

SEXUAL VIOLENCE PREVENTION AND UNIVERSITY ATHLETICS: CAN
FOUNDATIONAL EDUCATION IMPROVE MORAL ENGAGEMENT IN PREVENTION
STRATEGIES?

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By

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ABSTRACT

Many high-profile reports of sexual assault have been connected to university athletic programs. Furthermore, athletes are perceived as leaders on campus. Consequently, not only should athletic programs be targeted, university athletes are well placed to be leaders in sexual violence prevention efforts on campus, such as in bystander intervention training (BIT). However, there have been few evaluations of BIT with university athletes. Furthermore, research has not explored the additional effects of foundational education on BIT. Therefore, the current study evaluated an online sexual violence prevention program with university athletes who were randomly assigned to one of three groups: (1) a group that received BIT, (2) a group that received foundational education plus BIT, and (3) a control group. Participants were surveyed over three waves on (1) alcohol and consent knowledge; (2) sexual violence knowledge; (3) moral disengagement; (4) rape myth acceptance; (5) consent beliefs and behaviours; and (6) bystander intentions.

It was hypothesized group 2 would have more positive changes than groups 1 and 3 towards sexual violence prevention. Furthermore, it was expected the relationship between moral disengagement and bystander intentions would be moderated by foundational education. At pre-test, foundational education was a moderator of moral disengagement on bystander attitudes, $R^2 = .33$, $F(7, 63) = 4.48$, $p < .001$. At post-test, group 2 did not have significantly better outcomes than groups 1 or 3. However, expected changes were revealed over time for group 1 in moral disengagement ($U = 50.00$, $z = -2.02$, $p = .045$, $r = -.37$) and bystander attitudes ($U = 142.50$, $z = 2.18$, $p = .03$, $r = .40$) and for group 2 in alcohol and consent knowledge ($U = 2.00$, $z = -2.921$, $p = .002$, $r = -.73$), positive consent attitudes ($U = 48.50$, $z = 2.39$, $p = .01$, $r = .60$) and bystander attitudes ($U = 45.50$, $z = 2.05$, $p = .04$, $r = .51$). Group 3 experienced no significant changes

across timepoints. Future research should continue exploring the additive effects of foundational education on BIT and strategies that can foster participant engagement in online sexual violence prevention programs.

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Sexual Violence Prevention and University Athletics: Can Foundational Education Improve Moral Engagement in Prevention Strategies?

There has been a substantial increase in the number of sexual assault accounts recently reported on news channels, social media platforms (McLaren, 2017), and to the police (Statistics Canada, 2018). Statistics Canada (2017) has noted that 41% of all self-reported sexual assaults were reported by high school and university students. Moreover, a number of high-profile sexual assault reports involve high school and university students connected to athletic programs (e.g., Stanford swimmer, St. Michael's College School's basketball team, and Florida State University quarterback). These programs and athletes have been implicated in behaviours that contribute to a campus culture conducive to sexual violence (Baxter, 2018; CBC Sports, 2005; Kilpatrick, 2015; McLaughlin, 2018). Notably, student-athletes enjoy social capital as they are placed high on the social hierarchy and are perceived as leaders on campus (Shavers et al., 2015). Consequently, there is an opportunity to both intervene to prevent sexual violence with athletes through the provision of sexual violence prevention training and to also harness their social capital to counteract campus cultures that support sexual violence (Fuller et al., 2017). Although few studies have explored intervention efforts within university athletic programs, the regularity of reports of sexual violence, along with the social capital of student-athletes, suggest that athletic programs should be a critical area of focus for university sexual violence prevention efforts.

