Undressing Consent – Preliminary Evaluation of a Campus Sexual Violence Prevention Program

Angelina M. Cleroux, Western University

Supervisor: Katreena Scott, The University of Western Ontario
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Abstract The current study is a preliminary evaluation of the impact of the Undressing Consent post-secondary sexual violence prevention program on student attitudes and beliefs related to consent, understanding of desires and boundaries, societal gendered sexual scripts, and responding to rejection. A primary goal of the study was to create a reliable measure to be used for future evaluation of changes in student attitudes and beliefs related to core program content. In addition, we evaluated student responses to our newly created scales before and after participation in the intervention and between gendered groups. A total sample of 570 students (women and non-binary students pre-intervention, n =208; post-intervention n = 167) participated. Analysis of newly designed scales showed promising results, with the Sexual Scripts scale having good model fit and reliability for the WNB group. An integrated scale including the Sexual Scripts and Response to Rejection scales for men’s data also demonstrated good model fit and adequate reliability. However, scale improvement is required for the measurement of the constructs of Consent and Desires & Boundaries. A small but significant change in beliefs was observed among women and non-binary students but such changes were not observed for men. In scale creation, we experienced issues with restricted range for change, independent and unequal gendered sample sizes, and attrition which limit our ability to make inferences regarding program effectivity. Further work on measurement is required to capture student attitudes and behaviours in preparation for a repeated measures randomized control trial of program efficacy.

Keywords: sexual violence, post-secondary sexual violence prevention programming, sex positive, consent, understanding of desires and boundaries, gendered sexual scripts, response to rejection

Summary for Lay Audience The current study evaluates how Undressing Consent, a campus sexual violence prevention program, impacts students' beliefs and attitudes about consent, understanding sexual boundaries and desires, media promoted societal expectations around gender and sex, and how to handle rejection. As this is a novel program that approaches sexual violence prevention through a sex positive perspective, the study sought to create valid and reliable tools to measure changes in students' attitudes and beliefs after participating in the program. The program was presented to students in gendered sessions with women and non-binary students attending a separate session form the one attended by men. A group of 570 students from both gendered groups responded to a questionnaire having newly created items, before and following the program. The results showed some positive outcomes, such as improved understanding of societal sexual and gendered expectations for the women and non-binary students (WNB). However, there were several limitations in the study, which emphasize the need to improve the measurement tool in order to better assess consent and boundaries for WNB students. Improved measurement tools are required to understand changes in beliefs for men. We present recommendations for future research which is needed to improve how the program is assessed and fully understand the effectiveness of the program.
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Introduction

In Fall 2021, Western University invested in creating a mandatory sexual violence (SV) prevention program in response to student reports of sexual assault on social media which occurred within the first weeks of the new term. In Canada, approximately 30.2% of women and 8.2% of men will have experienced at least one sexual assault since age fifteen (Brennan & Taylor-Butts, 2008; Cotter, A. & Savage, L. 2019; Senn et al., 2014). The World Health Organization (2002, p. 149) defines sexual violence as: "Any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, acts to traffic or otherwise directed, against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including but not limited to home and work". Our use of the term sexual violence is in reference to a continuum of coercive behaviors utilized to persuade or force another person to engage in non-consensual sexual acts (Jeffery, 2022; Koss et al., 2007). The definition used in this thesis proposal aligns with Koss et al.'s (2007) measures of sexual victimization and perpetration; it includes all non-consensual sexual contact and sexual assault in person or online, with or without contact, completed through verbal or physical threats, pressure, or by exploitation of an intoxicated person.

Sexual violence is prevalent on Canadian post-secondary campuses (Fisher et al., 2000; Jeffrey et al., 2022), with one in ten women (11%) one in six (18%) transgender and non-binary students and 4% of men reporting having experienced sexual assault in the past year in the form of unwanted sexual touching, sexual activity they did not consent to, and sexual attacks involving physical force (Burczycka, 2020). Students reporting at least one experience of unwanted sexualized behaviour in the past 12 months include 45% of women, almost half of transgender and non-binary students (47%), and approximately 32% of men (Burczycka, 2020).
Devastating short- and long-term sequela are related to having a history of SV, which negatively impact physical and psychological well-being, and cognitive domains of functioning. Survivors of sexual assault are at serious risk of physical injury, chronic illnesses, sleep disturbance, sexually transmitted infections, sexual dysfunction, and, for women, unwanted pregnancy (Campbell, Sefl, & Ahrens, 2003; Fisher et al., 2000; Grubb, 2020; Kilpatrick et al., 1997; Kolp et al., 2020; Lutgendorf, 2019). In addition, psychological health is adversely impacted, resulting in higher risk of developing symptoms of anxiety, depression, stress, difficulty with concentration, and suicidal ideation (Briere & Jordan, 2004; Campbell et al., 2009; Jordan et al., 2010; Snaychuk & O'Neill, 2020).

Consequently, these sequela impact academic success and future career opportunities (Jordan et al., 2014; Krug et al., 2002; Potter et al., 2018). In light of the impact of SV on physical and psychological wellbeing, it is not surprising that sexually violated students are at a higher likelihood of engaging in drug use, heavy drinking, disordered eating habits, risky sexual behaviours, and dropping out of school (Fisher et al., 2000; Ganson, 2022; Scheer et al., 2019).

Although most North American campuses provide first-year students with some form of education regarding SV, colleges and universities remain known high-risk settings for sexual assault (Burczycka, 2020; Oswalt et al., 2018; Senn et al., 2014). SV prevention programs that are currently available and proven to be effective tend to involve extensive student training periods (Senn et al., 2017; Senn et al., 2015). The SV prevention program of interest - Undressing Consent - was designed to address issues of consent, rejection, and understanding of one’s own sexual desires and boundaries through a sex-positive theoretical lens. The program presents evidence-based, prevention training designed to target the diverse needs of post-secondary students by gendered group. It is presented in one compact session (90 minutes) and
can be attended online or in-person. The current study aims at examining the impact and limitations of this compact targeted approach to campus SV prevention programming.

**Predictors of Sexual Violence on Canadian Campuses**

The risk of sexual assault or coercion into participating in unwanted sexual activity is greater for some students than others - women, sexual minorities, and first-year students are disproportionately affected (Eshbaugh & Gute, 2008; Fieldler & Carey, 2010; Flack et al., 2007; Oswalt et al., 2018; Senn et al., 2014). Unwanted sexual attention experienced by women and non-binary students ranges from catcalling to unwelcome physical contact, sexual images posted on the internet without consent, unsolicited exposure of body parts, explicit messaging, and sexual jokes (Burczycka, 2020; Muehlenhard et al., 2017). In addition, women having a history of sexual victimization before arriving on campus are at a greater risk of revictimization than their peers (Briere & Jordan, 2004; Senn et al., 2014). Students with a physical or mental disability are twice as likely to experience sexual assault (12% vs. 5% of students with no disability), as are bisexual students (16% compared to 7% of heterosexual students). Indigenous students have reported higher rates of unwanted sexual incidents (10% vs. 8% for non-Indigenous students). However, little or no significant difference in SV victimization has been found for students of ethnic minorities in comparison to Caucasian students (Burczycka, 2020; Jeffery et al., 2022). Researchers frequently identify other significant predictors of sexual victimization on U.S. and Canadian post-secondary campuses, including binge drinking, drug use, and membership in a fraternity (Daigle et al., 2020).

Most unwanted sex (78%) reported by college students occurs in the context of a hookup (Flack et al., 2007) with 50-80% of such incidents involve alcohol or drugs (Flack et al., 2007; Testa & Livingston, 2009; Walsh et al., 2010). Student engagement in non-committed
(Paul & Hayes, 2002), casual sexual activity has been termed “Hookup culture” and ranges from kissing to intercourse, usually with no expectation for future contact with the sexual partner. Hookup culture is prevalent across post-secondary institutions, with most studies indicating that 50–75% of university students in Canada and the USA report having “hooked-up” (Fischer et al., 2012; Owen, 2010). Levels of student engagement in hook up culture and varying perspectives exist amongst students; some indicate attraction to hookup culture and express feelings of satisfaction following hookups (20-30%), however, many students report feelings of regret, guilt, and disappointment (40%-55%) following engagement in hookups, and a few students express ambivalent feelings (15%) or choose to avoid it altogether (Owen et al., 2010; Paul & Hayes, 2002; Wade, 2017). Female students are more likely than men to express distress, regret, shame, and self-doubt following hookups (Eshbaugh & Gute, 2008; Fieldler & Carey, 2010; Owen et al., 2010; Paul & Hayes, 2002) and regret over unwanted sexual experiences (Eshbaugh & Gute, 2008; Flack et al., 2007; Monahan & Lee, 2007; Paul & Hayes, 2002). Despite varying levels of engagement and differences in perspectives reported by students, many students believe that most of their peers are engaging in hookups which contributes social pressure to engage (Eshbaugh & Gute, 2008; Flack et al., 2007; Monahan & Lee, 2007; Paul & Hayes, 2002; Walker, 2011).

Heavy drinking is known to mediate the relationship between sexual victimization in adolescence and revictimization following attendance in a post-secondary institution (Senn et al., 2014; Testa & Livingston, 2009). Increased alcohol consumption often results in impaired judgment and may lead to engagement in sexual activity which is later regretted (Abbey et al., 2002; Burczycka, 2020; Fieldler & Carey, 2010; Flack et al., 2007). Students reporting engagement in sexual intercourse during hookups are at a higher risk of alcohol/drug-facilitated
sexual victimization than those reporting a preference for sexual activity within a committed relationship and those having fewer sexual partners (Walker, 2011). In addition, students reporting high alcohol use were more likely to engage in oral sex with someone they have known for less than 24 hours and to do so for social approval rather than personal enjoyment (Gute & Eshbaugh, 2008; Walker, 2011). Canadian students have been observed to be at a slightly greater risk of violent and sexual victimization than their U.S. peers (Daigle et al., 2020); one contributing factor is higher rates of binge drinking reported by Canadian students (36%) than students in the U.S. (33%).

**Legislation of Sexual Violence Prevention Policies for Canadian Post-Secondary Institutions**

In Canada, post-secondary educational policy is the responsibility of provincial governments which includes regulation regarding sexual violence on college and university campuses. Many provinces in Canada (i.e., Ontario, British Colombia, Quebec, Manitoba, and Prince Edward Island) have passed legislation requiring that post-secondary institutions develop and regularly evaluate policies related to sexual violence prevention on campus. In 2016 The Legislative Assembly of Ontario instituted *The Sexual Violence and Harassment Action Plan* (Bill 132), designed to protect students and workers from harassment and sexual violence on campus or in the workplace. The specific definition of “sexual violence” as outlined in this bill is “any sexual act or act targeting a person’s sexuality, gender identity or gender expression, whether the act is physical or psychological in nature, that is committed, threatened or attempted against a person without the person’s consent, and includes sexual assault, sexual harassment, stalking, indecent exposure, voyeurism and sexual exploitation”. This legislation amended the *Ministry of Training, Colleges and Universities Act* and the *Private Career Colleges Act*
requiring that every private and publicly-funded college and university in Ontario develop a policy on sexual violence, with the input of students (Baker et al., 2017). Within this Act (S.O. 2016, c. 2 - Bill 132, Schedule 3, section 3) a series of requirements are outlined which must be considered when responding to student disclosures of sexual assault or violence. In addition, post-secondary institutions are required to report the number of incidents or claims of sexual violence that occur on campus, the number of times campus SV supports and services are accessed by students, provide information on initiatives which promote student awareness of campus supports and services, and provide data on the implementation and effectiveness of the institution’s sexual violence policy.

Colleges and universities across Ontario have implemented this act in a variety of ways including by providing survivor support and disclosure centers and through the creation of campus SV training and prevention programming. Western University’s Policy on Sexual Violence (2017), includes a university code of conduct, procedures for reporting and responding to sexual violence, and a non-discrimination and harassment declaration. Distinct processes have been put in place for incident disclosure and formal reporting allowing students to choose whether they want to involve the legal system, thus promoting disclosure while protecting the identity and privacy of the survivor (Baker et al., 2017; Western University, 2017).

In 2018, the Ministry of Training, Colleges and Universities (MTCU) sent out the Student Voices on Sexual Violence Survey on behalf of postsecondary institutions including questions surrounding student (1) perceptions of consent, (2) knowledge of sexual violence supports, (3) experiences of sexual violence, (4) satisfaction with institutional response to sexual violence, (5) behaviour of bystanders. The majority of students (70-90%) across colleges and universities in Ontario indicated an understanding of various components of consent in their responses to the
questionnaire. Fewer students (37-60%) across Ontario indicated an awareness of institutional supports, services, and reporting procedures. A large proportion of students in Ontario universities (63%), colleges (50%), and private colleges (30%) disclosed some experience of verbal, physical, or electronic sexual harassment. Non-consensual sexual experiences with or without penetration were disclosed by 23% of university, 17% of college, and 9% of private college students. Students (12-23%) also reported that they experienced stalking incidents since the beginning of the academic year. When asked about their level of satisfaction with the Institution’s response to their disclosure 19-22% of students who disclosed a sexual harassment, stalking or a non-consensual sexual experience indicated dissatisfaction. Higher percentages of students reported that they "Witnessed and Intervened" (67-69% vs. 30-32% of those who witnessed and did not intervene) in incidences of campus sexual harassment or violence. However, this questionnaire did not collect demographic data, as such, the relationship between campus sexual violence and intersectionality is not identifiable from the report.

Approaches Currently Used in Addressing Campus Sexual Violence

Campus sexual violence prevention programs utilize a variety of evidenced based approaches (Orchowski et al. 2020; Senn et al., 2018) which may target all students or specifically address the varied needs of female and male students. As effective programming must be evidence based and data-driven (Senn et al., 2018), in this section I review several types of programs that have been evaluated for effectivity in campus sexual violence prevention. These approaches vary in focus and provide insights into components which contribute to sexual violence reduction. While beneficial when used in isolation, when integrated, these key approaches have greater potential promote change in campus culture than any individual approach (Orchowski, 2020; Senn et al., 2021).
Risk Reduction and Resistance Programming

Recent findings show that most perpetrators of sexual assault students of the university ([80%] Burczycka, 2020) attended by the victim and known to the victim ([70%] Jeffery, et al. 2022). However, there is also evidence of some campuses having higher rates of perpetration from non-student offenders (Jeffery, et al. 2022; Peter et al. 2019). A majority of victims (77% of women and 70% of men) report at least one incident of SV occurring off campus (Burczycka, 2020). These findings highlight the importance of programming aimed at empowering students with skills to identify and respond to uncomfortable and potentially dangerous sexual encounters both on and off campus. Some of the earliest training in self-defence was developed by in the 1970’s, Empowerment Self-Defense (ESD) training incorporated techniques from street fighting and martial arts (Hollander, 2018). Current risk reduction and resistance programs, while emphasizing that the perpetrator is responsible for sexual violence, acknowledge that a critical element of sexual violence prevention includes empowering women students with skills to reduce their risk of victimization. Programs such as Sexual Assault Risk Reduction (SARR), a 7-hour program, (Hanson & Gidycz, 1993; Orchowski, Gidycz, & Raffle, 2008) and Sexual Assault Resistance Education (SARE) (Senn et al., 2021, 2015, 2013) focus on educating students on the impact of sexual assault, and building physical, verbal, and psychological strategies for self-defence (Dardis et al., 2018; Gidycz et al., 2018). There’s evidence for the effectivity of resistance education in promoting assertiveness, verbal and physical self-defense strategies and perceived control, and reducing fear and self- or victim-blame (Dardis et al., 2018; Gidycz et al., 2015; Senn et al., 2015, 2017; Ullman, 2007). A longitudinal randomized control trial, demonstrated lower rates of sexual assault among students that had participated in SARE resistance programming (Senn et al., 2015). Enhanced Assess, Acknowledge, Act (EAAA) an
updated version of the resistance program, also known as Flip the Script™, demonstrates evidence of reduced campus sexual assaults by 45% in an RCT (Senn et al., 2020).

**Sexual Violence Intervention and Prevention Programming for Men**

Most sexual violence on post-secondary campuses is perpetrated by young men (Jeffery, 2022; Peter, 2018; Burczycka, 2020) Researchers have put out a call to action related to the need for intervention and prevention programming that educates and empowers young men to become agents of change and join the fight against sexual violence on campuses (Fabiano et al., 2003; Quinlan et al., 2016). There is a dearth of studies examining the implementation and effectiveness of male-only prevention programs on Canadian post-secondary campuses and mixed evidence of the effectiveness of such programming in the United States (Brecklin & Forde, 2001; Foubert, 2000; Stephen & George, 2009). Overall programming presented only to male students have been found to be more effective in promoting attitudinal change than mixed-gender interventions (Foubert, 2000). Man|Made is one example of a psychoeducational program designed as both an intervention program for men accused of perpetrating sexual violence on campuses and a prevention program for men who are leaders in their campus communities. Man|Made, consisting of five two-hour sessions, approaches men as potential agents of social change rather than perpetrators (Rich et al., 2010; Scheel et al., 2001) and aims at increasing male student’s accountability for behaviours- challenging them to become champions of both positive change in their own attitudes and through influence on male peers (Gidycz et al., 2002; Trudell, 2021). This male-only program creates a unique environment which encourages men to reflect on ways cultural scripts create pressure around masculinity which relates to gender-based violence (Stulhofer et al., 2010; Trudell, 2021; Wright & Bae, 2016). Topics approached include the impact of pornography on male sexual aggression towards women as well as the impact of
mainstream media and the internet on attitudes and behaviours towards sexuality and rejection. The program equips men with strategies to foster healthy body image, masculinity, and sexuality, with the aim of reducing harmful behaviours (Trudell, 2021). Empirical studies that examine the efficacy of the Man\Made are currently being conducted.

