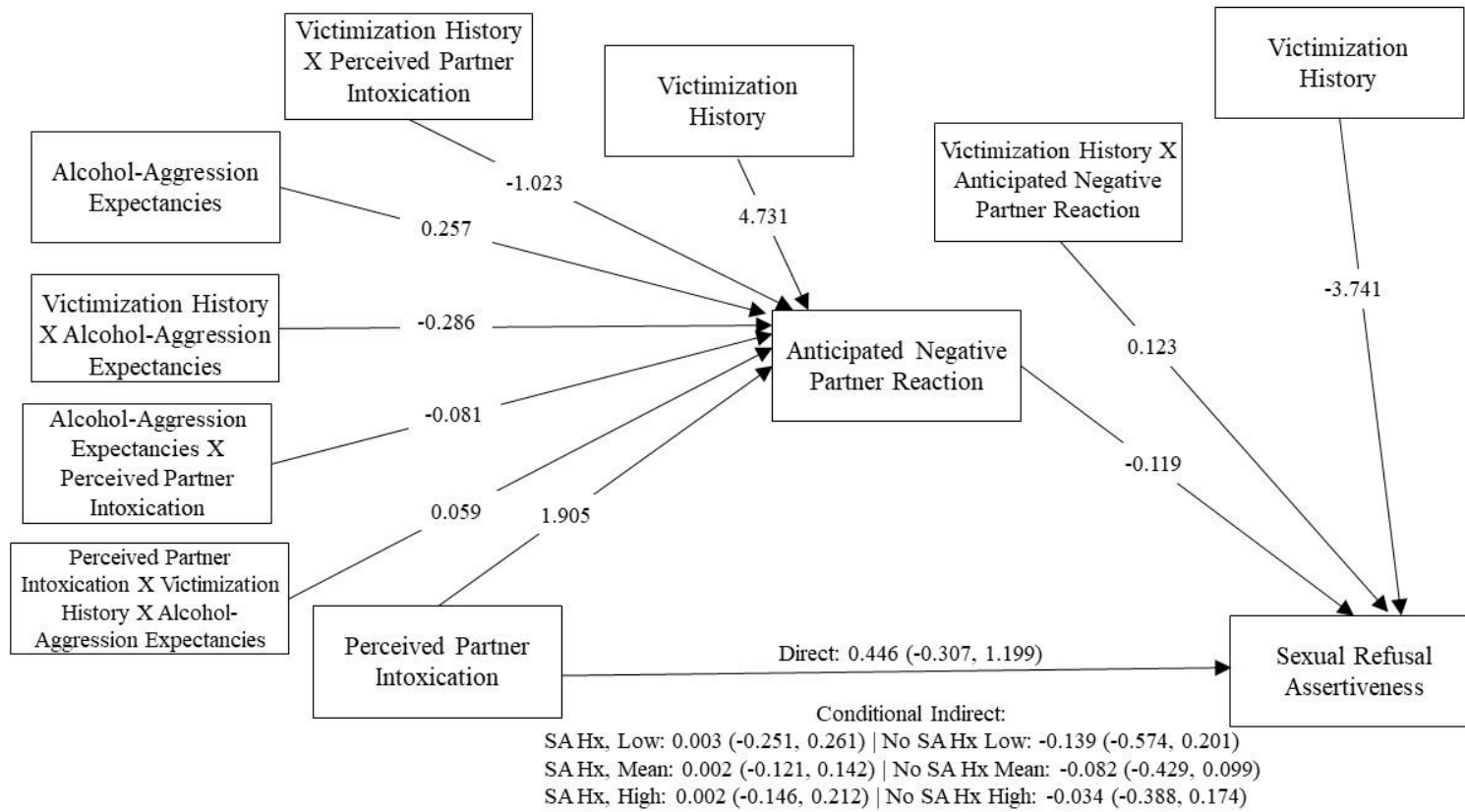


Note. N = 189. Standardized regression coefficients for the relationship between perceived partner intoxication and sexual refusal assertiveness as mediated by anticipated negative partner reaction. Covariates not included in model for simplicity.

* $p < .05$ ** $p < .01$

Figure 4

Moderated-Moderated Mediation Model of Sexual Refusal Assertiveness



Note. N = 189. Unstandardized beta coefficients provided. Covariates not included in model for simplicity.

* $p < .05$ ** $p < .01$

Appendix A: Vignettes – Initial Pool

Vignette 1:

1. You and four of your friends attend a party on Euclid. One of your friends agrees to be the designated driver and drives the five of you there in her car. You arrive at the party at 11pm.
2. You and your friends get acquainted with other people at the party. Everyone is having a good time, and people begin to dance as the music gets louder. You begin dancing with your girlfriends.
3. You've been at the party for about an hour when you notice a guy you know, Josh, approaching you. You and Josh are both in the same psychology class, and you've studied together on several occasions. Josh comes up to you and your friends and begins dancing with you.
4. **You have had one or two drinks during the evening, and you notice that he has been drinking too. Although he is not completely wasted, it is clear that he is intoxicated.**
5. You're flattered by his attention. In a joking voice, Josh says, "You look great tonight!" He puts his hands on your shoulders, and then starts to lean in towards you as he dances. You decide to dance with him for a few songs.
6. As you continue dancing, one of your friends gets sick and the others decide to take her home around midnight. You are having a good time and don't want to leave yet. They agree to come back for you later.
7. As the party begins to die down, Josh leans in and says, "You're more than welcome to come home with me since your friends left." You agree to go to his place on Ackerman.
8. You walk to his place together and into his apartment at 1am. His roommates are not home. Josh puts on a Spotify playlist of slow music and sits down next to you on the couch. He says again, "I'm so attracted to you. You're so hot" and leans in to kiss you.
9. He pulls away from the kiss and whispers, "I want to have sex with you so badly." Then he begins fondling your breast and kissing you harder.