Bystander intervention training (BIT) is a highly-regarded campus sexual violence prevention strategy based on the premise that students who are taught prosocial bystander behaviours will be more likely to intervene (Banyard, 2008; Katz & Moore, 2013). While BIT has been shown to increase bystander behaviour regarding sexual violence, it assumes that

students have foundational knowledge relating to sexual violence. Indeed, limited consent education is associated with lower prosocial bystander attitudes among university students (Thiessen & Buchanan, under review). Moreover, an inadequate comprehension of consent has been linked to students' negative attitudes towards sexual assault survivors, an indicator of rape myth acceptance (Demming et al., 2013; Hoxmeier et al., 2016). To date, significant decreases in rape myth acceptance have not been revealed in the few studies that have conducted randomized controlled trials of BIT in athletic programs (Exner-Cortens & Cummings, 2017; Moynihan et al., 2010). Thus, it may be crucial to include foundational education in BIT to decrease rape myth acceptance and further promote bystander behaviours. Therefore, I propose investigating the effects of providing foundational education with BIT on rape myth acceptance, and bystander attitudes and behaviours in a sample of university athletes.

Literature Review

The Continuum of Sexual Violence

In this document, the term *sexual violence* will be used rather than *sexual assault*. This choice was made because the term *sexual violence* serves as an umbrella term for a range of actions. In contrast, *sexual assault* is a legal term and is limited in the fact that it most often refers to overt violence that includes non-consensual sexual touching. Indeed, Stout (1991) suggests that there is a continuum of sexually violent actions, which begins with actions that do not include physical touch. Stout's (1991) model moves from more subtle actions like sexist language, catcalling, and sexist advertising to overt actions like sexual harassment, abuse, and rape. Stout (1991) argues that actions at the start of the continuum (e.g., catcalling) create a culture where actions at the end of the continuum (e.g., rape) are more easily justified. Consequently, the continuum is important to discuss in intervention efforts so that all of these

actions can be highlighted as harmful and as worthy of bystander intervention. This continuum approach is also currently used in BIT with university students (McMahon et al., 2015). As such, the term *sexual violence* is used rather than *sexual assault* in recognition of the continuum of actions that are sexually violent and necessary to target in intervention practices. However, *sexual assault* will still be used when discussing studies where researchers explicitly measured physical sexual assault but did not measure the range of actions that fall under the term *sexual violence*.

Bystander Intervention Training

Various forms of sexual violence prevention programming have been implemented on college campuses throughout the United States and Canada. At the author's host institution, Bringing in the Bystander® (BITB) is the program used on campus. It was selected because it is an evidence-based program and found to be effective in promoting prosocial bystander attitudes for men and women. Furthermore, it has been evaluated in a Canadian context (Senn & Forrest, 2016). The program has two versions (90 minutes and 4 hours), of which the 90-minute version is used at this campus and is designed to teach students to recognize risky situations, intervene against all actions along the continuum of sexual violence, and to be an ally to survivors through effectively responding to disclosures. This program is based on the bystander intervention model, which involves teaching prosocial bystander behaviours to encourage self-efficacy and safety when intervening in risky situations to prevent sexual violence (Banyard, 2008; Katz & Moore, 2013). Hastings et al. (2007) defined prosocial behaviour as “proactive and reactive responses to the needs of others that serve to promote the well-being of others” (p. 639). These behaviours can include protecting another from harm, reacting as a witness to an event, or responding to requests for help (Hastings et al., 2007). Bystander training is based on the premise that

individuals who are taught appropriate beliefs and behaviours for risky situations will be more likely to exhibit prosocial behaviours and therefore have greater intentions to intervene (Banyard, 2008). Bystander intervention behaviours against sexual violence can range from actions such as voicing one's disapproval when a rape joke is made to checking in on someone who looks intoxicated that is being taken upstairs at a party (Banyard et al., 2014).