**The Bystander Approach**

The bystander approach places responsibility for a safe campus environment on all students (Orchowski, 2020). It educates mixed-gender groups of students on rape myths and sexual scripts that contribute towards gender-based sexual violence and empowers students with information on how to identify peers in need of support. In addition, it provides students with safe strategies for intervention in potentially dangerous situations or when violence is occurring. While approximately 8% of women (6% of men) who experienced sexual assault will disclose the incident to an institutional support worker (Burczycka, 2020), students are more likely to disclose incidents to a friend or peer. One-third of female and one fifth of male students report having a friend disclose an unwanted sexual experience to them (Walsh et al., 2010). As drinking on campus often occurs in a social setting with most alcohol-related sexual assaults taking place in social situations (Fisher et al. 2000), peer “bystanders” are the most capable of timely intervention. In addition, the bystander approach teaches students how to respond to peer disclosures following SV and support survivors (Moynihan et al., 2010; Orchowski, 2020). One example of such programming, Bringing in the Bystander® (Banyard, Moynihan, & Crossman, 2009; Banyard, et al., 2007) was found to be effective in promoting attitudinal change (Cares et al., 2015; Moynihan et al., 2010) among students including increased commitment to intervene during instances of sexual violence (Cares et al., 2015; Moynihan et al., 2011; Orchowski, 2020). It is available in both short (one 90-min session) and longer 4.5-hr formats.
Both male and female students have been found to benefit from the Bringing in the Bystander program with effects persisting at 4- and 12-month follow-ups (Banyard, et al., 2007). A meta-analysis evaluating the effectiveness of bystander education found evidence for moderate effects on bystander efficacy and intentions to help others at risk and small but significant effects of self-reported helping behaviors. Small but significant effects were found for lowered rape-supportive attitudes, however, no significant differences were found for rape perpetration. In the United States, federally legislated campus SV prevention includes instructions for bystander intervention training (Orchowski, 2020). In Canada, The University of Windsor has adopted the “Bringing in the Bystander” program and Western University has incorporated bystander training into online modules of its mandatory SV prevention programming (Straatman, 2013; Western University, 2021).

Support for the Sex Positive Approach to Sexual Violence Prevention

Experts in the field of human sexuality describe sex positivity as an ideology that promotes personal beliefs about consent and the potential for sex to be good (Ivanski, 2017; Lafrance et al., 2012; Mosher, 2017). It emphasizes the importance of age-appropriate access to information on healthy relationships, consent, pleasure, and diversity. Sex positivity respects the individual's rights and choices, including those who choose to abstain from sex. It should not result in individuals feeling pressured into engaging in any sexual activity they are not comfortable with and should promote body-positive views and acceptance of diversity in genders, sexual identities, and desires. Researchers have argued that a sex-positive, pleasure-focused approach to sexual violence prevention is critical in challenging gender scripts and norms that dictate that a woman is submissive and follows a man's lead during sexual activity (Mosher 2017; Radtke et al., 2020).
A personal awareness of one’s own sexual desires, values, and safety needs, empowers women to establish sexual boundaries and engage in effective and assertive communication regarding sexual activity (Hubach et al., 2019; Senn et al., 2013). It has been suggested that sexual self-awareness and the ability to effectively communicate sexual desires are protective against coercion to engage in unwanted sexual activity or compliance with unsafe sexual activities (Ford, 2021; Senn et al., 2013) and contribute towards healthy relationships, safe sex practices, and sexual satisfaction and well-being (Kaestle & Evans, 2018; MacGregor & Cavallo, 2011; Mosher, 2017). Sexual exploration plays an essential role in the development of self-awareness (Kaestle & Evans, 2018); students report engaging in sexual acts even when uncomfortable or unwanted due to social pressures (Ford, 2021). These reports indicate feeling pressured to “finish what they have started” (e.g., intercourse after flirting or kissing) to avoid situational awkwardness, future embarrassment, gossip, or to save one’s reputation (e.g., not a virgin). Programming created by Senn and colleagues includes content which encourages exploration of sexual values and desires (Enhanced Assess, Acknowledge, Act [EAAA] Rozee & Koss, 2001; Senn et al., 2011) with the goal of improved protection from unwanted sexual activity or sexual assault by known men. Evidence has been put forth concerning the effectivity of adding sexuality education to campus SV prevention programming, an RCT study (Senn et al., 2011) found that a sexuality enhanced program was effective in promoting situational sexual assault risk detection and sexual assertiveness during initiation of sexual activity. However, no significant reductions in completed sexual assault were found.

Comprehensive sex education acknowledges positive, growth-inducing factors related to sexual exploration in addition to risk related factors (Mosher, 2017). These include working towards the de-stigmatization of sex-for-pleasure and promoting a positive perspective toward
body diversity, relationships, and eroticism. A sex-positive focus acknowledges intersectionality and variations in sexual expression by racial and cultural minorities (Sarno et al., 2015), queer (Queen & Schimel, 1997; Wright & Cullen, 2001), and asexual individuals (Bogaert, 2006; Deluzio-Chasin, 2011). Hubach and colleagues (2019) advocate learning environments of openness and inclusion that promote positive attitudes about sex rather than shame and provides students with non-judgmental access to sexual health information.

**Introducing: Undressing Consent, Theoretical Foundations and Structure Overview**

The purpose of this research was to explore the effectiveness of *Undressing Consent*—a short, targeted SV prevention program consisting of one 90-minute session created to complement an online training module (60 minutes) aimed at providing students with a foundational understanding of gender-based and sexual violence as a societal issue and to encourage helpful bystander behaviours. Western’s pre-requisite online module introduces students to topics of discussion related to rape culture, sexual assault, consent and sexual coercion, gender norms, bystander interventions, and Western University’s Policy on Gender-Based and Sexual Violence.

The current study aims to explore the potential impact of Undressing Consent in changing student attitudes and behaviours related to gender-based sexual violence prevention and exploration of sexuality. As gender differences exist in the experience and perpetration of SV and gender-separated programs are most effective in promoting attitudinal change for men (Brecklin & Forde, 2001; Lonsway, 1996), the current program presents tailored content to small cohorts of students grouped by gender (e.g., men and women + non-binary). Gendered grouping affords students comfort in engaging in gender-specific topics of interest within small groups of peers. A comparison of differences in program effects between these two gendered groups will
allow evaluation of potential differences in benefits and limitations of the program exist by gender. Results of the current study have implications for future development of compact campus SV prevention programs and will contribute to the larger body of research on SV prevention programming for campus communities.

**Program Content - Theoretical Foundations**

As reviewed, some proximal factors that contribute to rates of sexual violence at university include (1) environmental factors impacting whether students obtain consent or have capacity to consent to sexual activity (Abbey et al., 2002; Burczycka, 2020; Fieldler & Carey, 2010; Flack et al., 2007), (2) the influence of sexual scripts promoted by the mainstream media and porn industry (Gagnon & Simon, 1986; Goldstein, 2019; Sun et al., 2016; Vandenbosch & Van Oosten, 2017), (3) pressure on women to engage in casual sexual activity (Eshbaugh & Gute, 2008; Flack et al., 2007; Ford, 2021; Monahan & Lee, 2007; Paul & Hayes, 2002), (4) gender scripts that influence men’s responses to rejection of their sexual advances (Flack, 2007; Ford, 2021; Shumlich & Fisher, 2020; Woerner et al., 2018; Wright et al., 2010).

Awareness of these contributing factors allows researchers to conceptualize potential targets for prevention programming. The Undressing Consent program was developed by Dr. Annalise Trudell and frontline practitioners at ANOVA (see http://www.anovafuture.org/) and addresses factors that contribute to campus sexual violence. It presents key content aimed at: (1) fostering a better understanding of consent, 2: highlighting the role of the media and gendered sexual scripts in influencing individual beliefs and sexual behaviours, 3: encouraging exploration of personal sexual desires and boundaries through a sex-positive lens, and 4: exploring healthy ways for men to cope with sexual or relational rejection. The underlying literature supporting these aims is discussed in the following paragraphs.
Understanding of Consent: Nonverbal/Indirect Cues and Grey Areas

Education on the nuances and social context in which consent is obtained is imperative in combating sexual violence on campus (Willis & Jozkowski, 2019). Undergraduates (Shumlich and Fischer 2020) have indicated that although they know what constitutes affirmative consent and believe verbal consent to be more reliable and respectful, they feel most comfortable indirectly ascertaining consent by observing hesitation or non-verbal cues. They reported feelings of awkwardness, introversion, and fear of rejection when considering the real-world application of affirmative consent.

The deconstruction of consent requires a nuanced understanding of contributing social context, underlying motivations, and expectations. Several factors contribute to the feeling that verbal consent is awkward, including a romanticized portrayal of sexual spontaneity and a lack of modeling of affirmative consent seen on TV and in movies (Jozkowski et al., 2019; Shumlich & Fischer, 2020). Alcohol is another deterrent to obtaining affirmative consent, as intoxicated men are more likely to become aroused by refusal and easily angered over rejection (Abbey, 2011). Additional factors that contribute to engagement in unwanted sex (Ford, 2021) include: men's expectations that a partner will follow through with sexual acts if they provided non-verbal cues (e.g., flirting or following the man into a room) or if they have engaged in sexual activity with the partner in the past (Willis & Jozkowski, 2019), compliance with sexual advances to avoid situational awkwardness and discomfort, and compliance based on fear that the man may become violent. Gay and bisexual men report engaging in unwanted sexual acts to satisfy their partner thereby ending sexual activity quickly to avoid intercourse (Ford, 2021).

It is recommended that prevention programs provide students with a better understanding of contextual and social pressures that contribute to participation in unwanted sexual activity. In
addition, such programs should stress the male partner’s role in ensuring that consent is ongoing and enthusiastic (Ford, 2021; Willis & Jozkowski, 2019; Shumlich & Fisher, 2020). Taking into consideration that students report obtaining verbal consent as awkward and potentially contractual (Shumlich & Fischer 2020), the Undressing Consent program aims to encourage students to observe non-verbal cues. It presents students with a continuum of consent that includes verbal to nonverbal and direct to indirect indications of consent (Burrow et al., 1998; Hickman & Muehlenhard, 1999; Humphreys, 2004). In addition, the program highlights the importance of context when determining whether an act is harmful and affirms consent may be withdrawn during sexual activity even after it has been obtained. Men who understand consent are less likely to perpetrate sexual violence, act in a sexually aggressive manner, confirm rape myths, conform to macho gender stereotypes, and support abuse perpetrated by peers (Warren et al., 2015). Education on the impacts of alcohol on judgment (Jozkowski, 2015) and the importance of the male partner’s role in establishing affirmative consent (Ford, 2021) places responsibility on men to create an environment in which their partner is able to express discomfort, choose to slow down, or forgo a sexual activity.

The Role of Mainstream Media in Influencing Sexual Beliefs and Behaviours

By age 17, 93% of boys and 62% of girls will have viewed pornography, primarily through unwanted or accidental exposure (Sabina et al., 2008). Early, frequent exposure to pornography is associated with engagement in sexual activity at a young age, engagement in sexually aggressive and risky behaviours, and negative stereotyping of women (Braun-Courville & Rojas, 2009; Bridges, 2010; Brown & L'Engle, 2009, Peter & Valkenburg, 2006). Social cognitive theory predicts that aggressive behavior met with a favorable or neutral response results in tolerance towards aggression in viewers of the act (Bandura, 1994, 2001, as cited in
Bridges et al., 2010). Gendered sexual scripts perpetuated by movies and pornography are learned socially and internalized as acceptable guidelines for interpreting sexual cues and engagement in sexual behaviors (Gagnon & Simon, 1986; Sun et al., 2016; Vandenbosch & Van Oosten, 2017). Such scripts sculpt beliefs of what is sexually appropriate, prioritize men's sexual desires above women's, contribute to women's feelings of obligation to follow through on unwanted sexual activities, and are implicated in sexual assault (Ford, 2021; Senn et al., 2013). An analysis of the most frequently viewed pornographic materials (Bridges, 2010) found that 88% of scenes involved physical aggression, primarily perpetrated by men (70%) against women victims (87%). Warren and colleagues found that men who frequently view pornography are more likely to objectify women than those less exposed (Warren et al., 2015) and are more likely to view women as sex objects and support violence against women (Warren et al., 2015).

Sexual scripts promoted through mainstream media and the pornography industry influence expectations for real-world sexual encounters (Sun et al., 2016). Young men's frequent viewing of pornography is associated with greater integration of activities modeled in porn into sexual interactions, higher dissatisfaction with their own sexual performance and physique, and less enjoyment of sexually intimate experiences. Gendered sexual scripts pressure women to comply with unwanted sexual activity to avoid an undesirable outcome (e.g., hurt feelings or damage to the male partner's reputation, violence, Ford, 2021). Expectations that "easy" or "slutty" women will comply with intercourse create social pressure for women to “follow through” on demands for sex once they have led men to believe they were interested (Ford, 2021). There is evidence of the effectiveness of media literacy programs in promoting awareness and evaluation of gendered sexual scripts learned from mainstream media. Porn literacy education reduced the impact of porn on 13–25-year-olds (Vandenbosch & Van Oosten, 2017);
young people who received porn literacy education were less likely to view women as sex objects, and such programs were proven helpful in supporting healthy body ideals in adolescent girls (McLean et al., 2016). The Undressing Consent program engages students in discussion of where they first learned about sex and provides them with an opportunity to reflect on how attitudes towards sexuality are often influenced by gendered sexual scripts promoted by mainstream media.

**Personal Awareness of Individual Sexual Desires and Boundaries**

Contemporary culture contributes towards rigid societal beliefs of what is "normal" regarding body types (e.g., size, ableness), sexual activities, and sexual orientation. Desirable women are often pictured as slender yet "busty" and men as buff and dominant – symbolic of female helplessness and male strength (Schauer, 2005). Racial and sexual minorities are typically underrepresented in contemporary media (Wright & Cullen, 2001). Young girls' consumption of porn is predictive of increased insecurities related to sexual performance and contributes to low self-esteem regarding their bodies and sexuality (Lofgren-Martenson & Mansson, 2010; Stewart & Szymanski, 2012). One Qualitative study (Goldstein, 2019) demonstrated Canadian undergraduates recognition of the detrimental effects of mainstream porn. Students highlighted three themes of harm related to pornography including: (1) unrealistic representations of sex that distort normal adolescent sexuality, (2) the portrayal of 'extreme' or 'risky' sexual behaviour, and (3) the exploitation of performers.

Gender scripts present a sexist, double standard, in which women are expected to be "nice" and comply with sexual activity when a man is aroused but are also labeled a "slut" or considered "easy" when spending time alone with men (Ford, 2021). On the other hand, for the man, sexual experience contributes to their reputation as being "more masculine" (Baumeister et
al., 2002; Bosson & Vandello, 2011). The ability to negotiate sexual consent is key in preventing unwanted sexual experiences. A study testing a mediation model (Scappini & Fioravanti, 2022), demonstrated an association between the level of endorsement of gendered sexual scripts’ and female sexual functioning through perceived sexual pressure, compliance with unwanted sex, and sexual subjectivity. Women who more frequently endorsed gendered sexual scripts’ reported higher levels of sexual pressure, low levels of sexual self-concepts (e.g., sexual body esteem, entitlement to sexual pleasure), and higher levels of compliance with unwanted sex. There is evidence that women who endorsed sexual stereotypes and listen to music that is degrading of women were less likely than their peers to negotiate sexual consent (Hust et al., 2017).

Reinforcing women's rights to sexual pleasure empowers them to identify pleasurable activities and those they are uncomfortable with or which go against their values (Radtke et al., 2020). Researchers have identified a distinct need for education that counters traditional gender scripts that women should repress their sexual needs and prioritize male sexual satisfaction (Kennett et al., 2013). When both partners can clearly articulate their needs, sexual desires, or discomfort related to sexual activity, they are more likely to have positive sexual experiences (Frederick et al., 2017). Women who scored high on sexual agency and whose actions aligned with their attitudes towards sex, reported greater sexual satisfaction and well-being than those whose sexual actions were incongruent with their attitudes towards sex and those reporting no engagement in sexual activity (Kaestle & Evans, 2018).

The Undressing Consent program aims to encourage women to identify their desires and which sexual activities they are comfortable or uncomfortable with. It empowers women and non-binary folk to use this understanding to communicate desires and boundaries during sexual engagement. In addition, the program emphasises that, while understanding and communicating
desires and boundaries is helpful in avoidance of unwanted sexual acts, sexual assault is never the fault of the victim (Sigurvinsdottir et al., 2019).