Vignette 2:

1. On the way to your Psychology 205 class, you see a flyer for a campus BBQ that evening.
2. You and two of your friends decide to attend. You arrive at the BBQ on the main quad at 6PM.
3. There are dozens of other students at the BBQ. You recognize a few of the other students in your Psychology 205 class, like Matt.
4. You say “hi” to Matt on the way to get a plate of food. He asks about how you think you did on the most recent Psychology 205 exam.
5. You and Matt discuss the exam for five minutes before you leave to go sit with your friends.
6. After eating with your friends, you play kickball with a group of people and then leave for home.
7. On the way home, you pass Matt again and he wishes you good luck on the next exam.

Vignette 3:

1. It's Friday and you just finished your last class of the week. On your way back to your dorm room, you run into a friend. She invites you to party on South Campus that evening.
2. Later that evening, you and two of your friends take a bus to South Campus for the party.
3. At the party, you and your friends mingle with the other people and watch a few rounds of beer pong. As the music gets louder, you begin to dance with your friends.
4. After about an hour of being at the party, you notice a guy you know, Nate, approaching you. You and Nate both live in the same dorm, and you've seen him on several occasions. Nate comes up to you and your friends and introduces himself.
5. **You have had one or two drinks during the evening; however, you notice that Nate appears sober.**
6. In a joking voice, Nate says, "You look great tonight!" He puts his hands on your shoulders, and then starts to lean in towards you as he dances. You jokingly tell him to "Back off!" and he calls you a "Flirt." As he puts his arms around you Nate says, "Man you look sexy tonight in that outfit."
7. As you continue dancing, one of your friends gets tired and the others decide to go back home around midnight. You are having a good time and don't want to leave yet.
8. After another hour, the party begins to die down. Nate invites you back to his apartment on South Campus and you agree to go to his place.
9. You walk to his place together and into his apartment. His roommates are not home. Nate puts on a Spotify playlist of slow music and says again, "I'm so attracted to you. You're so hot." He leans in to kiss you.
10. He pulls away from the kiss and whispers, "I want to have sex with you so badly." Then he begins fondling your breast and kissing you harder.

Vignette 4:

1. You and two of your friends attend a party at Day Hall. You walk up to Day Hall together at 11pm.
2. You and your friends get acquainted with other people at the party. Everyone is having a good time, and people begin to dance as the music gets louder. You begin dancing with your girlfriends.
3. After an hour of dancing and socializing, you notice a guy you know, Marcus, approaching you. You and Marcus are both in the same psychology class, though you've never spoken to him before. Marcus comes up to you and your friends and begins dancing with you.
4. **You have had one or two drinks during the evening; however, you notice that Marcus appears sober.**
5. You are flattered by his attention. In a joking voice, Marcus says, "That outfit looks great on you!" He puts his hands on your shoulders, and then starts to lean in towards you as he dances. You dance together for several songs.
6. As you continue dancing, one of your friends gets sick and the others decide to take her home. You are having a good time and don't want to leave yet. They agree to come back for you later.
7. After an hour or so, the party begins to die down. Marcus invites you back to his room in Day Hall and you agree to go.
8. You walk to his room together. When you arrive at his room, you notice that his roommate is not home. Marcus puts on Netflix and says, "I'm so attracted to you. You're so hot." He pulls you onto his bed and kisses you.
9. After a few minutes of kissing, he whispers, "I want to have sex with you so badly." Then he begins fondling your breast and kissing you harder.

Vignette 5:

1. You and five of your friends attend a party on Ackerman. One of your friends agrees to be the designated driver and drives the six of you there in her car at 11pm.
2. You and your friends get acquainted with other people at the party. You watch your friends play a few rounds of beer pong.
3. After an hour or so of being at the party, you notice a guy you know, Nate, approaching you. You've seen him at parties a few times. Nate comes up to you and your friends and asks if you want to play beer pong with him.
4. **You have had one or two drinks during the evening, and you notice that he has been drinking too. Although he is not completely wasted, it is clear that he is intoxicated.**
5. You play a round of beer pong together and win. He high fives you and says, "I'm impressed at how good you are at this."
6. Later in the evening, one of your friends gets sick and the others decide to take her home. You are having a good time and don't want to leave yet, so you tell them that you'll catch up with them later.
7. As the party begins to die down around 1am, Nate leans in and says, "You're more than welcome to come home with me since your friends left." You agree to go to his place on Colvin.
8. You walk to his place together and into his apartment. His roommates are home but asleep. Nate puts on Netflix and says again, "I'm so attracted to you. You're so hot." He leans in to kiss you.
9. He pulls away from the kiss and whispers, "I want to have sex with you so badly." Then he begins fondling your breast and kissing you harder.

Vignette 6:

1. It is a Wednesday afternoon, and you decide to go to Bird Library to study for your upcoming Psychology 205 exam.
2. On the way to the library, you pass Chris, who is in your Psychology 205 class.
3. He asks if you feel prepared for the exam, and you jokingly say “no.”
4. You walk to the library together for five minutes and chat about the professor and content for the upcoming exam.
5. Once you arrive at the library, Chris wishes you good luck on the next exam and heads to the café for coffee.
6. You walk to the upper floor to find a seat and begin studying.