Education on how to intervene in risky situations such as those that potentially lead to sexual violence may help to increase individuals' prosocial bystander behaviours. For example, in a study where sorority member women were randomly assigned to receive bystander intervention programming or to a control group, women who received bystander intervention training showed significantly improved feelings of efficacy in being a prosocial bystander five weeks after receiving bystander programming compared to women sorority members who did not receive the programming (Moynihan et al., 2011). However, Moynihan et al. (2011) failed to measure bystander behaviour so it is not known whether program effects extended beyond attitudinal changes. In another quasi-experimental assessment of bystander intervention programming that included evaluations conducted in three different waves (i.e., baseline, one-week post-intervention, and four-month post-intervention), undergraduate students who received the programming showed increased bystander efficacy, readiness to intervene, and intent to intervene one-week post-intervention that was maintained four months post-intervention (Senn & Forrest, 2016). While women had higher mean scores for their intent to intervene with friends, there was a substantial increase in mean scores for men on the intent to intervene with both friends and strangers. It is important to understand what factors predict existing differences in people's prosocial bystander attitudes and behaviours given that research demonstrates this type

of training is effective in fostering individual efficacy to recognize and intervene in risky situations that may lead to sexual violence (Moynihan et al., 2011; Senn & Forrest, 2016).

Identifying predictors of prosocial bystander attitudes and behaviour may further improve the effectiveness of bystander training. Several factors have previously been identified as predictors for prosocial bystander behaviours. Banyard (2008) surveyed undergraduate students about their bystander behaviours and found that greater prosocial bystander behaviours were related to being a woman, knowing a survivor of sexual assault, having a greater believed sense of community, having lesser rape myth acceptance, having taken a class on sexual violence, and having more knowledge about sexual assault. Yet, being a woman was one of the strongest predictive factors for actual bystander behaviours suggesting that gender differences may influence a bystander's decision to intervene.

Indeed, findings of women reporting higher levels of bystander behaviours than men are well-documented in the existing research. For example, Nicksa (2016) surveyed college students about their willingness to report different types of crime and found that women were more likely than men to report all types of crime (i.e., theft, physical assault, and sexual assault). As well, Exner and Cummings (2011) surveyed undergraduate students about their bystander attitudes and found that men were significantly more likely than women to report that they could not do anything to prevent sexual assault. Interestingly, these studies did not reveal differences in bystander efficacy between men and women, despite finding significant self-reported sex differences on all other measures of prosocial bystander behaviours (Banyard, 2008; Exner & Cummings, 2011).

This research does help to identify various factors that are related to sexual coercion and bystander attitudes, beliefs, and behaviours. These factors do seem to include foundational

knowledge (e.g., having taken a class on sexual violence and having more knowledge about sexual assault; Banyard, 2008). However, this research does not identify what specific topics (e.g., consent, BIT, substance use knowledge) regarding individuals' foundational knowledge is associated with both sexually coercive behaviours and prosocial bystander behaviours regarding sexual violence. It is important to consider sources of socialization that inform beliefs and behaviours regarding sexual relationships that could influence both sexually coercive behaviours and prosocial bystander attitudes.

Athletic Subculture Socialization and Sexual Violence

Just as previous foundational education on sexual violence may be related to the development of prosocial bystander behaviours and the inhibition of sexually violent behaviours, membership in certain subcultures or groups may also be related to the socialization towards prosocial bystander behaviours and sexual strategies. In her cross-cultural review, Sanday (1981) identifies three markers of what she terms "rape-prone societies": the intensity of interpersonal violence, low power and authority of women, and greater segregation of men and women. Building off of Sanday's (1981) assessment, Crosset (2016) characterizes men's university athletic programs as upholding these markers of "rape prone societies." Crosset (2016) asserts that "male athletes spend much of their time and energy engaged in a sex-segregated, male-dominant, and sometimes violent activities..." all of which are indicants of "rape-prone societies" (p. 88). The propensity of these markers to be attached to university athletic programs suggests that membership in this group may be associated with attitudes supportive of sexual coercion and assault. The presence of these markers within athletic programs suggests that this group may particularly benefit from directed intervention efforts. Notably, Crosset (2016) did not

address women athletes' role in university athletic programs, which is parallel to much of the research on athletic programs and sexual violence where men athletes are the focus.