**Healthy Responses to Sexual or Relational Rejection**

Sexual rejection elicits strong feelings of embarrassment, anger, frustration, anxiety, or confusion in both men and women (Baumeister et al., 2002; DeGraaf & Sandfort, 2004; Downey & Feldman, 1996). Young men are more likely than women to initiate casual sex, view engagement in casual sex more favorably, and reflect positively on experiences of casual sex (Baumeister et al., 2002; Clark et al., 1999; Fieldler & Carey, 2010; Grello et al., 2003; MacGregor & Cavallo, 2011; Manning et al., 2005; Owen et al., 2010). As such, they are more likely to be rejected (Jozkowski & Peterson, 2013). Rejection of men’s sexual advances is also often perceived as a threat to masculinity and self-image, a hindrance to goal attainment, or an insult to their honor (Baumeister et al., 2002; Bosson & Vandello, 2011; Stramoen et al., 2018) and men having concerns over rejection are less likely to seek affirmative verbal consent before engaging in sexual activity (Downey and Feldman, 1996; Shumlich & Fisher, 2020).

When sexual or romantic advances are rejected, men may retaliate with verbal threats or insults (Woerner et al., 2018), physical threats or violence (Brown, 2012), use coercion, or repeat unwanted attempts to engage in sexual activity (Flack et al., 2007; Ford, 2021; Shumlich & Fisher, 2020; Woerner et al., 2018; Wright et al., 2010). Women and gay or bisexual men often feel obligated to engage in unwanted sex with physically large men (Ford, 2021) and report apprehension to directly refuse sex out of fear of adverse reactions and concern for their physical safety (Shumlich & Fisher, 2020). Many students have indicated that if they explicitly decline sex, men try harder to convince them or become violent (Flack et al., 2016; Ford, 2021).
A study having male students engage with a true-to-life digital simulation showed that one-third of men whose sexual advances were rejected responded with aggression (Woerner et al., 2018). Students who have experienced unwanted intercourse indicate that the sexual assault "happened before I could stop it", that it was "easier to go along than cause trouble," that they were pressured verbally, or that the encounter began with consensual sexual activities but became assaultive when the man pressured or forced them to participate in unwanted activities (Flack et al., 2016; Ford, 2021; Shumlich & Fisher, 2020).

Beliefs held by both men and women contribute to the occurrence and acceptance of sexual violence. Rape myths include the belief that sex is expected from a woman if they have a sexual history or after a man has invested resources in her (Ford, 2021; Shotland & Goodstein, 1992; Woerner et al., 2018). Both male and female students are more likely to believe that a person is obligated to agree to a sexual act when they have previously engaged in sexual activity and are less likely to label a rape scenario as "violent" if the perpetrator and victim had been involved in sexual activity on multiple prior occasions (Shotland & Goodstein, 1992).

The Undressing Consent program addresses the impact of male verbal and physical aggression in response to rejection by highlighting discrepancies between male intent and impact and seeking to prepare men for rejection and equip them with strategies to respond to rejection without aggression and in a manner that is respectful. In addition, the program acknowledges sexual scripts that set expectations for male physique and performance, put pressure on men to initiate sexual activity and lend to a higher likelihood of experiencing rejection (Jozkowski and Peterson, 2013).

**Program structure and Facilitation**
The creators of the Undressing Consent program took a sex-positive approach when creating content addressing sexuality and sexual violence (Hubach et al., 2019; Ivansi & Kohut, 2017; Lafrance et al., 2012). Undressing Consent engages students with content-driven interactive activities and conversational prompts for small group discussions. The content is presented in a 90-minute session and is trauma-informed, considering that survivors will likely be present in every session. Sexual violence on campus significantly impacts student academic success, with victims having a higher risk of dropping out of college early and lower GPAs (Baker et al., 2016). These findings highlight the value of offering sexual violence prevention programming early on in the university experience, as such, this program is provided to first-year students at Western University in the summer prior to beginning their first term at the university.

The program was designed for in-person delivery but was delivered online via zoom throughout Winter 2021- Fall 2022, as all programming was moved to online delivery due to covid pandemic restrictions. Program facilitators were chosen from various cultural backgrounds, having diverse identities, sexual orientations, and lived experiences that contribute to creating a learning environment that is welcoming to all students. Students attended either a session for (1) men or (2) women and non-

**Figure 1.**
*Key program components.*

<table>
<thead>
<tr>
<th>Key Program Components</th>
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<tbody>
<tr>
<td><strong>Grey-areas and Capacity for Consent:</strong></td>
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<tr>
<td>- Stoplight reference, facilitator shares support resources</td>
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<tr>
<td>- Where did you first learn about sex interactive (Discussion/Padlet)</td>
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<tr>
<td>- Introducing the Consent Matrix</td>
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<tr>
<td>- The Sexual Violence Spectrum</td>
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<tr>
<td>- How drunk is too drunk to consent? (Discussion/Padlet)</td>
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<tr>
<td><strong>Gendered Sexual Scripts:</strong></td>
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<tr>
<td>- Introduction to Sexual Scripts</td>
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<tr>
<td>- Where did you first learn about sex? (Discussion/Padlet)</td>
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<td>- In the Writer's Room ([Jamboard]/group activity)</td>
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<td>- The Orgasm Gap</td>
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<tr>
<td><strong>Normalizing and Coping with Rejection (Men):</strong></td>
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<tr>
<td>- Depersonalizing Rejection</td>
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<tr>
<td>- Getting Rejected – how it feels (Discussion/Padlet)</td>
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<tr>
<td>- Handling Rejection, Intent vs. Impact</td>
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<tr>
<td><strong>Sexual Desires and Communication of Boundaries (Women &amp; Non—binary):</strong></td>
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<tr>
<td>- What does desire have to do with SV prevention?</td>
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<tr>
<td>- What does fulfilling sex look like to you? (Discussion/Padlet)</td>
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<tr>
<td>- Stoplight for understanding desires and navigating boundaries</td>
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binary. All sessions include discussions of consent and sexual scripts. Sessions for men include content addressing the rejection of sexual or romantic advances, normalizing such experiences, and building healthy coping strategies that are not harmful. Content presented in sessions for women and non-binary folk includes affirmation of rights to pleasure, encouragement to identify personal sexual desires while also determining which sexual activities they are not “ok” with in order to establish and communicate boundaries to potential partners.

**The Current Study**

The current study aims to evaluate the impact of the new Undressing Consent sexual violence prevention program on postsecondary student attitudes and beliefs. This preliminary evaluation will provide insight into program effectivity, strengths, and limitations. This community-based research is a collaboration between researchers in social science and psychology at the Center for Research and Education on Violence Against Women and Children (CREVAWC; see [http://www.learningtoendabuse.ca/](http://www.learningtoendabuse.ca/)) and the frontline practitioners who created the program, Dr. Annalise Trudell and colleagues at ANOVA (see [http://www.anovafuture.org/](http://www.anovafuture.org/)). The benefits of community-based research include the pooling of unique strengths, interests, and resources and the equitable distribution of decision-making power and accountability (Goodman et al., 2018; Ragavan et al., 2019). The merger pulls a wealth of expertise from experts who have worked with survivors of sexual assault (Ragavan et al., 2019) and have experience in supporting, counseling, and providing resources for survivors, as well as educating through prevention and intervention services. This research recognizes the vital contributions of program creators and facilitators who have dedicated time and effort to the fight against gender-based violence.
In order to examine program impact we created measurement scales specific to the program content which measure student attitudes of awareness of factors related to SV prevention including student awareness of what constitutes affirmative consent, understanding of media promoted gendered sexual scripts, awareness of one’s own desires and boundaries, and an understanding of how to respond to rejection in a manner that does not harm.

**Methodology**

Quantitative data from before and after student attendance programming was collected via questionnaire using the Qualtrics application (https://www.qualtrics.com). In addition, student and facilitator interviews and/or focus groups were conducted to collect post-programming qualitative data to be analyzed in future studies.

The use of logic models in program development and evaluation is recommended by researchers in fields addressing public health issues, including sexual violence (Hawkins et al., 2009; Senn et al., 2020). Logic models enable researchers to clearly identify a focal point and key program content, describe desired outcomes, build consensus and facilitate communication between collaborators, and guide project development, implementation, and monitoring (Kaplan & Garret, 2005). The logic model adopted for the current program evaluation was developed in consultation with Dr. Katreena Scott and Dr. Annalise Trudell and was utilized to articulate program content, determine intended results, and develop and select items for the measurement of student beliefs and attitudes before and after attending *Undressing Consent* (see figure 2). Research questions were informed by the literature examining postsecondary campus sexual violence prevention and guided by the logic model:

1. What is the reliability and validity of the newly created evaluation measurement tools? Do related items “hold together” for each construct of interest?
2. Does a short psychoeducational program lead to changes in students' knowledge and attitudes regarding:

   b) Grey areas of consent
   c) Gender-based sexual scripts
   d) Understanding of desires and communication of sexual boundaries
   e) Responding to rejection

3. Do programming effects vary by gendered student groups (men & women/non-binary)?

**Figure 2.**
*Logic model: Key programming components, intended outcomes, and evaluation measures.*

<table>
<thead>
<tr>
<th>Key Program Components</th>
<th>Intended Outcomes</th>
<th>Evaluation Measures (Student Attitudes and Beliefs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grey areas and Capacity for Consent:</td>
<td><em>Engagement in clear communication of consent</em></td>
<td><em>Illinois Rape Myth Acceptance Scale – Revised (McMohan &amp; Farmer, 2011), select items</em></td>
</tr>
<tr>
<td>• Stoplight reference, facilitator shares support resources</td>
<td><em>Think through context in which consent is given</em></td>
<td><em>Sexual Consent Attitudes Scale (Humphreys &amp; Brousseau, 2010), select items</em></td>
</tr>
<tr>
<td>Where did you first learn about sex? (Discussion/Padlet)</td>
<td><em>Navigate ethical grey areas around capacity to consent</em></td>
<td><em>Newly created items consistent with the Alcohol and Sexual Consent Scale (Ward et al., 2013)</em></td>
</tr>
<tr>
<td>• Introducing the Consent Matrix</td>
<td><em>Understand that sexual violence is any sexualized behaviour without consent</em></td>
<td></td>
</tr>
<tr>
<td>• The Sexual Violence Spectrum</td>
<td><em>Shift blame from survivors to perpetrators</em></td>
<td></td>
</tr>
<tr>
<td>• How drunk is too drunk to consent? (Discussion/Padlet)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gendered Sexual Scripts:</td>
<td>• Consider where we learn about sexuality</td>
<td>• Double Standard Scale (Caron et al., 2013), select items</td>
</tr>
<tr>
<td>• Introduction to Sexual Scripts</td>
<td>• Promote awareness of gender norms perpetrated via popular media</td>
<td>• Newly created items designed to measure beliefs related to sexual scripts and rape myths</td>
</tr>
<tr>
<td>• Where did you first learn about sex? (Discussion/Padlet)</td>
<td>• Reflect on how sexual scripts impact behaviours and assumptions</td>
<td></td>
</tr>
<tr>
<td>• In the Writer’s Room (Jamboard/group activity)</td>
<td>• Understand how sexual stereotypes influence student body ideals and pressure to perform</td>
<td></td>
</tr>
<tr>
<td>• The Orgasm Gap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normalizing and Coping with Rejection (Men):</td>
<td>• Normalize and depersonalize rejection</td>
<td></td>
</tr>
<tr>
<td>• Depersonalizing Rejection</td>
<td>• Promote awareness that impact is often different than intent</td>
<td></td>
</tr>
<tr>
<td>• Getting Rejected - how it feels (Discussion/Padlet)</td>
<td>• Promote healthy strategies for handling/coping with rejection</td>
<td></td>
</tr>
<tr>
<td>• Handling Rejection, Intent vs. Impact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Desires and Communication of Boundaries (Women &amp; Non-binary):</td>
<td>• Rewrite sexual scripts by considering personal desires</td>
<td>• Newly created items modeled after the Intention to be Accountable Scale (Trudell, 2021) and the Rejection Sensitivity Questionnaire (Brennen et al., 2009)</td>
</tr>
<tr>
<td>• What does desire have to do with SV prevention?</td>
<td>• Normalize the vast spectrum of sexualities and sexual preferences</td>
<td></td>
</tr>
<tr>
<td>• What does fulfilling sex look like to you? (Discussion/Padlet)</td>
<td>• Navigate Boundaries</td>
<td></td>
</tr>
<tr>
<td>• Stoplight for understanding desires and navigating boundaries</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Participants**

Data was analyzed from a total of 567 students who completed either the pre or post-surveys (see section below for specifics on data screening). While all students were asked to complete the questionnaire prior to and following the intervention, most self-selected to complete the questionnaire at only one time point and many did not follow instructions to create
a unique identifier code that would allow us to match their pre and post responses. As such, only able ten students (WNB = 7, Men = 3) data could be matched and repeated measures analyses were not feasible.

The majority of students that completed the surveys attended the women and non-binary (WNB) session (60% of pre-survey and 75% of post-survey respondents). Of participants responding to the pre-survey, roughly 51% identified as women, 35% as men, 1% as non-binary or other, with 8% preferring not to disclose gender; 64% were heterosexual, 13% bisexual, and 11% were either gay, queer, lesbian, pansexual, asexual or did not disclose their sexual identity. A slim majority of participants were Caucasian (40%), Asian students represented the next largest majority (30%), students of mixed ethnicity (5%), Black (4%), and Middle Eastern (4%), as well as a minority of Latinx, and Indigenous students represented the remainder of the students sample. Most participants were between ages 18-24 years (58%). These demographics were similar but not identical for respondents to the post-survey. Detailed demographic information is presented in Table 1.

### Table 1.
Demographic characteristics.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session group</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>137</td>
<td>55</td>
</tr>
<tr>
<td>Women/non-binary</td>
<td>208</td>
<td>167</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-18</td>
<td>88</td>
<td>59</td>
</tr>
<tr>
<td>18-24</td>
<td>202</td>
<td>144</td>
</tr>
<tr>
<td>25-34</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>35 +</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td><strong>Gender Identity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woman</td>
<td>176</td>
<td>148</td>
</tr>
<tr>
<td>Man</td>
<td>122</td>
<td>56</td>
</tr>
<tr>
<td>Non-binary</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
The pre-survey was accessed by 651 individuals with $n = 642$ consenting to participate. However, only 354 participants (54%) completed at least 80% of the questionnaire with many students responding to only the first few items. The post-survey was accessed by 603 individuals of which 95% consented to participate ($n = 575$) yet only 39% ($n = 222$) completed at least 80% of the questionnaire. While attrition in post-survey sample size was a concern, cases having 20% or more missing values were excluded from the final analysis to prevent overestimation (Tabachnick & Fidell, 2007). For cases having fewer than 20% of absent values ($n = 6$), missing values were replaced with item mean estimates (Tabachnick and Fidell, 2007) prior to running analyses. Boxplots were used to assess for univariate and multivariate outliers (Tabachnick & Fidell, 2007). On examining boxplots for each item, nine outliers were removed from the data set utilizing Tukey’s definition of extreme outliers (1977) as those beyond the outermost fences. A total of 567 student participants ($n_{pre} = 345$, WNB = 208; $n_{post} = 222$, WNB = 167) remained and was used in item measurement and analyses of group differences for purposes of gaining

<table>
<thead>
<tr>
<th>Prefer not to say</th>
<th>5</th>
<th>1.4</th>
<th>1</th>
<th>0.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transgender</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**Sexual Orientation**

<table>
<thead>
<tr>
<th>Sexual Orientation</th>
<th>222</th>
<th>64.3</th>
<th>153</th>
<th>68.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heterosexual</td>
<td>222</td>
<td>64.3</td>
<td>153</td>
<td>68.9</td>
</tr>
<tr>
<td>Bisexual</td>
<td>45</td>
<td>13</td>
<td>26</td>
<td>11.7</td>
</tr>
<tr>
<td>Gay/Queer/Lesbian</td>
<td>10</td>
<td>3</td>
<td>16</td>
<td>7.2</td>
</tr>
<tr>
<td>Asexual</td>
<td>3</td>
<td>.9</td>
<td>5</td>
<td>2.3</td>
</tr>
<tr>
<td>Pansexual</td>
<td>4</td>
<td>1.2</td>
<td>5</td>
<td>2.3</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>2.3</td>
<td>7</td>
<td>3.2</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>13</td>
<td>3.8</td>
<td>2</td>
<td>.9</td>
</tr>
</tbody>
</table>

**Race**

<table>
<thead>
<tr>
<th>Race</th>
<th>140</th>
<th>40.6</th>
<th>113</th>
<th>50.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>140</td>
<td>40.6</td>
<td>113</td>
<td>50.9</td>
</tr>
<tr>
<td>Asian</td>
<td>103</td>
<td>29.9</td>
<td>57</td>
<td>25.7</td>
</tr>
<tr>
<td>Mixed ethnicity</td>
<td>16</td>
<td>4.6</td>
<td>15</td>
<td>6.8</td>
</tr>
<tr>
<td>Middle Eastern</td>
<td>13</td>
<td>3.8</td>
<td>10</td>
<td>4.5</td>
</tr>
<tr>
<td>Black</td>
<td>12</td>
<td>3.5</td>
<td>6</td>
<td>2.7</td>
</tr>
<tr>
<td>Latinx</td>
<td>4</td>
<td>1.2</td>
<td>5</td>
<td>2.3</td>
</tr>
<tr>
<td>Indigenous</td>
<td>2</td>
<td>.6</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>16</td>
<td>4.6</td>
<td>7</td>
<td>3.2</td>
</tr>
</tbody>
</table>
preliminary insight into measurement validity and reliability and program effectivity. I acknowledge that sample size is a limitation within this work and may introduce additional error into the modeling and impact outcomes of the analyses.