Vignette 7:

1. You and four of your friends attend a party on Euclid. One of your friends agrees to be the designated driver and drives the five of you there in her car around 11pm.
2. You and your friends get acquainted with other people at the party. Everyone is having a good time, and people begin to dance as the music gets louder. You begin dancing with your girlfriends.
3. After dancing to several songs, you notice a guy you know, Josh, approaching you. You and Josh are both in the same psychology class, and you've studied together on several occasions. Josh comes up to you and your friends and begins dancing with you.
4. **You have had one or two drinks during the evening; however, you notice that Josh appears sober.**
5. You're flattered by his attention. In a joking voice, Josh says, "You look great tonight!" He puts his hands on your shoulders, and then starts to lean in towards you as he dances. You decide to dance with him for a few songs.
6. As you continue dancing, one of your friends gets sick and the others decide to take her home. You are having a good time and don't want to leave yet. They agree to come back for you later.
7. After another hour or so, the party begins to die down. Josh leans in and says, "You're more than welcome to come home with me since your friends left." You agree to go to his place on Ackerman.
8. You walk to his place together and into his apartment. You noticed that his roommates are not home. Josh puts on a Spotify playlist of slow music and sits down next to you on the couch. He says again, "I'm so attracted to you. You're so hot" and leans in to kiss you.
9. He pulls away from the kiss and whispers, "I want to have sex with you so badly." Then he begins fondling your breast and kissing you harder.

Vignette 8:

1. It's Friday and you just finished your last class of the week. On your way back to your dorm room, you run into a friend. She invites you to party on South Campus that evening.
2. Later that evening, you and two of your friends take a bus to South Campus for the party.
3. At the party, you mingle with people and watch a few rounds of beer pong. As the music gets louder, you begin to dance with your friends.
4. You notice a guy you know, Nate, approaching you. You and Nate both live in the same dorm, and you've seen him on several occasions. Nate comes up to you and your friends and introduces himself.
5. **You have had one or two drinks during the evening, and you notice that he has been drinking too. Although he is not completely wasted, it is clear that he is intoxicated.**
6. In a joking voice, Nate says, "You look great tonight!" He puts his hands on your shoulders, and then starts to lean in towards you as he dances. You jokingly tell him to "Back off!" and he calls you a "Flirt." As he puts his arms around you Nate says, "Man you look sexy tonight in that outfit."
7. As you continue dancing, one of your friends gets tired and the others decide to go back home. You are having a good time and don't want to leave yet.
8. Around 1am, the party begins to die down and Nate invites you back to his apartment on South Campus. You agree to go to his place.
9. You walk to his place together and into his apartment. His roommates are not home. Nate puts on a Spotify playlist of slow music and says again, "I'm so attracted to you. You're so hot." He leans in to kiss you.
10. Then, he pulls away from the kiss and whispers, "I want to have sex with you so badly." Then he begins fondling your breast and kissing you harder.

Vignette 9:

1. It's Saturday night and you and two of your friends decide to attend a party at Day Hall. You walk up to Day Hall together.
2. You and your friends get acquainted with other people at the party. Everyone is having a good time, and people begin to dance as the music gets louder. You begin dancing with your girlfriends.
3. You notice a guy you know, Marcus, approaching you. You and Marcus are both in the same psychology class, though you've never spoken to him before. Marcus comes up to you and your friends and begins dancing with you.
4. **You have had one or two drinks during the evening, and you notice that he has been drinking too. Although he is not completely wasted, it is clear that he is intoxicated.**
5. You are flattered by his attention. In a joking voice, Marcus says, "That outfit looks great on you!" He puts his hands on your shoulders, and then starts to lean in towards you as he dances. You dance together for several songs.
6. As you continue dancing, one of your friends gets sick and the others decide to take her home. You are having a good time and don't want to leave yet. They agree to come back for you later.
7. As the party begins to die down around midnight, Marcus invites you back to his room in Day Hall. You agree to go to his room.
8. You walk to his room together. His roommate is not home. Marcus puts on Netflix and says, "I'm so attracted to you. You're so hot." He leans in to kiss you.
9. Then, he pulls away from the kiss and whispers, "I want to have sex with you so badly." Then he begins fondling your breast and kissing you harder.

Vignette 10:

1. You and five of your friends attend a party on Ackerman. One of your friends agrees to be the designated driver and drives the six of you there in her car around 11pm.
2. You and your friends get acquainted with other people at the party. You watch your friends play a few rounds of beer pong.
3. You notice a guy you know, Nate, approaching you. You've seen him at parties a few times. Nate comes up to you and your friends and asks if you want to play beer pong with him.
4. **You have had one or two drinks during the evening; however, you notice that Nate appears sober.**
5. You play a round of beer pong together and win. He high fives you and says, "I'm impressed at how good you are at this."
6. Later in the evening, one of your friends gets sick and the others decide to take her home. You are having a good time and don't want to leave yet, so you tell them that you'll catch up with them later.
7. As the party begins to die down around 1am, Nate leans in and says, "You're more than welcome to come home with me since your friends left." You agree to go to his place on Colvin.
8. You walk to his place together and into his apartment. His roommates are home but asleep. Nate puts on Netflix and says again, "I'm so attracted to you. You're so hot." He leans in to kiss you.
9. Then, he pulls away from the kiss and whispers, "I want to have sex with you so badly." Then he begins fondling your breast and kissing you harder.