Athletics Programs and Sexual Violence

Consistent with Crosset's (2016) assessment of athletic programs being associated with indicators of "rape-prone societies," institutional athletic programs and athletes have been associated with the perpetration of sexual violence (Baxter, 2018; CBC Sports, 2005; Kilpatrick, 2015, McLaughlin, 2018). In addition to media reports featuring high school and university athletes' involvement in sexual violence related allegations, past research also demonstrates that athletic participation is associated with sexually coercive attitudes and behaviours. For example, Young et al. (2017) found that, in surveying men university students, being an athlete (i.e., recreational or intercollegiate) was predictive of sexual coercion, with athletes being 77% more likely to report engaging in sexual coercion in comparison to non-athletes. Importantly, the authors note that their measure for sexual coercion only asked participants to report coercive behaviours against a partner, and consequently, participants may not have reported coercive behaviours that occurred with strangers or in casual relationships. Thus, this measure does not account for the entirety of sexually coercive behaviours that some participants may have engaged in. While Statistics Canada (2017) indicates that the majority of survivors of sexual assault knew the perpetrator, still 44% of all self-reported sexual assaults were committed by a stranger. Furthermore, it is unclear if similar relationships between harmful sexual behaviours and athletic status among women would also be evidenced as this survey did not include women athletes.

Young and colleagues (2017) also found that athlete men reported more traditional gender role attitudes and higher rape myth acceptance than non-athletes. This finding is important because traditional gender role attitudes have been linked to the perpetration of sexual

aggression. For example, in surveying men university students, Warren et al. (2015) found that adherence to masculine gender norms, peer support of abuse, and rape myth acceptance are correlated with the perpetration of sexual assault. Likewise, a meta-analysis of athletic participation, fraternity membership, and sexual aggression conducted by Murnen and Kohlman (2007) revealed that men athletes and fraternity members had significantly higher scores on hypermasculinity, rape myth acceptance, and sexual aggression than men not in these groups. Importantly, hypermasculinity was the strongest differentiating variable between groups with athletes and fraternity members having higher hypermasculinity scores than men not in these groups. This evidence suggests that socialization factors within athletic programs may be fostering harmful sexual attitudes and behaviours in men suggesting this may be a particularly important group for intervention efforts on university campuses. However, it is not clear how athletic program membership may be associated with harmful attitudes about sexual violence for women athletes as this meta-analysis did not include women athletes.

In comparison to men athletes, women university athletes' attitudes, beliefs, and behaviours regarding sexual violence have been relatively under-researched. Indeed, men athletes are more often named as perpetrators in sexual assault reports than women athletes (e.g., Baxter, 2018; CBC Sports, 2005; Kilpatrick, 2015; McLaughlin, 2018). Thus, research surrounding sexual violence and athletic programs have singularly targeted men. However, women athletes are a vital group in the community of university athletics, and women university athletes can also both support and prevent a culture of sexual violence on campus. As women athletes are part of the community of university athletics, their role in prevention in the wider-campus community should not be discounted.

Athletes as Leaders in Sexual Violence Prevention

Despite university athletic status being associated with harmful sexual attitudes, university athletes may represent untapped potential as highly-visible leaders for bystander intervention on campus. For instance, in interviews with athletes ($N = 22$) where they were asked how student-athletes could be involved in working to end violence, participants consistently reported that they were respected and viewed as leaders on campus and that this status could be leveraged to help change the problem of sexual violence (McMahon & Farmer, 2009). This evidence suggests that university athletes occupy leadership roles on campus and may be well-positioned to contribute to social change on campus.

Athletes may even want to contribute to broader social change on their campuses. Fuller et al. (2017) asked male university athletes to provide written open-ended responses to questions regarding leadership and social change. They identified several themes in the athletes' responses including a drive to lead and positively influence those around them, a desire to leave similar positive impacts to the next generation as their mentors left for them, a desire to work with others towards a common purpose, and the belief that their leadership would change society in the future. Importantly, the male athletes felt that they were a part of communities beyond athletics and sought to use their leadership to change their communities.