Measurement

Items taken from empirically validated measures were initially piloted, however, there was evidence of participant response bias within the pilot data. Participants seemed to be aware of the socially correct response to many evaluation questions and were indiscriminately self-reporting high levels of agreement with protective attitudes reflected in the items. This resulted in many of the evaluation items performing at ceiling and contributed to poor measurement reliability. As the content of Undressing Consent was newly created by social scientists in the field of gender-based violence, it was necessary to create items that specifically measure the unique material presented in the program. The majority of pilot items were replaced by newly created items which assess attitudinal changes related to four key program components (1) grey areas and capacity for consent, (2) gendered sexual scripts learned from popular media (3) normalizing and responding to rejection, and (4) exploring desire and boundaries. Scales and item creation are described in greater detail below.

Pilot Items

When collecting pilot study data, I utilized a subset of items selected from several empirically validated measures (McMohan & Farmer, 2011; Humphreys & Brousseau, 2010; Caron et al., 1993). The selected items were presented before and after students attended the first Undressing Consent sessions (winter term, 2022). Histograms of pilot study data were examined and indicated poor construct reliability with most items performing at ceiling. Items in which >90% of participants indicated that they “agree” or “strongly agree” were removed from the scales - in
accordance with Item Response Theory (IRT) criteria (Fayers, 2004; Reise & Waller, 2009). New items were then created with the goal of addressing the unique content presented in the program and improved differentiation of student agreement levels and detection of changes from before and after the intervention.

**Program Evaluation Questionnaires**

The final questionnaire comprised of 32 items, with five items sourced from previously validated scales (Caron et al., 1993; Humphreys & Brousseau, 2010; McMohan & Farmer, 2011). Integrated items included three from the Illinois Rape Myth Acceptance Scale – Modified Version ([IRMAS-M] McMohan & Farmer, 2011; Payne et al., 1999) which were selected to measure student understanding of capacity to consent in the context of drinking. The scale has good internal consistency ($\alpha = .87$, McMohan & Farmer, 2011), good to excellent reliability ($\alpha = .86 - .91$), and has been utilized in sexual violence program evaluation (Johnson et al., 2021; McMohan et al., 2014; Peterson et al., 2016). One item was retained from the Sexual Consent Scale - Revised (SCS-R; Humphreys & Brousseau, 2010; Humphreys & Herold, 2007) which measures youth evaluations of the establishment of sexual consent through verbal or nonverbal cues, which predicts intent to negotiate sexual consent (Humphreys & Herold, 2007). One item taken from the Double Standard Scale (Caron et al., 1993) was utilized to assess gendered double standards for sexual experience. Researchers have used the Double Standard Scale to explore sexual communication (Greene & Faulkner, 2005), relationship satisfaction, and engagement in unwanted sex (Kennett, Humphreys & Bramley, 2013). An item measuring positive and negative feelings towards sex was selected from the Sex Positivity–Negativity Scale (Hangen & Rogge, 2022).
In addition to items retained from validated measures, several items were created in consultation with Dr. Scott and Dr. Trudell. These included nine items related to rape myths and obtaining consent when intoxicated or from an intoxicated person (thirteen items in all), eight items related to awareness of one’s own sexual desires and boundaries, five items measuring gendered sexual scripts (six items in all), and five items reflecting material presented to men only. Items measuring student perspectives on consent, desires, and sexual scripts were presented to all students and were revised or written to reflect gender neutrality. Students that attended the men’s group also received the items related to responding to rejection, masculinity, and intent versus impact. All items were rated on a Likert Scale from 1(Strongly agree) - 5 (Strongly disagree) and included in both the pre and post-program questionnaires (see appendix A. for a sample of the post-program questionnaire). The questionnaire took participants approximately 20 minutes to complete.

Table 2.
*Items assessing student attitudes and beliefs.*

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Survey Instructions</th>
<th>Items</th>
<th>Item Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grey Areas and Capacity to Consent</td>
<td>Please indicate your answers to the following statements by circling the number which best represents your personal beliefs.</td>
<td>If a (person) is drunk, they might rape someone unintentionally</td>
<td><em>Illinois Rape Myth Acceptance Scale – Revised</em> (McMohan &amp; Farmer, 2011)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It shouldn’t be considered rape if a (person) is drunk and didn’t realize what he was doing</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>If a (person) doesn’t say &quot;no&quot; it can't be considered rape</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I am worried that my partner might think I am weird or strange if I asked for sexual consent before starting any sexual activity</td>
<td><em>Sexual Consent Attitudes Scale – Revised</em> (Humphreys &amp; Brousseau, 2010)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I tend NOT to decide ahead of time which sexual activities I will and will not consent to engaging in. I wait till I am ‘in the moment’ to decide.</td>
<td></td>
</tr>
</tbody>
</table>
I believe it is important to check for non-verbal, indirect signs of comfort/discomfort in someone when engaging in sexual activity with them.*

It is important to check that someone is still interested in the sexual activity throughout the experience.*

It is often complicated to figure out if person is too high or intoxicated to consent to sexual activity.*

Drinking alcohol is likely to impair my judgement about whether or not someone is consenting to sexual activity.*

Consent to sexual activity can be given before drinking begins and is still valid later on, even if the person who gave consent is intoxicated.*

I feel capable of giving consent when I am drunk.*

I can receive consent from a person who is drunk.*

If two people are drunk before or during engagement in sexual activity consent may be misunderstood and result in an unwanted sexual experience.*

I believe using non-verbal indirect cues when initiating sexual activity can be easily misinterpreted by a partner.*

### Sexual Scripts

<table>
<thead>
<tr>
<th>Please select your response to the following questions about your attitudes about the sex roles of men and women. Please keep in mind that there are no right or wrong answers. Please answer honestly.</th>
<th>It is worse for a woman to sleep around than it is for a man.</th>
<th>Double Standard Scale (Caron et al., 2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women should be less sexually experienced than men.*</td>
<td>Mainstream media plays a large role in ideas of what is “normal” sex and who is considered “attractive”.*</td>
<td></td>
</tr>
<tr>
<td>It is not OK for a woman to have multiple sex partners.*</td>
<td>It is OK for someone to choose not to engage in sexual activity.*</td>
<td></td>
</tr>
<tr>
<td>Our ideas about sex are often shaped by mainstream portrayals of heterosexual, white, non-disabled couples.*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Desires & Boundaries

<table>
<thead>
<tr>
<th>Select all choices that describe how you personally feel.</th>
<th>IN GENERAL, I feel that sex and sexuality are... (students select from 18 descriptive adjectives)</th>
<th>Sex Positivity–Negativity Scale (Hangen &amp; Rogge, 2022)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I think about whether engaging in a sexual activity aligns with my values, given the context of the situation. *

I feel like a lesser person if I choose not to engage in casual sex.*

I have thought about which specific sexual activities I want to do and which I am not ok with so that I can communicate my comfort level and preferences when engaging in sexual activity.*

I know what kind of relationship I expect to have with a person (e.g., casual, long term relationship, just friends) before engaging in sexual activity with them.*

Knowing what I do and do not want to do sexually can help me get out of sexual activities that I don’t want to participate in.*

I think about whether I feel safe to verbally communicate my needs to the person I am hooking up with (e.g., engaging in sexual activity).*

I tend NOT to decide ahead of time which sexual activities I will and will not consent to engaging in. I wait till I am ‘in the moment’ to decide.*

It is really awkward to let someone know I’m no longer interested in hooking up sexually when we have already started making out (e.g., kissing or undressing).*

Response to Rejection (M)

<table>
<thead>
<tr>
<th>Click on the option that best represents your personal beliefs.</th>
<th>When someone declines my invitation to hook-up sexually it is a threat to my masculinity.*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>When my sexual advances are refused I stop to think about how to respond in a respectful manner*</td>
</tr>
<tr>
<td></td>
<td>It is important to me that my friends view me as sexually active.*</td>
</tr>
<tr>
<td></td>
<td>Gender roles contribute to pressure on guys to initiate sexual activity.*</td>
</tr>
<tr>
<td></td>
<td>Trying to convince someone to have sex might have the impact of making the other person feel forced.*</td>
</tr>
</tbody>
</table>

Note. New items are indicated with an asterix (*).

When creating new items, several popular scales were referred to for the measurement of consent (The Alcohol and Sexual Consent Scale [Ward et al., 2012], Double Standard Scale
[Caron et al., 2011]; understanding of desires/communication of boundaries (The Female Resourcefulness Scale [Humphreys & Kent, 2010], The Sexual Communication Efficacy Scale [Quinn-Nilas et al., 2018]); and awareness of gendered sexual scripts (The Scale for the Assessment of Sexual Standards Among Youth [Emmerink et al., 2017]).

As the program aimed at providing information on protective and risk factors for SV through a sex-positive lens, a balance item (taken from a scale developed by Hangen & Rogge, 2022) was utilized to measure potential changes in student perspectives on sexual activity following participation in the program. This multiple-response item had eighteen selectable descriptors; nine negative (e.g., unpleasant, awkward) and nine positive (e.g., enjoyable, exciting). Students were instructed to select as many positive and negative descriptors as reflected their perspectives on sexual activity.

In addition, the questionnaire contained two open-ended vignettes designed to assess student’s feelings and behaviours in response to incidents of Unwanted Sexual Attention, presented to students who participated in the WNB sessions, and Rejection of Sexual Advances which was presented to the Men’s group (see appendix A. for the full pre- and post- evaluation package including vignettes).

**Procedure**

Western University's Research Ethics Board approved all research activities related to this project. Pre-and post-intervention data was collected from a population of approximately 1000 students enrolled at The University of Western Ontario and its affiliated colleges Brescia, Huron, and King's University College. We had originally planned to utilize a mixed-method approach including examination of student and facilitator qualitative responses. However, as we
realized the need to create questionnaire items that address the unique features of the program we opted to focus on scale measurement and examine the qualitative data at a later date.

The quantitative data analyzed in this thesis was collected in Fall 2022. Student participants were invited by CREVAWC to complete the pre-program questionnaires via email before participating in the Undressing Consent programming. Following participation in the programming students were invited by facilitators to complete the post-programming questionnaire. All students were informed of the risks and benefits of participating in this research and were required to provide consent before any data was collected. In appreciation of their time, all student participants were entered into a draw to win one of three reMarkable tablets. Participants’ questionnaire responses were de-identified and all students were asked to create a unique identifier code in order to facilitate matching of each students pre- and post-program data.

Data Management and Analytic Plan

Although the original purpose of this research was to explore program efficacy, due to the number of newly items created, the study focus shifted to scale measurement. This thesis contributes towards the creation and analysis of a scale for the evaluation of student outcomes following participation in Undressing Consent. The Statistical Package for Social Sciences (SPSS), MPlus, and IRTpro software were used for all analyses which were conducted in collaboration with Allie Wall, a colleague who is currently completing a PhD degree in Social Work. Both classical (i.e., reliability and factor analyses) and modern (item response theory) testing theories (Bryant & Yarnold, 1994; Furr, 2013; Kline, 2011; Li, 2016; Rubio et al., 2007; Schmitt, 2011; Schreiber et al., 2006) were used to evaluate the psychometric properties of the newly created items and tools.
Scale measurement was conducted according to the three phases and nine steps of scale development and validation as outlined by Boateng and colleagues (2018) which include 1. Identification of domain and item generation, 2. Content validity, 3. Pre-testing of questions, 4. Sampling and survey administration, 5. Item reduction, 6. Factor extraction, 7. Tests of dimensionality, 8. Testing of Reliability, and 9. Testing of validity. A combination of correlation-based measure-development analyses (e.g., CFA) and item response theory analyses were utilized to: (1) explore model fit, error, and the strength of relationships between subscales and observed variables (2) evaluate the reliability and validity of latent variables that comprise subscales, (3) evaluate item performance including ability to discriminate between participants with different levels of awareness, and precision of item information levels.

To test program effectivity following scale evaluation we explore main and simple effects and interactions between gendered groups from before and after participation in Undressing Consent. The item assessing sex-positivity was also analyzed vignettes presented to both gendered groups (men, response to rejection; women, response to unwanted advances) were coded for content to observe student endorsements of strategies for responding to unwanted advances or rejection of sexual advances from before and after the program.

The majority of participants completed only one of the questionnaires (either the pre- or post-program questionnaire) and only ten students responses could be matched from pre to post. As such, independent samples analyses were run to examine differences from pre to post-intervention for each scale. Items assessing responses to rejection were only presented to students in the men’s sessions and were first examined as a separate latent variable and then within a CFA combining responses to both rejection items and items assessing men’s perspectives on gendered sexual scripts using only data from the men’s group. One item had
been listed twice in the questionnaire; to remedy this oversight mean differences between participant responses on the duplicated item were examined, as no significant difference in participant responses were observed, responses to the first listed item were used in consequent analyses.

**Item Response Theory**

IRT comes from the Modern Testing Theory framework of psychometrics and allows researchers to evaluate the item-level performance for psychological tests and measures (Furr, 2013). In IRT a person’s response to a test item is based on both the examinee’s intrinsic level of the latent trait being measured (e.g., beliefs that are protective against SV) and the quality of the test item. Item quality is indicated by certain parameters (Furr, 2013) including: Item Discrimination, Item Difficulty, and Item Information. The information function within IRT is comparable to the Classical Test Theory (CTT) concept of reliability (Harvey, 1999) and indicates at which trait level the item is most precise (Furr, 2013; Rubio et al., 2007, p. 44). The item characteristic curve (ICC), a probability curve that demonstrates the relationship between an individual’s ‘ability’ and how they respond to the item will typical show patterns indicating that as trait levels of the respondent increase, the probability of endorsing the item also increases (Nguyen et al., 2014). Item Discrimination ($a_i$) indicates the magnitude of change in probability of responding to the item in a particular direction as a function of the trait level (Rubio et al., 2007, p.40). It helps us determine how well the item is discriminating between those with different levels of the underlying trait and can be interpreted qualitatively with Baker’s (1985) classification (Rubio et al., 2007, p. 41):
Ostini & Nering (2006) discuss differences between assessments intended to measure attitudes/beliefs, personality traits, or interests and those that measure ability. They indicate that references to “correct responses” and “item difficulty” lose their common meaning in the context of tests that attempt to measure a respondent’s typical performance (i.e., attitudes) rather than maximum performance (i.e., ability). As our assessment explores differences in typical student attitudes related to SV prevention item difficulty is not a particularly meaningful metric and focus was placed on assessing differences in item information and discrimination. A well-functioning item should have both discriminating power and have high precision across traits reflecting levels of awareness or agreement.

The Bock-Aitkin Marginal Maximum Likelihood (MML) estimation method (Bock & Aitkin, 1981) was used for graded response IRT models and all analyses were performed using IRTpro software. Both the graded response model and the MML estimation method are used for ordinal data (Furr, 2013). IRT Item Characteristic Curves (ICC) and Information Plots, common graphical outputs of IRT analyses, were examined to observe how items were performing within our sample and find items that should be removed or revised in order to optimize the scale. Item having poor information curves do not provide the respondent with enough information to properly distinguish between those having high or low trait levels and should be removed from future scales. As such, Item Characteristic Curves allow researchers to identify the smallest item set that yields the strongest power to detect individual differences.

<table>
<thead>
<tr>
<th>$a_i$</th>
<th>Discrimination</th>
</tr>
</thead>
<tbody>
<tr>
<td>$a_i &lt; 0.20$</td>
<td>Very Low Discrimination</td>
</tr>
<tr>
<td>$a_i &lt; 0.40$</td>
<td>Low Discrimination</td>
</tr>
<tr>
<td>$a_i &lt; 0.80$</td>
<td>Moderate Discrimination</td>
</tr>
<tr>
<td>$a_i &lt; 1$</td>
<td>High Discrimination</td>
</tr>
<tr>
<td>$a_i \geq 1$</td>
<td>Very High Discrimination</td>
</tr>
</tbody>
</table>
across the broadest range of the construct, thereby optimizing the scale (Hangen & Rogge, 2022).

**Structural Equation Modelling**

Confirmatory Factor Analysis (CFA) is a multivariate technique used to test the structure of a theoretical construct as well as the degree to which observed variables (e.g. scale items) are related to each other and can be explained by a smaller number of unobserved or latent factors (Bryant & Yarnold, 2005; Li, 2016; Schmitt, 2001; Schreiber et al., 2006). In CFA, the number of factors, their labels, and the items that load on each factor are predetermined based on a-priori theory or empirical evidence. Factor patterns are examined to identify which items load strongly on each hypothesised domain and to determine shared variance (due to the latent factor) and whether measurement variance is due to unobserved latent factors or random error. Factor loadings indicate the strength and direction of the relationship between the item and the measured variable (Schreiber et al., 2006). Goodness of fit of the pre-specified model is evaluated by comparing the observed covariance matrix with the model-implied covariance matrix using goodness-of-fit indices.