Appendix B: Vignettes – Finalized

Vignette 1:

1. You and four of your friends attend a party on Euclid. One of your friends agrees to be the designated driver and drives the five of you there in her car. You arrive at the party at 11pm.
2. You and your friends get acquainted with other people at the party. Everyone is having a good time, and people begin to dance as the music gets louder. You begin dancing with your girlfriends.
3. You've been at the party for about an hour when you notice a guy you know, Josh, approaching you. You and Josh are both in the same psychology class, and you've studied together on several occasions. Josh comes up to you and your friends and begins dancing with you.
4. **You have had one or two drinks during the evening, and you notice that Josh has been drinking too. Although he is not completely wasted, it is clear that he is intoxicated.**
5. You're flattered by his attention. In a joking voice, Josh says, "You look great tonight!" He puts his hands on your shoulders, and then starts to lean in towards you as he dances. You decide to dance with him for a few songs.
6. After dancing to a few songs, Josh grabs your hand and leads you away from the party down a hallway. "Let's go somewhere we can talk," he says. "It's too loud out there." You respond, "I was having fun dancing. Let's go back to the party." "We will in a minute. I just want to talk," he says.
7. He leads you into an empty bedroom and closes the door behind you. Josh sits on the bed and you sit next to him. He says again, "I'm so attracted to you. I want to have sex with you so badly" and leans in to kiss you. You pull away and say, "I'm not really looking to hook up with anyone right now." He then begins fondling your breast and kissing you harder.

Vignette 2:

1. It's Friday and you just finished your last class of the week. On your way back to your dorm room, you run into a friend. She invites you to party on South Campus that evening.
2. Later that evening, you and two of your friends take a bus to South Campus for the party.
3. At the party, you mingle with people and watch a few rounds of beer pong. As the music gets louder, you begin to dance with your friends.
4. You notice a guy you know, Nate, approaching you. You and Nate both live in the same dorm, and you've seen him on several occasions. Nate comes up to you and your friends and introduces himself.
5. **You have had one or two drinks during the evening; however, you notice that Nate appears sober.**
6. In a joking voice, Nate says, "You look great tonight!" He puts his hands on your shoulders, and then starts to lean in towards you as he dances. You jokingly tell him to "Back off!" and he calls you a "Flirt." As he puts his arms around you Nate says, "Man you look sexy tonight in that outfit."
7. After dancing to a few songs, Nate grabs your hand and leads you away from the party down a hallway. "Let's go somewhere we can talk," he says. "It's too loud out there." You respond, "I was having fun dancing. Let's go back to the party." "We will in a minute," Nate says. "I just want to talk."
8. He leads you into an empty bedroom and closes the door behind you. Nate sits on the bed and you sit next to him. He says again, "I'm so attracted to you. I want to have sex with you so badly," and leans in to kiss you. You pull away and say, "I'm not really looking to hook up with anyone right now." He then begins fondling your breast and kissing you harder.

Vignette 3:

1. It is a Wednesday afternoon, and you decide to go to Bird Library to study for your upcoming Psychology 205 exam.
2. On the way to the library, you pass Chris, who is in your Psychology 205 class. Although you do not know Chris well, he smiles and walks towards you.
3. “Do you feel prepared for the exam?” he asks. You jokingly say “no,” to which he replies, “same, I haven’t studied at all, but I’m hoping it will be easy.”
4. You walk to Bird together for five minutes and chat about the professor and content for the upcoming exam, which includes memorizing all the stages of child development.
5. Once you arrive at Bird, Chris says, “good luck! I’m going to go grab some coffee,” and he heads to the café.
6. You wave goodbye and walk to the upper floor to find a seat.

Vignette 4:

1. You and four of your friends attend a party on Euclid. One of your friends agrees to be the designated driver and drives the five of you there in her car. You arrive at the party at 11pm.
2. You and your friends get acquainted with other people at the party. Everyone is having a good time, and people begin to dance as the music gets louder. You begin dancing with your girlfriends.
3. You've been at the party for about an hour when you notice a guy you know, Josh, approaching you. You and Josh are both in the same psychology class, and you've studied together on several occasions. Josh comes up to you and your friends and begins dancing with you.
4. **You have had one or two drinks during the evening; however, you notice that Josh appears sober.**
5. You're flattered by his attention. In a joking voice, Josh says, "You look great tonight!" He puts his hands on your shoulders, and then starts to lean in towards you as he dances. You decide to dance with him for a few songs.
6. After dancing to a few songs, Josh grabs your hand and leads you away from the party down a hallway. "Let's go somewhere we can talk," he says. "It's too loud out there." You respond, "I was having fun dancing. Let's go back to the party." "We will in a minute. I just want to talk," he says.
7. You walk to his place together and into his apartment at 1am. His roommates are not home. Josh puts on a Spotify playlist of slow music and sits down next to you on the couch. He says again, "I'm so attracted to you. You're so hot" and leans in to kiss you.
8. He leads you into an empty bedroom and closes the door behind you. Josh sits on the bed and you sit next to him. He says again, "I'm so attracted to you. "I want to have sex with you so badly" and leans in to kiss you. You pull away and say, "I'm not really looking to hook up with anyone right now." He then begins fondling your breast and kissing you harder.

Vignette 5:

1. It's Friday and you just finished your last class of the week. On your way back to your dorm room, you run into a friend. She invites you to party on South Campus that evening.
2. Later that evening, you and two of your friends take a bus to South Campus for the party.
3. At the party, you mingle with people and watch a few rounds of beer pong. As the music gets louder, you begin to dance with your friends.
4. You notice a guy you know, Nate, approaching you. You and Nate both live in the same dorm, and you've seen him on several occasions. Nate comes up to you and your friends and introduces himself.
5. **You have had one or two drinks during the evening, and you notice that Nate has been drinking too. Although he is not completely wasted, it is clear that he is intoxicated.**
6. In a joking voice, Nate says, "You look great tonight!" He puts his hands on your shoulders, and then starts to lean in towards you as he dances. You jokingly tell him to "Back off!" and he calls you a "Flirt." As he puts his arms around you Nate says, "Man you look sexy tonight in that outfit."
7. After dancing to a few songs, Nate grabs your hand and leads you away from the party down a hallway. "Let's go somewhere we can talk," he says. "It's too loud out there." You respond, "I was having fun dancing. Let's go back to the party." "We will in a minute," Nate says. "I just want to talk."
9. He leads you into an empty bedroom and closes the door behind you. Nate sits on the bed and you sit next to him. He says again, "I'm so attracted to you. I want to have sex with you so badly," and leans in to kiss you. You pull away and say, "I'm not really looking to hook up with anyone right now." He then begins fondling your breast and kissing you harder.