Similar to men athletes' belief in their leadership skills, women athletes have also reported believing they have strong leadership ability. In another study by Fuller et al. (2018), wherein women athletes were asked to provide written open-ended responses to leadership-related questions, women athletes reported their potential for being agents of change that could positively affect their communities. Furthermore, they reported their willingness to lead by example and their intention to be a unifying force in their communities by challenging

stereotypes, prejudice, and discrimination. This research suggests that both men and women athletes may be especially willing and well-positioned to be leaders of social change within campus communities (Fuller et al., 2017, 2018; McMahon & Farmer, 2009).

Athletics Programs and Sexual Violence Interventions

Although previous research suggests that university athletes may be especially at risk for negative attitudes and behaviours regarding sexual violence, relatively little research has explored the efficacy of intervention efforts with this group, and even fewer have explored intervention efforts with both men and women athletes. The few studies that have evaluated bystander intervention efforts with university athletes show inconsistent effects of bystander intervention programming. For example, in their evaluation of Bringing in the Bystander (BITB) where university athletes were randomly assigned to either an experimental or control group, Moynihan and colleagues (2010) found that athletes who participated in a 4.5-hour session of BITB showed greater intentions and confidence towards intervening than the control group. However, there were no significant decreases in rape myth acceptance scores and no significant increases in actual bystander behaviours from pre-test to post-test for program participants. Furthermore, although this evaluation evidenced increased bystander intentions, efficacy, and behaviours, it did not measure sexual violence perpetration and victimization rates. Thus, it is not known whether BITB reduces instances of sexual violence within university athletics.

Contrary to the findings of Moynihan and colleagues (2010), an evaluation of the hour-long bystander intervention program Wingman 101 where male university athletes were randomly assigned to either a control or program group revealed significant differences between the program and control group on bystander behaviours towards friends. However, there were no significant differences between the treatment group and control group on bystander behaviours

towards strangers, willingness to help, bystander efficacy, and rape myth acceptance (Exner-Cortes & Cummings, 2017). Though, due to a small sample size (i.e., 40 participants in the treatment group and 40 participants in the control), this study may have had limited ability to detect effects of the programming. Exner-Cortes and Cummings (2017) also suggest that the length of the program (i.e., 1 hour) may have been too short to produce the desired attitude and behaviour changes in participants. Furthermore, inadequate coverage of bystander intervention and related foundational education may be associated with lower efficacy of bystander intervention programming.

Ensuring adequate length and covering additional topics relevant to bystander intervention may be necessary to improve the effectiveness of bystander intervention programming. Indeed, research on a bystander intervention program that included education on power, privilege, and oppression, components of consent, and the effects of alcohol consumption as it relates to bystander intervention revealed promising results. In Morean and colleagues' (2018) evaluation of the bystander training and alcohol prevention program, Preventing and Responding to Sexual Misconduct (PRSM), with men and women student-athletes found significant increases in bystander confidence, readiness to help, and bystander behaviours. Additionally, they found significant decreases in rape myth acceptance. This evidence suggests that including additional topics that are relevant to bystander intervention may be necessary to improve the effectiveness of bystander intervention programming. However, this study did not include a control group, and therefore, changes in bystander behaviours and rape myth acceptance cannot be directly attributed to PRSM. Additionally, Morean et al. (2018) did not measure instances of victimization or perpetration, and therefore, it is not clear whether programs like PRSM may lead to a reduction in experiences of sexual violence.

Qualitative inquiries of BIT with student-athletes also reveal that additional foundational education may be necessary to include in BIT. Foubert and Cowell (2004) conducted focus groups with male fraternity members and student-athletes after they had participated in the 1-hour bystander intervention program, The Men's Program. In this study, participants discussed the need for more education on "less violent, more unclear forms of rape and sexual assault" and that the program should focus more on the relationship between alcohol and consent (p. 12). Similarly, in focus groups where men and women student-athletes were asked questions about their bystander intentions and behaviours regarding sexual assault, participants expressed concern about false accusations, uncertainty of what constituted sexual assault, and that the influence of alcohol made interpreting risky situations more difficult (McMahon & Farmer, 2009). These findings suggest that participants may need additional foundational knowledge on topics related to consent, how alcohol use complicates consent, and sexual violence to coincide with BIT.