Our three models (Consent, Desires & Boundaries, and Sexual Scripts) were pre-specified as uni-dimensional; with Consent having thirteen indicators (items: 1, 3, 6, 8, 10, 14, 16, 17, 20, 21, 23, 15, & 27), Desires & Boundaries having nine indicators (items: 4, 7, 9, 13, 15, 18, 22, & 26), Sexual Scripts having six indicators (items: 2, 5, 11, 12, 19, & 24), and Rejection having five indicators (items: 28,29, 30, 31, & 32). Univariate models were tested using the Weighted Least Squares with Mean and Variance adjusted (WLSMV) estimation method. WLSMV is specifically designed for categorical observed data (e.g., binary or ordinal) in which assumptions of normality are not possible (Li, 2016). This estimation method compensates for
bias due to categorical aspects of the variables, and does not assume observed variables come from a normal distribution but instead assumes a normal latent distribution underlies each observed categorical variable, and is considered acceptable for skewed response distributions (Beauducel & Herzberg, 2006; DiStefano & Morgan, 2014; Li, 2016; Muthén & Muthén, 2017).

In scale development involving Factor Analysis (EFA, CFA), sample size affects the precision and replicability of the results; parameter estimates are also sensitive to sample size (Kyriazos, 2018). In factor analyses, the general rule that the ratio of participants to observed indicators should be at least 10:1 (Yong & Pearce, 2013) was followed; as our scales has a total of 27 items, a sample size of at least 270 participants at each time of assessment (pre, post) is sufficient. A total sample of n = 345 students prior to participation in the program and n = 222 post intervention was obtained; which was deemed adequate for the analyses. All 27 items were presented to both gendered groups with an additional five items assessing responses to rejection presented to the men’s group only. Rejection scale items were also examined using CFA, however, men’s sample size was inadequate (pre n = 137, post n = 55) for confident interpretation of CFA.

Model fit indices and reliability were examined for each univariate model conducted on each subscale of interest. Recommended goodness of fit indicators including the Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), and the Root Mean Square Error of Approximation (RMSEA [Schreiber et al., 2006]) were utilized to test model fit. RMSEA, a measure of model fit error that is calculated by comparing the fit of the hypothesized model to the fit of a "null" model (Bryant & Yarnold, 1995, p. 114). The RMSEA accounts for both the discrepancy between the model and the data (i.e., the residuals) as well as the complexity of the model (i.e., the number of parameters estimated). The TLI is a relative fit index, and was examined to compare the fit of
multiple models. The CFI is considered one of the most reliable indices of fit and is used in conjunction with other fit indices. It is suggested that for continuous data cut-off levels of $TLI > .95$, $CFI > .95$, and $RMSEA < .06$ are reasonable for determining model fit (Hu & Bentler, 1999 as referenced in Schreiber et al., 2006). The Chi square parameter is not compatible with WLSMV and likert data (Li, 2016; Muthén & Muthén, 2017) and was not referred to as an indicator of model fit. Internal consistency was tested for each subscale using Cronbach’s alpha, a reliability coefficient (Cronbach, 1951).

Several assumptions of CFA were considered when performing analyses (Yong & Pearce, 2013; Bryant & Yarnold, 2005); heterogeneous samples were used (Kline, 1994), histograms and frequency tables were examined for skew and kurtosis and to observe the item trend direction form pre to post data (Beauducel & Herzberg, 2006). As per recommendations by Kline (2011) absolute values of $KI > 20.0$ were deemed to indicate severe kurtosis. Responses on most items were skewed, as such, WLSMV estimation methods in Mplus were used to analyze model fit. In addition, it was ensured that each specified model contained at least 3 observed indicators in order to reliably assess model fit and reduce error and risk of under-identification of the model (Thompson, 2004; Kyriazos, 2018).

CFAs were conducted using all items within each conceptual domain, and factor loadings, unique variances, and modification indexes were examined to find the best indicators of latent variables, this allowed us to identify and drop items loading poorly on the factor of interest. “Rotated” solutions were utilized to facilitate meaningful interpretation (Berkman & Reise, 2012). Oblique rotations are used when factors are considered conceptually related (Yong & Pearce, 2013) and are recommend in psychological research as they are less likely than orthogonal rotations to produce inflated item loadings and generally result in statistically sound
factor structures (Schmitt, 2011) regardless of the strength of inter-factor correlations. Items having loadings above .30 were included in our subscales. Item loadings and cross-loadings were identified to better understand item clustering and communality accounted for by the common factor (Child, 2006). Item performance was examined in IRT and poorly loading items that were confirmed to have low information and discrimination properties were dropped from the scales.

**Analysis of Group Differences**

A series of Two-way ANOVAs were utilized to compare student attitudes on subscales of Consent, Desires and Boundaries, and Gendered Sexual Scripts from pre- to post- intervention and between gendered groups. An acceptable ANOVA sample size is determined by central limit theorem in which the threshold of 25-30 participants per group is sufficient to run the analysis regardless of sample normality, and parametric tests are generally more robust with respect to violations of assumptions of sample size and normality of the sample distribution than nonparametric tests when utilized for ordinal data (Norman, 2010). As Cronbach alpha and factor analysis techniques were run to provide evidence that the variables were sufficiently intercorrelated and measure the latent variable, composite scores were created and analyzed to determine group differences (Norman, 2010). Partial eta squared, was then examined as a measure of effect size which measures the proportion of variance in the dependent variable that is explained by a particular independent variable, after controlling for the effects of other variables in the model. Partial eta squared can range from 0 to 1, with larger values indicating a stronger effect, conventionally values of 0.01, 0.06, and 0.14 indicate small, medium, and large effects (Richardson, 2011).

**Analysis of Sex Positivity**
Composite scores were created and used to analyze patterns of student endorsements of sex positivity and sex negativity which were composed of binary values on each of the 18 possible selections. Two-way ANOVAs were performed in SPSS to examine mean differences in student endorsements of positive and negative descriptors between gendered groups and before and after participation in the program.

**Open-ended Vignettes**

Students in both gendered groups were presented with a vignette followed by two open-ended response questions asking what they “think” and how they would “act” in response. A total number of 518 students responses to the open-ended questions were collected. Responses to *Rejection of Sexual Advances* were given by a total of n = 176 men, (n<sub>pre</sub> = 115 , n<sub>post</sub> = 61); and n = 342 WNB students (n<sub>pre</sub> = 176 , n<sub>post</sub> = 166) responded to the vignette: *Unwanted Sexual Advances*.

A codebook was created in Excel for concept-mapping, with student’s meaningful responses categorized into “buckets” as responses matched pre-determined constructs of interest (Desideratum, 2020; Jackson & Trochim, 2002). The first step in the coding process included color coding “down” the column of collective responses to each sub-question (e.g., think, act) for vignettes presented to either the men or women and non-binary students. This provided me with a “bird’s eye view” of common themes emerging from student reactions to the scenario presented to their gendered group. A second round of coding involved ascribing a binary code to each bucket for each student response containing an endorsement of the theme of interest. For example, a common code that emerged in response to the question of how men would act following rejection of their sexual advances was “apologize”; each individual response was then scanned and assigned a “1” if their response endorsed apologizing and a “0” if this was not
mentioned in the response. The second round of coding was done independent of the first round
to allow for a “fresh” perspective on the data. In order to reduce the number of coding buckets,
during the second round of coding several overlapping subcodes were combined under an
overarching code. For example, the codes “attempts to contact later” and “asks why they don't
want to continue” were combined under the code “Continues Sexual Advances”. Stacked bar
graphs presenting the percentage of student endorsements of beliefs and behaviors were created
to aid in the visualization of responses corresponding to each coded theme from pre to post
programming. Although responses could not be matched from pre and post intervention,
frequency and percentage of student endorsements was calculated for each coded theme, within
each gendered group, for both pre and post responses.

Results

Measurement Development

Consent

A series of graded-response IRT analyses were performed on the consent items to
determine information and discrimination parameters. Information plots for items 1, 10, 16, 17,
and 27 indicated very low precision, with the information parameter ranging between 0.00 and
0.11 across all trait levels within the sample. Item Characteristic Curves indicated higher
precision (0.5 -1.4) for items 3, 6, 20, 23 & 25 at higher student trait levels. And items 8, 14, &
21 indicated low precision (0.2 - 0.4) across all trait levels. Items which best discriminated
between students having low and high traits of awareness included items 3 ($a_i = 1.32$, $SE = 0.20$)
6 ($a_i = 1.42$, $SE = 0.21$), 8 ($a_i = -0.85$, $SE = 0.14$), 14 ($a_i = 1.06$, $SE = 0.17$), 20 ($a_i = 2.15$, $SE =
0.33$), 21($a_i = 1.05$, $SE = 0.17$), 23 ($a_i = 1.48$, $SE = 0.23$), & 25 ($a_i = 1.36$, $SE = 0.21$). Items 1,
10, 17, and 27 were confirmed to be problematic in discrimination analyses, which indicated poor ability to differentiate between student trait levels (see Table 3.).

A univariate CFA was then performed on pre-intervention data from both gendered groups for all thirteen Consent scale items (1, 3, 6, 8, 10, 14, 16, 17, 20, 21, 23, 25 & 27). A poor fitting model with low reliability (CFI = 0.63, TLI = 0.55, RMSEA = 0.14, α = 0.63) was observed. In addition, low factor loadings (< .30) were found for items 1, 10, 17, and 27 in confirmation that these items are problematic and should be removed from the scale to improve internal consistency. Based on item loadings, information, and discrimination, items 1, 10, 17, and 27 were removed from the final consent model. Although item 16 had poor information and a small loading, it had moderate discrimination power and was retained as it was one of the few questions pertaining to "giving consent" whereas the other items addressed "receiving consent" and defining rape. Item 8 also demonstrated moderate discrimination power, however, the probability of choosing the "correct response" decreases as trait level increases; while the item was retained for the purpose of this evaluation, it may require modification in the future. The percent of all student respondents answering “Strongly Agree” or “Agree” at pre-test ranged from 80 to 95% for most items (3(r)= 80%, 6(r)=87%, 14=85%, 20=92%, 23=95%, 25(r)=84%); with greater variability in responses seen for items 8, 16, and 21 (percent of respondents indicating SA or A: 8=19%, 16(r)= 60%, 21(r)= 65%). Item 8 received the least agreement with only 19 percent of students agreeing or strongly agreeing, this was likely due to the majority of students holding the belief that any amount of alcohol impacts ability to consent. The program content however, does express that it is complicated to understand how much alcohol leaves one incapable of consent in order to highlight grey areas of consent and promote caution in receiving consent when a prospective partner has been drinking alcohol.
A univariate CFA was then performed on the final nine item model (3, 6, 8, 14, 16, 20, 21, 23, & 25). Following the recommendations by Kline (2011), post-hoc modification indices were conservatively used to correlate error terms for four pairs of theoretically related items including: 3 with 21, 8 with 16, 20 with 23, 23 with 25 (see figure 3). The final CFA for consent with included modifications resulted in a good model fit (CFI = 0.96, TLI = 0.94, RMSEA = 0.069) with reliability approaching acceptability (α = 68). See item loadings for the final Consent scale in Table 3.

**Figure 3.**
Revised Consent measurement model – 9 items

![Revised Consent measurement model – 9 items](image)

Note. Standardized loadings with standard error in brackets are presented for all variables within the subscale.

**Table 3.**
CFA, Consent items and final model loadings.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item loadings (SE)</th>
<th>Pre</th>
<th>Discrimination</th>
</tr>
</thead>
<tbody>
<tr>
<td>c_q3(r)</td>
<td>Consent to sexual activity can be given before drinking begins and is still valid ...even if ...intoxicated.</td>
<td>0.54 (.05)</td>
<td>1.78</td>
</tr>
<tr>
<td>c_q6(r)</td>
<td>If a (person) doesn't say &quot;no&quot; it can't be considered rape.</td>
<td>0.65 (.05)</td>
<td>1.60</td>
</tr>
</tbody>
</table>
UNDRESSING CONSENT – A PRELIMINARY EVALUATION

It is often complicated to figure out if a person is too high or intoxicated to consent to sexual activity.  

If ... drunk before or during engagement in sexual activity consent may be misunderstood and result in an unwanted sexual experience.

I am worried that my partner might think I am weird or strange if I asked for sexual consent before starting any sexual activity.

It is important to check that someone is still interested in the sexual activity throughout the experience.

I can receive consent from a person who is drunk.

I believe it is important to check for non-verbal, indirect signs of comfort/discomfort in someone when engaging in sexual activity with them.

It shouldn’t be considered rape if a (person) is drunk and didn’t realize what he was doing.

Note. Reverse coded items are indicated with an (r).

### Desires & Boundaries

An IRT analysis was performed on all eight scale items; item characteristic curves indicated the highest precision (between 1.5 - 2.5) for items 9 & 15 across all trait levels; good discrimination was also observed at higher trait levels (item 9: \( a_i = 1.56, \ SE = 0.30 \); item 15: \( a_i = 1.30, \ SE = 0.26 \)). Remaining items (4, 7, 13, & 18) indicated low information (approx. 0.2), however, moderate to good discrimination ability was observed for item 4 (\( a_i = 0.76, \ SE = 0.16 \)), item 13 (\( a_i = 0.96, \ SE = 0.18 \)) & 18 (\( a_i = 0.71, \ SE = 0.16 \)) which were retained for the purpose of program evaluation. Information values below 0.05 were observed for items 22 and 26 on all levels of agreement and both items showed low discrimination. Regarding response range, between 67%-74% of all students fell within the “Strongly Agree” or “Agree” response categories on most items, indicating greater response variability (respondents indicating SA or A: 4=72%, 7(r)=73%, 9=74%, 13=69%, 18= 67%) than observed for the Consent scale; however, item 15 showed little range for change (15=87%). A CFA was performed for responses of both gendered groups for all Desires & Boundaries items (4, 7, 9, 13, 15, 18, 22, 26); the eight-item demonstrated poor model fit (CFI = 0.81, TLI = 0.74, RMSEA = 0.08) and
unacceptable reliability ($\alpha = 0.48$). Items 22 and 26 were confirmed to be problematic having low factor loadings, and were dropped from the scale. Following the removal of these two problematic items, model fit improved (CFI = 0.98, TLI = 0.96, RMSEA = 0.04), however, scale reliability remained poor ($\alpha = 0.48$). The six-item model was used in program evaluation analyses comparing gendered groups and pre to post intervention responses, keeping in mind that the scale demonstrated poor reliability.

**Figure 4.**
*Revised Desires measurement model – 6 items.*

![Diagram](image)

Note. Standardized loadings with standard error in brackets are presented for all variables within the subscale.

**Table 4.**
*CFA, Desires items and final model loadings.*

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item Loadings</th>
<th>Pre</th>
<th>Discrimination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>($SE$)</td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>c_q4</td>
<td>0.40 (.06)</td>
<td>2.11</td>
<td>0.87</td>
</tr>
<tr>
<td>c_q7(r)</td>
<td>0.20 (.07)</td>
<td>1.99</td>
<td>1.00</td>
</tr>
<tr>
<td>c_q9</td>
<td>0.68 (.06)</td>
<td>2.06</td>
<td>0.88</td>
</tr>
<tr>
<td>c_q13</td>
<td>0.36 (.06)</td>
<td>2.09</td>
<td>0.97</td>
</tr>
</tbody>
</table>
Knowing what I do and do not want to do sexually can help me get out of sexual activities that I don't want to participate in.

I think about whether I feel safe to verbally communicate my needs to the person I am hooking up with (e.g., engaging in sexual activity).

Note. Reverse coded items are indicated with an (r).

**Sexual Scripts**

IRT graphs for sexual scripts items indicated high ($a_i > 1$) discrimination for items, which differentiate well for students having average to above average awareness levels. The item characteristic curve showed varied precision ranging from 0.24 - 1.77 for students having average to high agreement levels with the highest precision observed for items 2, 11, & 12. Regarding response range of the sexual scripts items, the majority of respondents “Strongly Agreed” or “Agreed” with items 2, 5, 12, and 19 (percent indicating SA or A: 2(r)=82%, 5=89%, 12=97%, 19=79%). The greatest response variability was observed for items 11 and 24 (11(r)=46%, 24(r)=60%) which addressed the topic of whether it is “OK” for women to have multiple sexual partners.

A univariate CFA was performed on all sexual script items (2, 5, 11, 12, 19, 24) using pre-program responses from both gendered groups. Modification indices were examined and error terms correlated for items 19 and 5 which were conceptually similar. The resultant model showed good fit (CFI = 0.99, TLI = 0.98, RMSEA = 0.05) with reliability approaching acceptable ($\alpha = .67$) the model fit and reliability improved for data from the WNB group only and for the men’s groups independently when rejection items were added to the SS scale (see Table 6).

**Figure 5.**
Revised Sexual Scripts measurement model – 6 items (both gendered groups).
Note. Standardized loadings with standard error in brackets are presented for all variables within the subscale.

**Response to Rejection**

IRT graphs were examined to determine the performance of *Response to Rejection* items given only to men. Items 28 ($a_i = 3.47$, $SE = 1.02$) & 30 ($a_i = 1.27$, $SE = 0.32$) showed good discrimination and good precision was also observed for item 28 (0.4 - 2.8) at average to high trait levels. Remaining items 29, 31, & 32 indicated low discrimination ($a_i < 0.80$, $SE = 0.21 – 0.23$) and item 31 showed low precision (< 0.05) at all awareness levels. A univariate CFA was then performed on men’s data for items measuring *Response to Rejection*. Both poor model fit and reliability were observed (see Table 6). The Rejection scale has only five items which likely impact model fit and reliability. In addition, men’s responses indicate little range for change with the majority of respondents selecting “Strongly Agree” or “Agree” for items 28, 29, & 32; greater variability was observed for items 30 & 31 (items: 28($r$)=93%, 29=82%, 30($r$)=67%, 31=70%, 32=82%).