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Current Position

Predoctoral Psychology Intern, August 2023 – Present

Syracuse Veterans Affairs Medical Center, Syracuse, New York

Education

Ph.D. Candidate, Clinical Psychology, Expected Degree Conferral: August 2024

Syracuse University, Syracuse, New York, (APA Accredited)

Title: “Sexual Assault History and Alcohol-Aggression Expectancies as Barriers to Sexual Refusal Assertiveness in College Women”

Chair: Sarah Woolf-King, Ph.D.

M.S., Clinical Psychology, December 2020

Syracuse University, Syracuse, New York, (APA Accredited)

Title: “Evaluating Level of Specificity and Discrepancy of Normative Referents in Relation to Personal Condom Use Among College Students”

Chair: Sarah Woolf-King, Ph.D.

B.A., Psychology and Neuroscience, *Summa Cum Laude*, May 2018

Minor: Writing & Rhetoric

Syracuse University, Syracuse, New York

Clinical Experience

Predoctoral Psychology Intern, August 2023 – Present

Syracuse Veterans Affairs Medical Center, Syracuse, New York

Supervisors: Alexis Kramer, Ph.D., Jane Higham, Ph.D., Mark Minnick, Ph.D.

Mental Health Clinic

- Completed initial and routine assessment of Veterans (including use of clinical interview and self-report measures)
- Provided individual psychotherapy using evidenced-based treatments to Veterans with a range of psychopathology
- Administered, scored, and interpreted cognitive and psychological assessments
- Provided comprehensive verbal and written feedback, including the provision of psychiatric diagnoses and treatment recommendations

Substance Treatment Services

- Performed weekly screening assessments to diagnose substance use and comorbid disorders; collaborated with multidisciplinary treatment team to make appropriate referrals
- Conducted individual therapy to assist veterans in decreasing their substance use
- Co-facilitated Intensive Outpatient and Readiness to Change groups

PTSD Clinic Team

- Performed weekly intake assessments to diagnose PTSD and determine appropriateness for treatment; collaborated with multidisciplinary treatment team
- Provided individual Cognitive Processing Therapy and Prolonged Exposure Therapy to Veterans with PTSD and complex trauma presentations

Graduate Student Therapist, June 2022 – June 2023

Psychosocial Oncology Program, SUNY Upstate Cancer Center, Syracuse, New York
Supervisor: Dorianne Eaves, Psy.D.

- Provided short-term individual psychotherapy to cancer patients and family members to address psychological, social, behavioral, and emotional issues that can present following a cancer diagnosis and treatment
- Sought weekly individual supervision to discuss in-session difficulties, learn new techniques, and strengthen case conceptualizations
- Implemented and honed cognitive-behavioral, emotion-focused, and mindfulness techniques

Clinical Interventionist, June 2022 – June 2023

University of Rochester School of Medicine & Dentistry, Rochester, New York
Supervisors: Lisham Ashrafioun, Ph.D., Tracey Stecker, Ph.D.

Funding: NIDA R21DA050886: The Impact of Addressing Loneliness on Opioid Use

- Implemented a 6-session, telephone-based Cognitive Behavioral Therapy to address loneliness among adults with opioid use disorder

Behavioral Health Intern, August 2021 – May 2022

University Health Services, Syracuse University, Syracuse, New York
Supervisors: Julie Woulfe, Ph.D., Jennifer Funderburk, Ph.D.

- Provided brief assessments and treatments (20-30 minutes for 1-6 sessions) to undergraduate and graduate students presenting for on-campus primary care
- Collaborated and consulted with primary care providers to inform case management
- Conducted suicide risk assessments and safety planning for students with suicidal ideation

Testing Coordinator, June 2021 – June 2022

High-Risk Program, SUNY Upstate Medical University, Syracuse, New York
Supervisor: Robert Gregory, M.D.

- Conducted the Structured Clinical Interview (SCID-III) for Borderline Personality disorder and a brief interview for alcohol and substance use
- Administered, scored and interpreted measures including the Peabody Picture Vocabulary Test and symptom-based questionnaires

- Conducted suicide and self-harm risk assessments and safety planning

Clinical Interventionist, June 2021 – November 2021

University of Rochester School of Medicine & Dentistry, Rochester, New York

Funding: NIAAA R01AA026815: CBT by Phone to Promote Use of Alcohol Related Care and Reduce Drinking

Supervisor: Tracey Stecker, Ph.D.

- Implemented a one session, telephone-based Cognitive Behavioral Therapy for Treatment Engagement to increase alcohol use treatment-seeking among adults with alcohol use disorder

Clinical Interventionist, June 2021 – November 2021

Psychology & HEALth Lab, Syracuse University, Syracuse, New York

Funding: NIAAA R34AA026246: Brief Acceptance and Commitment Therapy for HIV-Infected At- Risk Drinkers

Supervisors: Sarah Woolf-King, Ph.D., Stephen Maisto, Ph.D.