Alcohol Use and Sexual Violence

Alcohol has been implicated in the perpetration of sexual aggression, and athletes may be at increased risk for alcohol abuse. In their systematic review on the association between sports participation, alcohol-use, and aggression and violence, Sonderlund and colleagues (2014) found that of the eleven studies they reviewed, ten indicated a statistically significant association between athletic participation, alcohol use, and generalized violence. Consistent with this finding, when investigating the association between sexual violence and college party subcultures (i.e., fraternities and athletic teams), Boyle and Walker (2016) found that nearly 40% of sexual assault survivors that were fraternity and athletic team party attendees had been under the influence of alcohol or drugs.

In interviewing women ($M_{age} = 24.40$, $SD = 3.79$) about their experiences of sexual aggression, Testa and Livingston (1999) found that 42% of the women reported believing that alcohol or drugs enabled the assault to take place. Furthermore, 79.3% of the participants felt that their assailant's alcohol use impaired their judgement or behaviour. For example, one participant noted that they thought their aggressor was less aware of how they were responding to the aggressor's advances. Not only did the participants feel as though alcohol use negatively affected their assailant's behaviour, but they also felt that their alcohol use negatively impacted their judgment and behaviour. For example, participants expressed feelings that they had failed to leave dangerous situations because of their drinking and that their ability to resist sexual advances were impaired.

Likewise, in reviewing research on alcohol-related sexual assaults, Abbey (2002) concludes that alcohol use is associated with the likelihood of acquaintance sexual assault, where alcohol use may enhance pre-existing beliefs regarding sexual behaviour (e.g., feeling led on or teased justifies forcing sex) and perception of sexual intent (e.g., accepting a drink is equated to interest in having sex). In making recommendations for future research and policy implications, Abbey (2002) identifies the need to provide students with specific definitions of sexual assault and focus on alcohol as a risk factor for sexual assault to improve sexual violence prevention programs. Additionally, Abbey (2002) recommends that programming provide information on discussing sex and consent with a partner, especially because alcohol makes it difficult to read more subtle signals making obtaining active verbal consent even more vital. Indeed, in surveying university students about alcohol use and sexual consent, Jozkowski and Wiersma (2015) found that drinking before a recent sexual encounter was associated with weaker feelings of safety, comfort, and readiness during their most recent sexual encounter in comparison to those who did

not report drinking. This evidence suggests that providing students with foundational education on consent may be essential for sexual violence prevention.

Foundational Education and Sexual Violence Prevention Programs

While foundational education has been incorporated into sexual violence prevention education, the evaluation of these programs has not been designed to determine what specific program topics have led to positive behaviour changes. For example, the online sexual violence prevention program, *RealConsent*, includes information on consent and communication skills, rape myths, the effects of alcohol and drugs, and prosocial behaviours and was found to significantly decrease sexual violence perpetration in undergraduate men who participated in comparison to an undergraduate men control group (Salazar et al., 2019). This randomized controlled trial evaluation of *RealConsent* identified that legal knowledge of assault, knowledge of effective consent for sex, rape myth acceptance, and date rape attitudes mediated the greatest proportion of the effect of the program on sexual violence perpetration, suggesting that these topics may be essential in sexual violence prevention programming. However, this program was only evaluated with undergraduate men, and therefore, mediation effects with undergraduate women may be unique.

Another in-person sexual violence prevention program that included definitions of sexual violence and sexual violence statistics, bystander intervention, consent, and improving communication in relationships also identified a decrease in sexual violence victimization among undergraduate men and women participants in comparison to controls (Rothman & Silverman, 2007). However, causality could not be determined due to the use of a quasi-experimental design. Despite this limitation, this evidence suggests that foundational education and not just BIT may be central to sexual violence prevention.