Theoretically, gendered sexual scripts influence ideals of masculinity and are known to impact men’s responses to rejection (Jozkowski & Peterson, 2013; Woerner et al., 2018). As such,
men’s responses on both the SS and Rejection scales were combined and a univariate CFA was performed using only men’s responses on Sexual Scripts and Rejection items (SS<sub>men</sub>: 2, 5, 11, 12, 19, 24; Rej<sub>men</sub>: 28, 29, 30, 31, 32). Modification indices were examined, and theoretical similarities between items considered. Error terms were correlated for items 11 with 2, and 19 with 5, and 28 with 30. This combined model showed improved model fit (CFI = 0.97, TLI = 0.95, RMSEA = 0.06) and acceptable reliability (α = .75). Items were observed to have moderate to strong loadings (> .30) on the latent factor (see Table 5 for item loadings) with the exception of item 28 which loaded just below the cutoff but was retained as IRT results showed the item has good discrimination and precision. The combined model demonstrated stronger internal consistency than that of either the Sexual Scripts or Rejection items alone within the men’s sample (see table 6).

**Figure 6.**
Revised Sexual Scripts & Rejection measurement model (men only) – 11 items.

Note. Standardized loadings with standard error in brackets are presented for all variables within the subscale.

**Table 5.**
CFA, Men’s Sexual Scripts and Rejection items and loadings.
UNDRESSING CONSENT – A PRELIMINARY EVALUATION

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item loadings (SE)</th>
<th>Pre</th>
<th>SD</th>
<th>Discrimination</th>
</tr>
</thead>
<tbody>
<tr>
<td>c_q2(r)</td>
<td>Women should be less sexually experienced than men.</td>
<td>0.58 (.06)</td>
<td>1.66</td>
<td>0.84</td>
</tr>
<tr>
<td>c_q5</td>
<td>Mainstream media plays a large role in ideas of what is “normal” sex and who is considered “attractive”.</td>
<td>0.61 (.07)</td>
<td>1.61</td>
<td>0.81</td>
</tr>
<tr>
<td>c_q11(r)</td>
<td>It is not OK for a woman to have multiple sex partners.</td>
<td>0.34 (.08)</td>
<td>2.13</td>
<td>1.22</td>
</tr>
<tr>
<td>c_q12</td>
<td>It is OK for someone to choose not to engage in sexual activity.</td>
<td>0.78 (.09)</td>
<td>1.20</td>
<td>0.55</td>
</tr>
<tr>
<td>c_q19</td>
<td>Our ideas about sex are often shaped by mainstream portrayals of heterosexual, white, non-disabled couples.</td>
<td>0.54 (.06)</td>
<td>1.86</td>
<td>0.98</td>
</tr>
<tr>
<td>c_q24(r)</td>
<td>It is worse for a woman to sleep around than it is for a man.</td>
<td>0.55 (.07)</td>
<td>1.92</td>
<td>1.09</td>
</tr>
<tr>
<td>c_q28(r)</td>
<td>When someone declines my invitation to hook-up sexually it is a threat to my masculinity.</td>
<td>0.28 (.10)</td>
<td>1.51</td>
<td>0.72</td>
</tr>
<tr>
<td>c_q29</td>
<td>When my sexual advances are refused I stop to think about how to respond in a respectful manner.</td>
<td>0.37 (.08)</td>
<td>1.98</td>
<td>1.04</td>
</tr>
<tr>
<td>c_q30(r)</td>
<td>It is important to me that my friends view me as sexually active.</td>
<td>0.30 (.08)</td>
<td>2.21</td>
<td>1.08</td>
</tr>
<tr>
<td>c_q31</td>
<td>Gender roles contribute to pressure on guys to initiate sexual activity.</td>
<td>0.60 (.08)</td>
<td>2.11</td>
<td>0.98</td>
</tr>
<tr>
<td>c_q32</td>
<td>Trying to convince someone to have sex might have the impact of making the other person feel forced.</td>
<td>0.60 (.05)</td>
<td>1.91</td>
<td>0.78</td>
</tr>
</tbody>
</table>

Note. Reverse coded items are indicated with an (r).

Table 6.
Sexual Scripts & Response to Rejection CFA model fit & reliability by gendered group.

<table>
<thead>
<tr>
<th>Models</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA(df)</th>
<th>alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Both gendered groups)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Scripts 6-item model, items: 2, 5, 11, 12, 19, 24.</td>
<td>.99</td>
<td>.98</td>
<td>.05</td>
<td>0.67</td>
</tr>
<tr>
<td>(WNB Only)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Scripts 6-item model, items: 2, 5, 11, 12, 19, 24.</td>
<td>.99</td>
<td>.98</td>
<td>.04</td>
<td>0.70</td>
</tr>
<tr>
<td>(Men Only)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Scripts 6-item model, items: 2, 5, 11, 12, 19, 24.</td>
<td>.99</td>
<td>.98</td>
<td>.04</td>
<td>0.68</td>
</tr>
<tr>
<td>Rejection 5-item model, items: 28, 29, 30, 31, 32.</td>
<td>.59</td>
<td>.19</td>
<td>.24</td>
<td>0.39</td>
</tr>
<tr>
<td>Sexual Scripts + Rejection 11-item model, items: 2, 5, 11, 12, 19, 24, 28, 29, 30, 31, 32.</td>
<td>.97</td>
<td>.95</td>
<td>.06</td>
<td>0.75</td>
</tr>
</tbody>
</table>

In summary, twenty-six items were retained overall including a nine-item Consent scale showing adequate model fit and reliability approaching acceptability; a six-item Desires and Boundaries scale having poor model fit and inadequate reliability; and a six-item scale for the
measurement of sexual scripts in WNB students with an additional five items for Men. (See Table 6 for all final retained scale items.)

The majority of scales were significantly correlated ($p < .01$) as all scales relate to student understanding of protective and risk factors for sexual violence (see Table 7). Differences were seen between gendered groups for correlations of Desires with Consent scales, a significant relationship was found for the men’s group ($a = .52, p < .001$), however Consent and Desires were not significantly related for the WNB group.

**Table 7.** Scale correlations for gendered groups.

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Both gendered groups)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Consent</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Desires</td>
<td>.47**</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>3. Sexual Scripts</td>
<td>.55**</td>
<td>.26**</td>
<td>—</td>
</tr>
<tr>
<td>(WNB)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Consent</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Desires</td>
<td>.35**</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>3. Sexual Scripts</td>
<td>.51**</td>
<td>.10</td>
<td>—</td>
</tr>
<tr>
<td>(Men)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Consent</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Desires</td>
<td>.51**</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>3. Sexual Scripts + Rej.</td>
<td>.64**</td>
<td>.52**</td>
<td>—</td>
</tr>
</tbody>
</table>

*Sig. (two-tailed), *$p < .05$. **$p < .01$.  

**Program Impact on Student Sex Positivity**

Two composite scores (sex-positive; sex-negative) were created for each case, to analyze binary student endorsements on each of the 18 possible descriptors. The data was transformed so that each participant received a “count” value for number of positive values selected and an additional count value for number of negative values selected, a mean value was calculated for each time (pre, post) and gendered group (WNB, men). Independent two-way ANOVAs were conducted to examine combined student mean differences in sex positive and negative
endorsements from pre to post intervention and mean differences between gendered groups across time.

No significant mean differences were found for student sex positivity either between gendered groups or following attendance in the program. The most frequently endorsed positive descriptors among both the Men’s and WNB groups were Natural (endorsed by approx. 80% of both groups at pre and post) and Enjoyable (endorsed by approx. 65% of both groups at pre and post). The most frequently endorsed negative descriptors were Awkward (WNB\textsubscript{pre} = 42%, WNB\textsubscript{post} = 34%; Men\textsubscript{pre} = 45%, Men\textsubscript{post} = 40%), Uncomfortable, and Embarrassing (see Table 8).

Table 8.
Percentage of student endorsement of sex-positive and negative descriptors.

<table>
<thead>
<tr>
<th></th>
<th>Pre-intervention</th>
<th>Post-intervention</th>
<th>(\alpha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\text{sex-positive})</td>
<td>(%)</td>
<td>(%)</td>
<td>(%)</td>
</tr>
<tr>
<td>Natural</td>
<td>81</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Fun</td>
<td>58</td>
<td>55</td>
<td>61</td>
</tr>
<tr>
<td>Pleasant</td>
<td>50</td>
<td>53</td>
<td>55</td>
</tr>
<tr>
<td>Invigorating</td>
<td>20</td>
<td>23</td>
<td>19</td>
</tr>
<tr>
<td>Positive</td>
<td>51</td>
<td>53</td>
<td>51</td>
</tr>
<tr>
<td>Enjoyable</td>
<td>63</td>
<td>64</td>
<td>66</td>
</tr>
<tr>
<td>Exciting</td>
<td>59</td>
<td>54</td>
<td>60</td>
</tr>
<tr>
<td>Good</td>
<td>50</td>
<td>48</td>
<td>53</td>
</tr>
<tr>
<td>Comfortable</td>
<td>44</td>
<td>44</td>
<td>43</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(\text{sex-negative})</th>
<th>(%)</th>
<th>(%)</th>
<th>(%)</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncomfortable</td>
<td>18</td>
<td>14</td>
<td>22</td>
<td>16</td>
</tr>
<tr>
<td>Unpleasant</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Negative</td>
<td>-</td>
<td>1</td>
<td>0.6</td>
<td>-</td>
</tr>
<tr>
<td>Upsetting</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Disgusting</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Bad</td>
<td>0.5</td>
<td>0.5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Awkward</td>
<td>42</td>
<td>34</td>
<td>45</td>
<td>40</td>
</tr>
<tr>
<td>Shameful</td>
<td>6</td>
<td>4</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Embarrassing</td>
<td>18</td>
<td>21</td>
<td>17</td>
<td>24</td>
</tr>
</tbody>
</table>

This balance measure indicates that the program goal to create awareness of protective and risk factors for SV through a sex-positive lens was achieved and no indication of change
towards a negative perspective on sexual activity was observed in students following the intervention.

Program Evaluation

Mean Comparisons by Gendered Group

Response differences from before and after attending Undressing Consent were examined for both WNB (n = 372) and Men’s (n = 197) groups using two-way ANOVAs for independent groups (gendered group x time).

Table 9.
ANOVA overall test and group differences.

<table>
<thead>
<tr>
<th></th>
<th>MSE (3,565)</th>
<th>F</th>
<th>p</th>
<th>η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consent</td>
<td>.161</td>
<td>1.84</td>
<td>.176</td>
<td>.003</td>
</tr>
<tr>
<td>test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>group</td>
<td>31.21</td>
<td>.001**</td>
<td></td>
<td>.052</td>
</tr>
<tr>
<td>test* group</td>
<td>4.63</td>
<td>.03*</td>
<td></td>
<td>.01</td>
</tr>
<tr>
<td>Desires</td>
<td>.197</td>
<td>0.03</td>
<td>.858</td>
<td>.000</td>
</tr>
<tr>
<td>test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>group</td>
<td>9.89</td>
<td>.002*</td>
<td></td>
<td>.017</td>
</tr>
<tr>
<td>test* group</td>
<td>5.88</td>
<td>.016*</td>
<td></td>
<td>.010</td>
</tr>
<tr>
<td>Sexual Scripts</td>
<td>.311</td>
<td>0.07</td>
<td>.789</td>
<td>.000</td>
</tr>
<tr>
<td>test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>group</td>
<td>91.57</td>
<td>.001**</td>
<td></td>
<td>.139</td>
</tr>
<tr>
<td>test* group</td>
<td>7.31</td>
<td>.007**</td>
<td></td>
<td>.013</td>
</tr>
</tbody>
</table>

Note. Two-tailed, equal variances not assumed, * p < .05, ** p < .01

A small but significant interaction of time by group was found for student understanding of Consent, $F(3, 1) = 4.63, p = .03, MSE = 0.161, η² = .01$; with a main effect of gender ($F(3, 1) = 31.21, p < .001, MSE = 0.161, η² = .05$). Levene's Test of Equality of Error Variances revealed that the variances of the groups were significantly different, $F(3, 565) = 2.71, p = .05$ indicating the responses were not likely from a normal sample distribution. However, comparisons of ANOVAs performed on normal and non-normal sample distributions have found that in terms of Type I error the F-test was robust in 100% of cases studied (Blanca et al., 2017). Examination of the ANOVA results showed that WNB students demonstrated a marginally greater understanding of Consent at both times (see Figure 7.). Scores for WNB showed no change over time whereas consent attitudes for men were slightly worse post intervention. A ceiling effect was observed.
with restricted range for change as most student respondents indicated agreement with statements related to giving and receiving consent prior to the intervention and post-hoc analyses indicate no significant post program differences on measures of Consent for either WNB or Men’s groups.

**Figure 7.**
*Consent estimated marginal mean differences at pre & post for gendered groups.*

Note. Standard Deviation is indicated with capped bars.

A significant interaction was found for student awareness of the role of desires and boundaries as protective against SV from pre to post intervention, $F(3, 1) = 5.88, p = .02, MSE = 0.197, \eta_p^2 = .01$; a main effect of group was seen $F(3, 1) = 9.89, p = .002, MSE = 0.197, \eta_p^2 = 0.02$; see figure 8), such that slightly greater awareness is observed in WNB students compared to Men both pre and post intervention. Levene's Test was not significant. Post-hoc analyses revealed no significant group differences on measures of Desires & Boundaries following participation in the program, however marginal differences are observed such that slightly greater agreement was seen for WNB students.

**Figure 8.**
*Desires & Boundaries estimated marginal mean differences at pre & post for gendered groups.*
An independent samples ANOVA was run on SS (only) between men and women; then pre to post analyses were conducted testing differences between the SS and SS +Rej scales for men only. A small but significant interaction was seen for awareness of the role of gendered sexual scripts in creating a culture of SV ($F(3, 1) = 7.31, p = .007, MSE = 0.311, \eta^2_p = 0.01$) and a main effect of gender ($F(3, 1) = 91.57, p <.001, MSE = 0.311, \eta^2_p = 0.14$) with students in the WNB demonstrating slightly higher awareness (see figure 9). Levene's test was significant, $F(3, 565) = 4.51, p = .004$, indicating unequal variances. Two-tailed post hoc comparisons (equal variances not assumed) revealed a significant effect of the sexual scripts program content for WNB students ($t = 2.72(368), MD = 0.15, SE = 0.06, p = .007$), no significant difference was found for men on either SS or SS+Rej scales. However, the reliability of the SS subscale for men is inadequate and was only deemed acceptable following the addition of rejection items (see table 6).

**Figure 9.**
*Sexual Scripts estimated marginal mean differences at pre & post for gendered groups.*
Table 10.

*T-test* pre- and post- estimated marginal mean differences for gendered groups.

<table>
<thead>
<tr>
<th>Program Outcomes</th>
<th>Pre n</th>
<th>Post n</th>
<th>Pre $\bar{x}$ (SD)</th>
<th>Post $\bar{x}$ (SD)</th>
<th>$t(df)$</th>
<th>$p$ value</th>
<th>MD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WNB</strong></td>
<td>191</td>
<td>181</td>
<td>1.93(0.4)</td>
<td>1.89(0.4)</td>
<td>0.73(369)</td>
<td>.47</td>
<td>0.03</td>
<td>.04</td>
</tr>
<tr>
<td>Consent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desires &amp; Boundaries</td>
<td>2.28(0.4)</td>
<td>2.18(0.5)</td>
<td>1.92(361)</td>
<td>.06</td>
<td>0.09</td>
<td>.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Scripts</td>
<td>1.58(0.6)</td>
<td>1.42(0.5)</td>
<td>2.72(368)</td>
<td>.007**</td>
<td>0.15</td>
<td>.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Men</strong></td>
<td>130</td>
<td>67</td>
<td>2.05(0.4)</td>
<td>2.18(0.5)</td>
<td>-1.86(111)</td>
<td>.07</td>
<td>-0.13</td>
<td>.07</td>
</tr>
<tr>
<td>Consent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desires &amp; Boundaries</td>
<td>2.30(0.5)</td>
<td>2.41(0.4)</td>
<td>-1.78(160)</td>
<td>.08</td>
<td>-0.12</td>
<td>.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Scripts &amp; Rej.</td>
<td>1.935(0.5)</td>
<td>2.04(0.6)</td>
<td>0.19(113)</td>
<td>.09</td>
<td>-1.0</td>
<td>.08</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Two-tailed, equal variances not assumed, * $p < .05$, ** $p < .01$

Although marginal significant effects were found on most subscales with the WNB group, effect sizes were small due to a ceiling effect which limited potential range for change. Only Sexual Scripts scales detected marginal significant differences in WNB responses following participation in the intervention. No significant changes in beliefs were seen for men.

**Responses to Unwanted Advances and Rejection Vignettes**

A total number of 518 students responded to the open-ended questions that followed vignettes of *Rejection of Sexual Advances* (Men: $n_{pre} = 115$, $n_{post} = 61$) and *Unwanted Sexual Advances* (WNB: $n_{pre} = 176$, $n_{post} = 166$). Emergent themes were coded at two levels, at the first
level of coding, thirty-five codes emerged for men across questions of what they “think” and how they would “act” in response to the Rejection of Sexual Advances scenario. Twenty-six codes emerged from the women and non-binary student responses to the “think” and “act” questions following the Unwanted Sexual Advances scenario. The second round of coding combined several response codes into overarching themes, of these Women/NB responses produced fifteen “think” codes and eight “act” codes. For men, ten final codes emerged in response to the question of what they “think” and thirteen in response to how they would “act”. Coded themes and percentage of endorsements in response to “think” and “act” questions pre and post intervention are listed in figures 10 (WNB “think”), 11 (WNB “act”), 12 (Men “think”), & 13 (Men “act”).