- Implemented a 6-session, telephone-based Acceptance and Commitment Therapy to address hazardous drinking among people living with HIV

Graduate Student Therapist, August 2020 – May 2021

Psychological Services Center, Syracuse University, Syracuse, New York

Supervisor: Afton Kapuscinski, Ph.D., Clinic Director

- Provided individual psychotherapy using evidenced-based treatments in an outpatient specialty mental health clinic serving college students and community members
- Administered, scored, and interpreted psychological and cognitive assessments
- Provided comprehensive verbal and written feedback, including the provision of psychiatric diagnoses and treatment recommendations
- Sought weekly individual and group supervision to discuss in-session difficulties, learn new techniques, and strengthen case conceptualizations

Supervision Experience

Clinical Psychology Graduate Student Supervisor, August 2022 – May 2023

Psychological Services Center, Syracuse University, Syracuse, New York

Supervisor: Afton Kapuscinski, Ph.D., Clinic Director

- Provided weekly clinical supervision to a junior clinical psychology trainee
- Assisted with case conceptualization, treatment planning, and encourage readings when appropriate
- Provided verbal and written feedback on sessions, notes, and written reports

Research Experience

Principal Investigator, August 2021 – Present (anticipated defense: February 2024)

Syracuse University, Syracuse, New York

- Designed and implemented a dissertation to test a conceptual model of sexual refusal assertiveness in a sample of college women using a vignette-based experimental design

- Conducted formative research to develop experimental vignettes utilizing a mixed-methods approach with a total of 59 college women
- Conducted an experimental study with an additional sample of 200 college women, which included obtaining consent, administering experimental vignettes and questionnaires, and debriefing participants per IRB-approved protocol
- Organized database and analyzed data according to study hypotheses

Principal Investigator, October 2019 – October 2020

Syracuse University, Syracuse, New York

- Designed and implemented master's study to determine ways in which to improve normative feedback interventions to increase motivation to engage in safe sex behaviors among college students
- Conducted formative research to develop experimental procedures with a sample of 36 college students; administered experimental study to >200 college students

Project Coordinator, August 2018 – August 2020

Psychology & HEALth Lab, Syracuse University, Syracuse, New York

Funding: NIAAA R34AA026246: Brief Acceptance and Commitment Therapy for HIV-Infected At-Risk Drinkers

Supervisors: Sarah Woolf-King, Ph.D., Stephen Maisto, Ph.D.

- Coordinated site activities for a pilot randomized controlled trial
- Recruited, screened, scheduled, and ran participants through laboratory procedures (including experience with Timeline Followback administration and biospecimen collection)
- Prepared, submitted, and tracked Institutional Review Board (IRB) applications and amendments; managed clinicaltrials.gov registration
- Recruited, trained, and supervised undergraduate research assistants

Undergraduate Research Assistant, August 2016 – May 2018

Alcohol Research Lab, Syracuse University, Syracuse, New York

Funding: NIAAA R01AA022301 Alcohol and Implicit Process in Sexual Risk Behavior in Men who have Sex with Men

Supervisor: Stephen Maisto, Ph.D.

- Recruited, screened, scheduled, and ran participants through laboratory procedures (including experience with alcohol administration and ecological momentary assessment)

Research Grants

Principal Investigator, December 2021 – December 2022

American Psychological Association Dissertation Research Award

Title: Sexual Victimization History and Alcohol-Aggression Expectancies as Barriers to Sexual Refusal Assertiveness in College Women

Total Costs: \$1,000

Principal Investigator, October 2017 – October 2018

Syracuse University Allport Research Grant
Title: Risky sexual behaviors and social desirability bias among racially diverse men who have sex with men
Total Costs: \$500

Peer-Reviewed Publications

* Denotes mentorship of undergraduate student co-author

Sheinfil, A.Z., **Firkey, M.**, Bucci, V. Gjoka, M., & Woolf-King, S.E. (2024). A Mixed-Methods Approach to Develop a Combined Model of U.S. College Student Alcohol-Associated Condomless Sex. *Archive of Sexual Behavior*.

<https://doi.org/10.1007/s10508-024-02826-4>

Firkey, M., Tully, L., Rohacek, A.M., Antshel, K.M., & Woolf-King, S.E. (2023). Sexual Assault Victimization, Mental Health, and Alcohol Use in College Women: The Role of Resilience and Campus Belonging. *Journal of Interpersonal Violence*.

<https://doi.org/10.1177/08862605231153884>

Firkey, M., Tully, L., Bucci, V.M., Walsh, M.E., Maisto, S.A., Hahn, J.A., Bendinskas, K.G., Gump, B.B., & Woolf-King, S.E. (2023). Feasibility of Remote Self-Collection of Dried Blood Spots, Hair, and Nails Among People with HIV (PWH) with Hazardous Alcohol Use. *Alcohol: Clinical & Experimental Research*. <https://doi.org/10.1111/acer.15063>.

Rohacek, A.M, **Firkey, M.**, Woolf-King, S.E., & Antshel, K.M. (2022). Moderation of Risks to Sexual Health by Substance Use in College Students With ADHD. *The Journal of Clinical Psychiatry*, 83(4). <https://doi.org/10.4088/JCP.21m14240>

Firkey, M., Sheinfil, A., & Woolf-King, S.E. (2022). Evaluating Level of Specificity and Discrepancy of Normative Referents for Condom Promotion. *Health Education Journal*, 81(4), 439-450. <https://doi.org/10.1177/00178969221090635>

Woolf-King, S.E., **Firkey, M.**, Foley, J., Bicker, J., Hahn, J.A., Asiago-Reddy, E., Wikier, J., Moskal, D., Sheinfil, A.Z., Ramos, J., & Maisto, S.A. (2022). Adaptation of a Telephone-delivered Acceptance and Commitment Therapy Intervention for People Living with HIV who are Hazardous Drinkers. *AIDS & Behavior*, 26(9), 3029-3044.