The most frequently endorsed response to the question of what WNB students “think” following an unwanted sexual advance was Desire to Leave or Escape the Encounter, endorsed by approximately 40% of students before and after attendance. The next largest endorsement was Feeling Uncomfortable (approx. 25% both pre and post). Following participation in the program students less frequently endorsed feeling Uncertainty of How to Respond (pre 7% > post 2%), and Panic and Anxiety (pre 11% > post 5%) which are barriers to responding effectively (see Figure 10. for all “think” WNB endorsements

Figure 10.
Frequency of WNB “think” responses to Unwanted Advances vignette.

Both prior to and following program attendance the most frequently endorsed actions in response to an unwanted advance included Leaving the Environment or Conversation (pre 36% > post 29%), and the use of Direct Verbal Cues (33% for both pre and post). Following the program WNB students more frequently endorsed the use of Indirect Verbal Cues (pre 24% < post 30%), and less frequently endorsed use of Indirect Body Cues (pre 28% > post 23%). However, students also less frequently endorsed Seeking the Help of a Friend or Outsider (pre 27 > post 17%), which may reflect greater confidence to dismiss the pursuant on their own, but is an unintended outcome of the program (see figure 11).

Figure 11.
Frequency of WNB “act” responses to Unwanted Advances vignette.
Students in the men’s group who indicated what they were “thinking” in response to a scenario of rejection, most frequently endorsed *Acknowledgment of the Other’s Boundaries/Disinterest/Discomfort* both prior to and following the intervention (pre 42% > post 36%). Men more frequently *Reflected their Own Actions or Behaviour* following program attendance (pre 26% < post 36%), and endorsed more *Feelings of Guilt* (pre 20% < post 31%) regarding possible actions that led to the scenario. However, they were also more likely to give responses of *Indicated Plans to “Move On”* before participation in the program (pre 16% > post 3% [see figure 12]).

**Figure 12.**
*Frequency of Men “think” responses to Rejection of Advances vignette.*
In response to the question of how they would “act” men most frequently indicated actions or statements of *Acceptance or Respect of Boundaries* both before and after the program, however the frequency of endorsement decreased post programming (pre 75% > post 62%). Post program, men less frequently endorsed *Acknowledgment and Regulation of Emotions* (pre 20% > post 11%), or *Seeking Emotional Support of Friends or Others* (pre 7% > post 0%). Men also less frequently endorsed *Reflection on Own Actions or Behaviour* (pre 16% > post 8%), however, this is likely because such reflections were endorsed in response to the previous question of what they are “thinking”.

**Figure 13.**
*Frequency of Men “act” responses to Rejection of Advances vignette.*
Discussion

The Undressing Consent program aims at promoting positive change in first-year students’ attitudes and beliefs related to sexual violence. The goal of this study was to explore whether an integrated approach that pulls from existing SV prevention programming presented through a sex positive lens is impactful in creating awareness among students while presented in only one compact session. This analysis required that new items and scales specifically created to assess student beliefs related to core program content be examined for their psychometric properties.

This preliminary evaluation contributes towards the creation of a reliable and valid measurement scale to improve accuracy in the evaluation of the impact of specific content presented in Undressing Consent. In addition, this study provides preliminary insights into
program strengths and limitations which emerged from student data and responses to open-ended vignettes.

Scale Measurement

In order to evaluate student programming aimed at changing student beliefs, reliable and valid measurements are required. A primary goal of this research was to present a robust statistical analysis of newly designed scales for the measurement of the effectivity of the Undressing Consent program. A range of statistical procedures, including confirmatory factor analysis (CFA) and item response theory (IRT) analysis, were employed in measurement evaluation. We sought to address the limitations of initial models and retain only the best performing items. Through a rigorous process - resulting in the removal of several poorly performing items based on factor loadings, information, and discrimination values - we were able to improve the model fit and reliability of the Sexual Scripts scale for both gendered groups (with added Rejection items for men).

Although the Consent scale improved, a limited range for change and poor reliability was observed indicating further improvement is required. The “ceiling effect” observed in the data confirms findings (Shumlich and Fischer 2020) that most students have a strong understanding of what constitutes affirmative consent and believe verbal consent to be more reliable and respectful. The same study indicates that students most often observe non-verbal cues to ascertain whether affirmative consent has been given. This implies that an indication of beliefs does not necessarily reflect changes in behaviours related to campus sexual violence prevention. The creation of additional items of greater difficulty is necessary to improve model fit and reliability. In addition, the measurement of self-reported behavioural differences in receiving and
giving consent over a broader time period would be useful in gaining a more meaningful perspective on program effectivity.

In evaluating the Desires scale, despite achieving a good model fit after removing problematic items, scale reliability remained poor. This finding suggests that while the items may reflect the construct adequately, internal consistency of the measure must be improved with the additional of more items that directly measure students understanding of their own desires and boundaries. In addition, items of greater difficulty should be added and it the scale may benefit from the removal of item 15 (which demonstrated limited range for change). Future evaluations may choose to present the men’s group with material related to desires and boundaries or to evaluate only data from WNB students.

For the men’s group, the reliability of the Sexual Scripts and Response to Rejection subscales independent of each other were inadequate and acceptable only when the scales were combined. The limited number of items created for the Response to Rejection scale likely contributed to poor model fit and reliability, resulting in an overly simplistic scale for the measurement of a complex topic (men’s responses to rejection). The integration of Sexual Scripts and Response to Rejection scales for men's responses not only improved the model fit but also increased scale reliability. As men’s responses to rejection are often influenced by societal gendered sexual scripts, the integration of these scales serves to provide a more well-rounded measure of beliefs contributing to harmful responses to rejection.

However, range for change was an issue with items created for men and significant changes were not detected with the current scales. As such, range for change and item difficulty should be considered when additional items are created. It may be beneficial to adjust the wording of items, for example item M_3: It is important to me that my friends view me as
sexually active, may be revised to specify “male friends” in order to more precisely indicate the role of male peer perspectives on masculinity and its role in the importance men place on being sexually active which has been found to underlie harmful and violent responses to the rejection of their sexual advances.

**Program Effectivity**

Findings suggest that, in general, the intervention has significantly improved WNB student awareness of gendered sexual scripts. Furthermore, the WNB group demonstrated a marginally greater understanding of Consent, and the role of Desires and Boundaries post-intervention. However, although differences on the SS scale for WNB students are statistically significant, effect sizes are small. In addition, it is important to note that significant changes in beliefs were not observed for the men’s group on any scales.

An issue of range was seen for most items with item means within the “strongly agree to agree” range and small standard deviations observed. This may indicate that students are aware of the socially acceptable responses to questions related to consent and alcohol, the importance of understanding desires and boundaries, societal gendered sexual scripts, and responding to rejection. There are two recommendations to improve the measurement tools, one is to improve item difficulty and a second is to include items that measure behaviours in the scales to obtain a more accurate reflection of the program’s impact on student actions.

Marginal differences were observed between gendered groups in response to items measuring awareness of desires and boundaries. This result was unexpected as only the WNB group was presented with Desires & Boundaries content, men were included in the comparison as a placebo group. As such, it was our expectation that a greater difference would be visible post programming. However, it may also be that men have greater awareness of their own sexual
desires at baseline. There is some evidence to suggest that women have a more flexible and contextually influenced sexuality and may be more responsive to social and situational factors, leading to potential variations in awareness of desires and boundaries (Baumeister, 2000). Other contributing factors may be the overall scale reliability and issues with range for change.

The findings from student responses to the open-ended questions following the vignettes are indicative of commonly endorsed strategies to cope with or respond to situations of unwanted sexual advances and rejection of sexual advances and are not to be interpreted as indicative of program impact as different student samples were available before and after programming and a large attrition was observed for the men’s group. Overall, student responses to potential scenarios of unwanted advances and rejection of advances following the intervention, are less definite which is possibly a reflection of the program contents emphasis on the many grey areas around consent. When asked what they “think”, WNB students frequently indicated *Desire to Leave or Escape the Encounter* and *Feeling Uncomfortable* both before and after program attendance. Following program participation, small differences were seen with students less frequently endorsing feeling *Uncertainty of How to Respond* and *Panic and Anxiety* which may reflect feelings of greater confidence in their ability to respond effectively to unwanted advances.

When asked how they would “act”, WNB students most frequently endorsed a plan to use verbal and direct communication to express disinterest both before and after the intervention. Additionally, small differences were found in frequency of responses following the program, WNB students less frequently indicated the use of direct body cues (-7%; e.g., Choose to Leave the Environment/Conversation) and indirect body cues (-5%), and more frequently endorsed responding with indirect verbal cues (+ 6%). It is possible that following the program students felt more comfortable to express their most natural responses to the scenarios (i.e.,
UNDRESSING CONSENT – A PRELIMINARY EVALUATION

indirect/verbal) rather than trying to find the most “acceptable” response (i.e, direct/verbal). In addition, student responses to how they would “act” indicate some areas in which program adjustment may be helpful, such as indications of reduced endorsement for seeking the help of a friend or outsider, observed for both WNB and men (WNB post = -10%; Men post = -7%).

In response to the question of what they “think” following rejection, men most frequently endorsed Acknowledgment of the Other’s Boundaries / Disinterest / Discomfort both prior to and following the intervention, although a slightly larger percentage of endorsement was seen pre-programming. Men more frequently endorsed Reflection on Own Actions or Behaviour and Feelings of Guilt following program attendance. However, Plans to “Move On” was indicated more frequently before participation in the program. When asked about how they would “act” men most frequently indicated Acceptance or Respect of Boundaries both before and after the program, with some decrease in endorsement post program (-13%). Small differences were observed in which men less frequently endorsed Acknowledgment and Regulation of Emotions (-9%), Seeking Emotional Support of Friends or Others (-7%), and Reflection on Own Actions or Behaviour (-8%) post program. However, when considering the frequency of men’s endorsements it is important to acknowledge the large attrition in the men’s group from pre to post is likely to have impacted the differences observed in frequencies from pre to post intervention.

The Undressing Consent program took the novel approach of addressing the sensitive topic of gender-based sexual violence through a sex positive lens. The lack of significant mean differences in sex-positive and negative endorsements both between gendered groups and following program attendance is a positive indication that the program was able to balance its presentation of protective and risk factors for sexual violence and approach a potentially negative
topic without promoting a negative or restrictive perspective of sexuality. This approach aligns with recommendations by experts to create programming for students with a focus on the potential for sex to be good (Ivanski, 2017; Lafrance et al., 2012; Mosher, 2017).

**Limitations**

Although the overall impact of the intervention is promising, there are limitations in this study that must be addressed. Firstly, some issues are noted in the study design, different students self-selected to complete the questionnaire prior to and following participation in the program and responses could not be matched; it is possible that the students most interested in and knowledgeable about sexual violence chose to participate in the pre assessment, resulting in a high ceiling effect, restricting the range for change.

Secondly, while many students initially agreed to participate, a large proportion of students (46% pre and 61% post) completed less than 80% of the questionnaire (in most cases only 1-3 items). Given that the questionnaire was conducted through an organization affiliated with Western University, it is possible that students found the subject material sensitive for disclosure of personal beliefs. Alternatively, students taking the post-survey may have realized the items were identical in both and chosen to discontinue responding to the questionnaire. Specifically, the attrition of the men's sample from pre to post resulted in unequal sample sizes. The relatively small post program sample size for men is possibly due to attitudes of resistance to information presented in the program, although I suggest this possibility there is no evidence of haphazard or negative response management observed in the data set. Attrition within the men’s sample limits our ability to accurately measure program effects for men.

Thirdly, it is important to note that the observed ceiling effects, level of measurement error, and issues with the internal consistency of some of the scales impacts the validity of the
findings related to program effectivity - especially responses to scales measuring awareness of Consent and Desires & Boundaries. Future studies may require revision of items in such a way as to increase measurement of student endorsements of how they are likely to respond to situations and contextual environmental factors which are associated with occurrence of SV or unwanted sexual activity.

Fourthly, several poorly performing items were dropped from the scales which restricted the breadth of content evaluated. Researchers may consider specifically adding items that measure changes in student preferences to give consent verbally/non-verbally/directly/in-directly and student understanding of the impact of alcohol impairment on ability to give and receive consent to replace items dropped from the final scales. In addition, open response questions of program content which the student found most informative and “new” and those asking students about their impressions of program facilitation would provide a richer understanding of factors which contribute to student receptivity and program effectiveness.

Lastly, while we did collect demographic data related to racial and sexual/gender identity of participants, use of a validated and reliable measurement scale and a repeated measures sample with a randomized control group was preferred before attempting to evaluate differences related to racial or sexual/gender identity.

Future Directions

Measurement Development

Our study did not attempt to measure the predictive validity of the scales. Criterion validity may be assessed in the future by comparison of the newly created scales with validated scales which measure similar underlying constructs as those presented in the program content (e.g., consent), although at the current time there is no consensus among researchers of SV
prevention on a single “gold standard” scale for the measurement of student awareness of protective and risk factors for campus SV. Prospective longitudinal studies may also be helpful for establishing predictive validity.

Exploration of measurement invariance is necessary to demonstrate that the scales measure the same underlying factors across gendered groups (Lubke et al., 2003; Moreira, et al., 2022). In the current study measurement differences were explored only for the Sexual Scripts scale. Future evaluation of gendered response differences for each scale may allow researchers to better predict the program’s impact on men and understand which content is most effective in promoting accountability and motivating men to champion the protection of women and minorities on campus. This can be achieved by conducting analysis which compare differences in item responses and loadings between groups.

At the present time the program has been presented to students in Ontario enrolled at Western University and affiliate colleges. Further assessment of the external validity of this measurement tool is required. External validity may be determined through the analysis of group differences including minorities having diverse racial (e.g., black or indigenous students) and sexual orientations and students having a history of victimization or perpetration. Should the program be adopted by additional universities in various locations, further evaluations may be performed in various regions within North America and among diverse student cultures.

Assessment of Program Effectivity

Randomized controlled trial is the gold standard in the evaluation of interventions (Kraemer et al., 2002), as such, future studies would benefit from the use of an RCT to examine the effectiveness of the Undressing Consent program. Potentially, longitudinal studies that include baseline assessments and assessments immediately following intervention and at two
months post-programming and in subsequent years of engagement in the program (e.g., at the second and third year of enrollment) could provide insight into changes in student attitudes over time. Future evaluations may also consider examining correlations between student participation in the program and rates of campus sexual assault disclosures to observe any patterns that emerge which may contribute to a better understanding of intervention impact in reducing campus SV over several years of implementation at the university.

The program aims at providing students with a platform to explore both risk factors related to SV and protective factors in a trauma-informed manner with content presented through a sex-positive theoretical lens. Although a balance item was included in the current study, future studies would benefit from the assessment of populations having a history of victimization or perpetration of SV. This additional evaluation serves a dual purpose of both informing program developers of program impact and sensitivity towards students with a history of victimization and providing insights into whether the program is effective in changing attitudes and behaviours of students who have engaged in perpetration.

The Undressing Consent program utilized gender neutral language, sought to acknowledge differences in lived experiences, and enabled each student to choose the gendered group that it best identifies with. In the future, researchers may also choose to further explore student impressions of this unique grouping format. Program evaluators may choose to continue to monitor the effectivity of current gender-based groupings and whether combining women and non-binary students in one group session is an effective model to provide the safe space necessary to meet the needs of these diverse populations.

**Logistics and Features of Facilitation.**
In the current study, we experienced some difficulty recruiting a sufficient number of students for focus groups. It may be effective for future evaluations to recruit students for focus groups through student clubs and associations. In addition, to reduce the burden of time associated with participation and fill the need for the collection of both qualitative and quantitative data, it may be effective to offer students the option to either participate in a focus group or respond to the pre- and post-program questionnaires.

Facilitator and student qualitative interviews were conducted during the process of collecting quantitative data for this evaluation. It is recommended that future studies focus on the unique logistics and features of facilitation endorsed by students and facilitators in the one-on-one interviews and focus groups that were conducted. Triangulation of qualitative and quantitative data through the use of a mixed methods design would enhance our understanding of program efficacy from the perspective of multiple stakeholders (i.e., students, facilitators). Such an evaluation creates a richer picture of program impact and areas for improvement (Davidov et al., 2020; Campbell et al., 2012; Campbell et al., 2020) and may illuminate differences in facilitation which impact program effectiveness.

Exploration of the impact of facilitation style, program timing, and presentation in person vs. online (e.g., zoom sessions) will also likely illuminate logistical factors that contribute to program effectiveness. For example, although there are benefits associated with conducting programming session online, including scheduling flexibility, a recent study found that students are less likely to benefit from SV prevention programming when presented through an online format (Acquaviva, Hayes & Clevenger, 2022). Impact of individual differences in facilitation may be examined by assigning each student group session with a unique identifier code and
comparing differences in student responses as it relates to facilitators presentation style and skills. This would allow researchers to identify common factors in effect program facilitation.