<https://doi.org/10.1007/s10461-022-03649-x>

Sheinfil, A., Foley, J., Moskal, D., Dalton, M., **Firkey, M.**, Ramos, J., Maisto, S.A., & Woolf-King, S.E. (2022). Daily Associations Between Alcohol Consumption and Antiretroviral Therapy (ART) Adherence Among HIV-Positive Men Who Have Sex with Men. *AIDS & Behavior*, 26(10), 3153-3163. <https://doi.org/10.1007/s10461-022-03657-x>

Firkey, M., Sheinfil, A., Ramos, J., & Woolf-King, S.E. (2021). Cannabis and Alcohol Use Co-Use and Condomless Anal Sex Among Men Who Have Sex with Men Living with HIV: An Event-Level Analysis. *AIDS & Behavior*, 25, 3770-3781.

<https://doi.org/10.1007/s10461-021-03228-6>

- *Simmons., E.M., **Firkey, M.**, Sheinfil, A.Z., Ramos, J.M., & Woolf-King, S.E. (2021). The Association Between Financial Resources Strain and Perceived Adherence to Antiretroviral Therapy (ART) Among HIV-Positive Men who Have Sex with Men. *Journal of Health Care for the Poor and Underserved*, 32(4), 2222-2232. <https://www.muse.jhu.edu/article/837348>.
- Foley, J.D., **Firkey, M.**, Sheinfil, A., Ramos, J., Woolf-King, S.E., & Venable, P.A. (2021). Framed Messages to Reduce Sexual Risk Compensation Associated with Pre-Exposure Prophylaxis. *Archives of Sexual Behavior*, 50, 1755–1769. <https://doi.org/10.1007/s10508-021-02045-1>
- Firkey, M.**, Sheinfil, A., & Woolf-King, S.E. (2021). Substance Use, Sexual Behavior, and General Well-being of U.S. College Students During the COVID-19 Pandemic: A Brief Report. *Journal of American College Health*, 70(8), 2270-2275. <http://dx.doi.org/10.1080/07448481.2020.1869750>
- Scheer, J., Edwards, K., Sheinfil, A., Dalton, M., **Firkey, M.**, & Watson, R. (2021). Interpersonal Victimization, Substance Use, and Mental Health among Sexual and Gender Minority Youth: The Role of Cognitive Mechanisms. *Journal of Interpersonal Violence*, 37(19-20), 18104-18129. <http://dx.doi.org/10.1177/08862605211035868>
- Firkey, M.**, Buckheit, K., Mitzel, L., Maisto, S.A., Palfai, T., & Venable, P. (2020). Sexual Risk and Social Desirability among Black and White Men Who Have Sex with Men. *Journal of Black Sexuality and Relationships*, 6(3), 29-47. <http://dx.doi.org/10.1353/bsr.2020.0006>
- Woolf-King, S.E., Sheinfil, A.Z., Ramos, J., Foley, J., Moskal, D., **Firkey, M.**, Kellen, D., & Maisto, S.A. (2020). A Conceptual Model of Alcohol Use and Adherence to Antiretroviral Therapy: Systematic Review and Theoretical Implications for Mechanisms of Action. *Health Psychology Review*, 16(1), 104-133. <https://dx.doi.org/10.1080/17437199.2020.1806722>

Submitted Manuscripts

* Denotes mentorship of undergraduate student co-author.

Firkey, M., Possemato, K., Maisto, S.A., Ouimette, P., & Woolf-King, S.E. (*under review*). Cross-Lagged Panel Assessment of Post-Traumatic Stress Disorder and Social Support in OEF/OIF Combat Veterans who are Hazardous Drinkers.

*Gjoka, M., **Firkey, M.**, Sheinfil, A., & Woolf-King, S.E. (*under review*). The Association between Condom Use Self-Efficacy and Condom-Decision Abdication Among College Students.

Ramos, J.M., Sheinfil, A., **Firkey, M.**, Foley, J., Marabella, G., & Woolf-King, S.E. (*under review*). Coping with Emerging Adult and Sexual and Gender Minority Stress and Alcohol Use among US College Students.

Presentations

* Denotes mentorship of undergraduate student co-author

Sheinfil, A.Z., **Firkey, M.**, D. Moskal, V. Bucci, S.A. Maisto, & S.E., Woolf-King. (2023, June 24-28). *Associations of Alcohol-Related Problems with Alcohol Coping Motives and HIV Stigma among People with HIV: Exploring HIV Stigma as a Moderator*. Poster presented at the annual meeting of the Research Society on Alcoholism, Bellevue, WA.

Woolf-King, S.E., Hahn, J.A., Bricker J., Asiago-Reddy, E., Dalton, M.R., Sheinfil, A.Z., **Firkey, M.**, Foley, J.D., Ramos, J., Moskal, D., Ellerbeck, N., & Maisto, S.A. (2023, June 24-28). *A Feasibility/Acceptability Randomized Clinical Trial of Acceptance and Commitment Therapy for People with HIV who are Hazardous Drinkers*. Poster presented at the annual meeting of the Research Society on Alcoholism, Bellevue, WA.

Firkey, M., Maisto, S.A, Hahn, J.A., & Woolf-King, S.E. (2022, June 25-29). *Feasibility of Remote Self-Collection of Phosphatidylethanol (PEth) Among People Living with HIV (PWH)*. Poster presented at the annual meeting of the Research Society on Alcoholism, Orlando, FL.

Ramos, J., **Firkey, M.**, Sheinfil, A., Dalton, M., Andrews, K., & Woolf-King, S.E. (2022, April 6-9). *Transgender Minority Stress and Alcohol Use Among College Students: The Role of Coping Motives*. Poster presented at the annual meeting of the Society of Behavioral Medicine, Baltimore, MD.

Rohacek, A.M, **Firkey, M.**, Woolf-King, S.E., & Antshel, K.M. (2022, January 14-16). *Sex, Drugs, and ADHD: Sexual Health and Moderators of Risk in College Students*. Poster presented at the annual meeting of The American Professional Society of ADHD and Related Disorders, Tucson, AZ.

Firkey, M. & Woolf-King, S.E. (2021, August 12-15). *Personalized Normative Feedback for College Student Condom Use: Referent Discrepancy and Specificity*. Poster presented at the annual meeting of the American Psychological Association, virtual conference.

Scheer, J., Edwards, K., Sheinfil, A., Dalton, M., **Firkey, M.**, & Watson, R. (2021, May 20-21). *Interpersonal Victimization, Substance Use, and Mental Health among Sexual and Gender Minority Youth: The Role of Cognitive Mechanisms*. Poster presented at the annual meeting of the National LGBTQ Health Conference, virtual conference.

Dalton, M. R., Ramos, J. M., **Firkey, M.**, Sheinfil, A. Z., & *Gjoka, M. (2021, May 20-21). *Distal Gender Minority Stress and Depression: The Indirect Effect of Relational Support*. Poster presented at the National LGBTQ Health Conference, virtual conference.

- *Gjoka, M., **Firkey, M.**, & Woolf-King, S.E. (2021, April 17). *The Association between Condom Use Self-Efficacy & College Students' Condom-Decision Abdication*. Poster presented at the annual Western New York Undergraduate Psychology Conference, virtual conference.
- Firkey, M.**, Sheinfil, A., & Woolf-King, S.E. (2021, April 12-16). *College Students' General Well-Being, Substance Use, and Sexual Behavior as a Function of Geographic Region During COVID-19*. Poster presented at the annual meeting of the Society of Behavioral Medicine, virtual conference.
- *Marabella, G., **Firkey, M.**, Sheinfil, A., & Woolf-King, S.E. (2021, April 12-16). *The Impact of Social Desirability Bias on Alcohol use among Black and White Men Who Have Sex with Men Living with HIV*. Poster presented at the annual meeting of the Society of Behavioral Medicine, virtual conference.
- Firkey, M.**, Sheinfil, A., Ramos, J., & Woolf-King, S.E. (2020, June 20-24). *Unprotected Anal Intercourse and Combined Alcohol and Cannabis Use Among Men Who Have Sex with Men Living with HIV: An Event-Level Analysis*. Poster presented at the annual meeting of the Research Society on Alcoholism, virtual conference.
- Ramos, J., Sheinfil, A., **Firkey, M.**, *Simmons, E., & Woolf-King, S.E. (2020, June 20-24). *Coping Motives as a Moderator of the Association Between Minority Stress and Alcohol Use Among College Students of Marginalized Sexualities and Genders*. Poster presented at the annual meeting of the Research Society on Alcoholism, virtual conference.
- Firkey, M.**, Foley, J., Bricker, J., Hahn, J., Reddy, E., Wikiera, J., Maisto., S.A., & Woolf-King, S.E. (2019, June 22-26). *Adaptation and Acceptability of a Brief Acceptance and Commitment Therapy for Alcohol Use Among People Living with HIV*. Poster presented at the annual meeting of the Research Society on Alcoholism, Minneapolis, MI.
- Foley, J., Sheinfil, A., Ramos, J., **Firkey, M.**, & Woolf-King, S.E. (2019, March 6-9). *Changes in Depressive Symptoms and Antiretroviral Adherence among Men Who Have Sex with Men Living with HIV*. Poster presented at the annual meeting and scientific sessions of the Society of Behavioral Medicine, Washington, DC.
- Firkey, M.**, Mitzel, L.D., & Maisto, S.A. (2017, October 20-21). *Risky sexual behaviors and social desirability bias among racially diverse men who have sex with men*. Poster presented at the annual meeting of the New England Psychological Association, Newton, MA.

Teaching Experience

Instructor of Record

Health Psychology, SUNY Cortland, Spring 2024

Health Psychology, Syracuse University, Summer 2023

Other Professional Activities

Clinical Seminar Presentations, 2020, 2022

- October 2, 2020. *Health psychology data collection during the COVID-19 pandemic: Barriers, solutions, and implications*. Presented by M. Firkey & P. Goodhines.
- February 11, 2022. *Exposure and Response Prevention for Obsessive Compulsive Disorder: A Case Presentation*. Presented by M. Firkey.

Didactic Presentation, 2022

- August 5, 2022. *Psychosocial Oncology: Cancer & Communication*. Presented by D. Eaves, M. Firkey, & E. Lape.

Guest lecturer in undergraduate courses, 2020, 2023

- Alcohol Use and Abuse, Syracuse University
- Health Psychology, Syracuse University

Research Mentor, 2018 – 2023

- Mentored four undergraduate, one post-baccalaureate, and one graduate student in research activities, including developing a research question, identifying and conducting analyses to test the proposed hypotheses, and presenting findings for oral and written presentations

Professional Service

2021	Appointed member of the Chancellor's Citation for Excellence Selection Committee
2021	Graduate Student Committee Member, Psychology Action Committee
2020-2021	Graduate Student Committee Member, Committee for Diversity and Inclusion
2019, 2022	Psychology Research Initiative in Diversity Enhancement Mentor
2019-2021	Women in Science and Engineering Associate

Professional Membership

American College Health Association, Student Member
Society of Behavioral Medicine, Student Member
New York State Psychological Association, Student Member

Ad-Hoc Journal Review

Journal of American College Health
JAIDS: Journal of Acquired Immune Deficiency Syndromes
Journal of Dual Diagnosis
Journal of Drug Issues
Journal of Sexual Medicine