**Statement of Significance**

The current study indicates a need for further measurement development in order to better understand program impact. There is work to be done towards improving scale internal consistency and item development. However, promising preliminary evidence is observed for the effectivity of *Undressing Consent*, in impacting WNB student beliefs regarding consent, gendered sexual scripts, and understanding of desires and boundaries; although such changes were marginal and were not observed for the men’s group. Overall, the study provides a contribution to the literature on intervention programs aimed at creating awareness of factors associated with campus sexual violence and supports the use of a sex-positive lens in post-secondary SV programming. In addition, the findings provide positive indications in support of the effectivity of a short 90 minute program in promoting change in student attitudes and beliefs related to SV prevention.
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### Appendix A: Pre- and Post-program Evaluation Package

Thank you for your participation! Please read each question carefully and choose your answer from among the choices given below. There are no right or wrong answers to any of these questions, we are interested in your honest response. Click on the option that best represents your personal beliefs.

<table>
<thead>
<tr>
<th>Number</th>
<th>Question</th>
<th>Strongly Agree (1)</th>
<th>Agree (2)</th>
<th>Unsure (3)</th>
<th>Disagree (4)</th>
<th>Strongly Disagree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I believe using non-verbal indirect cues when initiating sexual activity can be easily misinterpreted by a partner</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>2.</td>
<td>Women should be less sexually experienced than men</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3.</td>
<td>Consent to sexual activity can be given before drinking begins and is still valid later on, even if the person who gave consent is intoxicated.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4.</td>
<td>I think about whether engaging in a sexual activity aligns with my values, given the context of the situation.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>5.</td>
<td>Mainstream media plays a large role in ideas of what is “normal” sex and who is considered “attractive”.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>6.</td>
<td>If a person doesn’t say “no” to a sexual activity they can’t claim rape.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>7.</td>
<td>I feel like a lesser person if I choose not to engage in casual sex.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>8.</td>
<td>It is often complicated to figure out if person is too high or intoxicated to consent to sexual activity.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>9.</td>
<td>I have thought about which specific sexual activities I want to do and which I am not ok with so that I can communicate my comfort level and preferences when engaging in sexual activity.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>10.</td>
<td>Drinking alcohol is likely to impair my judgement about whether or not someone is consenting to sexual activity.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
11. It is NOT ok for a woman to have multiple sex partners

12. It is OK for someone to choose NOT to engage in any sexual activity

13. I know what kind of relationship I expect to have with a person (e.g., casual, long-term relationship, just friends) before engaging in sexual activity with them.

14. If two people are drunk before or during engagement in sexual activity consent may be misunderstood and result in an unwanted sexual experience.

15. Knowing what I do and do not want to do sexually can help me get out of sexual activities that I don't want to participate in.

16. I am worried that my partner might think I am weird or strange if I asked for sexual consent before starting any sexual activity.

17. If a person is drunk, they might rape someone unintentionally.

18. I think about whether I feel safe to verbally communicate my needs to the person I am hooking up with (e.g., engaging in sexual activity).

19. Our ideas about sex are often shaped by mainstream portrayals of heterosexual, white, non-disabled couples.

20. It is important to check that someone is still interested in the sexual activity throughout the experience.

21. I can receive consent from a person who is drunk.

22. I tend NOT to decide ahead of time which sexual activities I will and will not consent to engaging in. I wait till I am ‘in the moment’ to decide.
23. I believe it is important to check for non-verbal, indirect signs of comfort/discomfort in someone when engaging in sexual activity with them.

24. It is worse for a woman to sleep around than it is for a man.

25. It shouldn’t be considered rape if a person was drunk and didn’t realize what they were doing.

26. It is really awkward to let someone know I’m no longer interested in hooking up sexually when we have already started making out (e.g., kissing or undressing).

27. I feel capable of giving consent when I am drunk.

29. Select all choices that describe how you personally feel. IN GENERAL, I feel that sex and sexuality are…

- Uncomfortable
- Unpleasant
- Negative
- Upsetting
- Disgusting
- Bad
- Awkward
- Shameful
- Embarrassing
- Natural
- Fun
- Pleasant
- Invigorating
- Positive
- Enjoyable
- Exciting
- Good
- Comfortable

Additional items for Men only (Likert 1-5):
1. When someone declines my invitation to hook-up sexually it is a threat to my masculinity.
2. When my sexual advances are refused I stop to think about how to respond in a respectful manner.
3. It is important to me that my friends view me as sexually active.
4. Gender roles contribute to pressure on guys to initiate sexual activity.
5. Trying to convince someone to have sex might have the impact of making the other person feel forced.

**Open-ended Response Vignettes**

1. Unwanted sexual attention (WNB only):

   *This is the last question in our survey, please think carefully and answer honestly.*

   Imagine that you are talking to someone at a party that you don’t know well. Your discussion is going great and you are feeling interested in the person. Then, something that they do (e.g., the way that are talking or the way they are touching you sexually) makes you feel uncomfortable.

   **What are you thinking in this situation? How would you act in response?**

2. Rejection of sexual advances (Men only):

   *This is the last question in our survey, please think carefully and answer honestly.*

   Imagine that you have approached someone at a party and that things seem to be going very well. You are excited to make this connection and hoping that it might result in hooking up sexually. When you try to make a move towards a sexual encounter (e.g., move closer, ask more intimate questions), the person gives you a “bad look” and walks away.

   **What are you thinking in this situation? How would you act in response?**
## Appendix B: Revised Undressing Consent evaluation scale – 21 +5 (men only) items.

<table>
<thead>
<tr>
<th>Item</th>
<th>Domain</th>
<th>Item wording</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Consent</td>
<td>Consent to sexual activity can be given before drinking begins and is still valid later on, even if the person who gave consent is intoxicated.</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>If a (person) doesn’t say “no” it can’t be considered rape</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>It is often complicated to figure out if person is too high or intoxicated to consent to sexual activity.</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>If two people are drunk before or during engagement in sexual activity consent may be misunderstood and result in an unwanted sexual experience.</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>I am worried that my partner might think I am weird or strange if I asked for sexual consent before starting any sexual activity.</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>It is important to check that someone is still interested in the sexual activity throughout the experience.</td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>I can receive consent from a person who is drunk.</td>
</tr>
<tr>
<td>23</td>
<td></td>
<td>I believe it is important to check for non-verbal, indirect signs of comfort/discomfort in someone when engaging in sexual activity with them.</td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>It shouldn’t be considered rape if a (person) is drunk and didn’t realize what he was doing.</td>
</tr>
<tr>
<td>4</td>
<td>Desires &amp; Boundaries</td>
<td>I think about whether engaging in a sexual activity aligns with my values, given the context of the situation.</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>I feel like a lesser person if I choose not to engage in casual sex.</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>I have thought about which specific sexual activities I want to do and which I am not ok with so that I can communicate my comfort level and preferences when engaging in sexual activity.</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>I know what kind of relationship I expect to have with a person (e.g., casual, long term relationship, just friends) before engaging in sexual activity with them.</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>Knowing what I do and do not want to do sexually can help me get out of sexual...</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>I think about whether I feel safe to verbally communicate my needs to the person I am hooking up with (e.g., engaging in sexual activity).</td>
</tr>
<tr>
<td>2</td>
<td>Sexual Scripts</td>
<td>Women should be less sexually experienced than men</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Mainstream media plays a large role in ideas of what is “normal” sex and who is considered “attractive”.</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>It is not OK for a woman to have multiple sex partners.</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>It is OK for someone to choose not to engage in sexual activity.</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>Our ideas about sex are often shaped by mainstream portrayals of heterosexual, white, non-disabled couples.</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>It is worse for a woman to sleep around than it is for a man.</td>
</tr>
<tr>
<td>28</td>
<td>Rejection (Men only)</td>
<td>When someone declines my invitation to hook-up sexually it is a threat to my masculinity.</td>
</tr>
<tr>
<td>29</td>
<td></td>
<td>When my sexual advances are refused I stop to think about how to respond in a respectful manner.</td>
</tr>
<tr>
<td>30</td>
<td></td>
<td>It is important to me that my friends view me as sexually active</td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>Gender roles contribute to pressure on guys to initiate sexual activity</td>
</tr>
<tr>
<td>32</td>
<td></td>
<td>Trying to convince someone to have sex might have the impact of making the other person feel forced.</td>
</tr>
</tbody>
</table>
Angelina Cleroux - Curriculum Vitae

EDUCATION

Master of Arts in Applied School and Child Psychology (candidate)  
*University of Western Ontario*  
**Major:** School and Child Clinical Psychology  

**Research Interests:** Adverse childhood experiences and their impact on cognitive development, the role of fathers in child development, Socio-emotional well-being and sexual violence prevention in adolescents and young adults.  
**Supervisor:** Dr. Katreena Scott  
**MA Thesis:** Undressing Consent: evaluation of a university campus sexual violence prevention program

Master of Applied Science  
*University of Waterloo*  
**Major:** Psychology - Developmental and Communication Science  
**Research Interests:** Socio-emotional well-being and cognitive development in young children, false beliefs and Alief.  
**Supervisor:** Dr. Ori Friedman  
**Research paper:** Supporting municipal investment of self and children’s judgements of psychological ownership.

Psychology post-degree program (BA Psychology Honors equivalent)  
*University of Waterloo*  
**Major:** Psychology  
**Honors Thesis:** Psychological ownership in young children towards frequently used objects  
**Supervisor:** Dr. Ori Friedman

Bachelor of Science in Education  
*Ashworth College*  
**Major:** Early Childhood Education

Montessori Teaching Diploma  
*North American Montessori Centre*  

Awards and Distinctions

Canada Graduate Scholarships-Master’s Award (2022) - $17,500, Western University.  
Ontario Graduate Scholarships-Master’s Award (2022) - $15,000, Western University.  
President's Graduate Scholarship (2019) - $5000, University of Waterloo.  
Arts Domestic Graduate Scholarship (2019) - $2500, University of Waterloo.  
Induction into the Delta Epsilon Tau Honor Society (2016), Ashworth College.
RESEARCH OUTCOMES AND EXPERIENCE

Publications and Presentations


Friedman, O. & **Cleroux, A.** (2019, March). Children can recognize that feelings-of-ownership are specific to particular objects. Study presented at the biennial meeting of the Society for Research in Child Development, Baltimore, MD.

**Research Associate, Centre for Research and Education on Violence Against Women and Children, Dr. Katreena Scott**

*University of Western Ontario Fall 2021 – present*

- Creation of survey items for the evaluation of *Undressing Consent* – a sexual violence prevention program for first year students at Western University
- Writing of study proposal, ethics application, and participant recruitment/study information materials.
- Assisted in coding data for thematic analysis from Man|Made (an educational program for young men with a history of assault/sexual violence or who are leaders of varsity teams at Western University).
- Proficient in use of applications and processes for quantitative data measurement including data cleaning, transformation, analyses, and graphing in SPSS, and Excel.
- Proficient in the use of technologies for experimental design and productivity including: Qualtrics, Amazon Turk, PowerPoint, OSF.io and Trello.

**Research Associate, Child Cognition Lab, Dr. Ori Friedman**

*University of Waterloo Winter 2017 - 2021*

- Honors Thesis - *Psychological Ownership in Young Children Towards Frequently Used Objects.*
- Designed and conducted original experiments examining children’s inferences of feelings of ownership (felt in the absence of actual ownership), the antecedents to such feelings, and the appearance reality distinction
- Created experiment stimuli and assessment items
- Collected data from over 2000 child participants (ages 3-7)
- Conducted data cleaning, coding, graphing, and analysis in SPSS, R, and Excel.
- Conducted comprehensive literature searches relevant to research interests
- Carried out administrative work, including coordination of participant recruitment and testing at schools
Manuscript writing and editing, writing of ethics applications, study proposals and pre-registration, newsletter articles articulating study findings in layman terms

**Research Associate, Whole Family Lab, Dr. Dillon Browne**
*University of Waterloo*

- Conducted a scoping study examining current psychological assessment tools used to measure children’s use of digital media and synthesize findings on the relationship between digital media exposure and child development. This study aimed at developing a reliable and valid tool to assess children's and adolescent’s usage of digital media. Contributions towards the review included screening 4191 articles for inclusion in the review and extraction of data from 116 articles.
- Assisted in research examining changes in the emotional and behavioral functioning of children enrolled in the *Learning Enrichment Foundation*’s early childhood education and after school programs. Collaborated on the creation of the study proposal, ethics application, child questionnaires, and participant recruitment/appreciation materials.
- Collaborated in the peer review process for a manuscript focusing on child welfare and early assessment and therapy
- Assisted in the creation of questionnaires to explore the effectiveness of Emotion-Focused Family Therapy in families experiencing enhanced stress during COVID-19

**EMPLOYMENT HISTORY**

**Psychometrist, Stonebridge Psychological Services,**
Dr. Johann Reis (psychologist) 2022- present *Waterloo, Ontario*

- Contributed to and observed clinical interviews for adults and adolescents presenting with symptoms indicative of neurodevelopmental, neurocognitive, depressive, and anxiety disorders.
- Received training in Maladaptive Schema Therapy
- Administered Neuropsychological, Intelligence, and Personality assessments utilizing test batteries for the assessment of ASD, ADHD, Depressive Disorders, Anxiety, and PTSD
- Scored and interpreted assessment outcomes
- Wrote psychological reports including summaries of the clinical interview and outcomes of self and observer reports and assessments.

**Graduate Teaching Assistant**
*University of Waterloo* 2019 – 2020

**PSYCH 207 – Cognitive Psychology (Dr. Jennifer Stolz and Dr. Jonathan Fugelsang)**

- Provided online student support through tutoring, exam review sessions, and discussion board engagement/ management for a class of 250+ undergraduate students
- Maintained student records and grade adjustments with Brightspace D2L
- Reviewed newly produced course material.
- Earned a reputation as approachable, fair, and effective in promoting learning and engagement through one on one and group discussions
• Used real-world examples, graphs, and data to explain complex concepts.
PSYCH 211 – Developmental Psychology (Dr. Ori Friedman)

- Provided in-person student support through tutoring, exam review sessions, and discussion board engagement/management for a class of 250+ undergraduate students
- Collaborated in the creation of exam items
- Graded written assignments and poster presentations, proctored exams
- Maintained student records and grade adjustments with Brightspace D2L
- Reviewed newly produced course material.

Highschool, Elementary and English as a Second Language (ESL) Tutor

Indigo Tutors, Waterloo, Ontario 2016 - 2021

- Provided quality tutoring for High School students and young children having learning disabilities (Dyslexia, and ADHD) with Indigo Tutors. Subjects taught include: chemistry, biology, social studies, English language studies and writing skills.
- Planned lessons based on student abilities and English language competence. Provided students with personal progress reports, graded assessments, assisted students in preparation for standardized English exams and oral presentations
- Taught one-on-one English lessons (ESL) to fifty students from China via three online platforms: 51 Talk, VIPkid, and Gogokid

Montessori Casa Directress (Kindergarten - Grade Two)

Kennedy Montessori Private School, Markham, Ontario 2012 - 2016

- Planned and presented core lessons in accordance with Montessori philosophy and methodology, created a stimulating learning environment to foster curiosity-based and experiential learning, conducted child observations, kept records of child cognitive development and achievement of learning objectives.
- Effectively promoted learning in students having Neurodevelopmental Disorders including Autism Spectrum Disorder, Attention Deficiency Hyperactive Disorder, and Conduct Disorders.
- Planned and coordinated special events for the school community including international night, annual sports day, and open house.
- Communicated with parents, families, and children in a professional and welcoming manner. Provided counselling and support to parents experiencing learning challenges with their children.
- Received an award from the parent community for excellence in teaching.

COMMUNITY AND SOCIAL SERVICES

Volunteer at Safe Steps

Women’s Crisis Services of Waterloo Region, Waterloo, ON 2019 - 2020

- Volunteer assistant to RSWs in providing a welcoming environment for women and their children participating in Safe Steps - a program providing education on neurological, socio-emotional and behavioural effects of trauma, domestic violence, and/or sexual abuse on child development. Weekly (3 hrs/week) participation over a 6 month period.
• Provided a calming and supportive environment for young children (ages 2-5) having emotional and behavioral challenges related to adverse childhood experiences, encouraged productive expression of needs and emotions.
• Organized crafts, games and play sessions for young children of participants
• Assisted social workers in preparation for group therapy, and community dinners.

Co-Founder of Start Early India
Start Early India, Mumbai, India 2009 - present

• Lead an international development project as co-founder of Start Early India, a non-profit early learning center for children (ages 4-7) from marginalized backgrounds.
• Coordinated project fundraising events and partnerships with local corporate and individual sponsors.
• Recruited and trained teachers and volunteers, coordinated book drives, and collaborated in curriculum development.
• Conducted outreach programs aimed at communicating the importance of quality primary education for illiterate families of low socioeconomic backgrounds.
• Made a recent site visit in December 2019 to assess the quality and effectiveness of the learning center and award the efforts of staff who continue to contribute towards the success of the learning center.

Mentor at St. Catherine’s Home for Girls
St. Catherine, Mumbai, India 2006 -2009

• Assisted in mentoring young girls having a history of adverse childhood experiences including exploitation and human trafficking.
• Conducted motivational seminars aimed at fostering the development of positive self-concept and confidence for girls ages 8-16.
• Coordinated vocational/skills training workshops with the purpose of empowering rescued girls to achieve financial independence.
• Participated in summer camps that engaged participants in sports events, dance, yoga, art programs