Understanding Consent

Lack of knowledge of consent, in particular, may leave students ill-equipped to navigate future sexual relations or recognize non-consensual sexual behaviours to act as a prosocial bystander. Consent is defined as an explicit “yes” to sexual activity, and not merely the absence of saying “no” (Sexual Assault Services of Saskatchewan [SASS], 2017). Furthermore, consent must be coherent, ongoing, and willing (SASS, 2017). This definition means that consent cannot be given under the influence of alcohol or drugs and cannot be given under pressure. Additionally, consent must be given at each step of intimacy, and previous sexual consent does not mean that future sexual consent is granted (SASS, 2017). If students do not learn the definition of consent, they may be unable to recognize sexual violence and consequently will not act as a prosocial bystander and will possibly be at greater risk of perpetrating or being a victim of sexual violence.

Importantly, sexual violence prevention educators have identified consent education as an important topic for prevention. For instance, interviews with rape-prevention educators ($N = 12$) revealed two themes: that consent is vital for sexual violence prevention, and that consent is not rape prevention (Beres, 2020). Participants described consent education initiatives as one method of reducing sexual violence perpetration and as vital for changing norms around discussing consent. While some participants believed teaching individuals about consent would not lead to rape prevention (particularly for extreme perpetrators), even these participants acknowledged that consent education could help others recognize problematic behaviour and reach out for or encourage friends to seek help earlier. Additionally, they reported feeling that consent education may help people to be better prosocial bystanders in risky situations that could lead to sexual violence.

Indeed, the lack of comprehension of consent is related to negative attitudes towards sexual assault victims and lower bystander behaviours. For example, Hoxmeier et al. (2016) surveyed undergraduate students about their bystander behaviours and students reported being less likely to see those who are intoxicated as victims of sexual assault in comparison to those who were not intoxicated. Likewise, Demming et al. (2013) asked first- ($n = 16$) and fourth year ($n = 17$) women college students to discuss different vignettes of sexual assault scenarios. In the sexual assault scenarios that were more ambiguous (i.e., involved alcohol, the absence of a verbal “no”), participants rarely identified these scenarios as sexual assault and even blamed the victim for putting themselves in a risky situation (Demming et al., 2013).

Similar to these findings, focus groups with undergraduate men ($N = 48$) revealed harmful beliefs about obtaining sexual consent (Salazar et al., 2017). Participants described feeling that consent was implied through a woman’s actions (i.e., being invited back to their home), that obtaining consent once meant they had consent in the future, and that being in a relationship with the person meant consent was implied. Not only did participants describe subscribing to these harmful beliefs about consent, they also relayed using coercive behaviours to obtain consent such as continuing to make sexual advances if a person said “no” in a flirtatious manner and a rejection meant they should try again, just in case it was not a “real” rejection (Salazar et al., 2017). The reviewed research points to an association between the lack of knowledge of consent, victim-blaming behaviours, and lower prosocial bystander behaviours. Therefore, it is imperative to consider how the lack of understanding of consent may be related to behavioural mechanisms.

Moral Disengagement

A lack of understanding of sexual consent may make it easier for individuals to morally disengage from sexually violent situations. Indeed, moral disengagement was found to be positively associated with sexual harassment in a survey of university and working men (Page et al., 2016). However, the role of moral disengagement has been largely overlooked in the context of sexual violence perpetration and intervention to prevent sexual violence. In their review on the cultural and moral dimensions of sexual aggression, Scarpati and Pina (2017) cover five unique moral disengagement mechanisms perpetrators may use and apply them to sexual violence: (1) reframing (e.g., sexual harassment is not as bad as sexual touching); (2) shifting the blame from themselves to the victim (e.g., they were drunk, they did not explicitly say “no”); (3) displacing or minimizing their role in the offence by placing their actions onto others; (4) diffusing responsibility (e.g., “sharing” the act between a group of people); and (5) dehumanizing their victim through characterizing them as lacking positive qualities such as morality or virtue (e.g., comparing them to animals or objects). Scarpati and Pina (2017) argue that studying moral disengagement mechanisms is a gap in the literature on understanding sexual violence even though these mechanisms appear similar to justifications used in victim-blaming and rape myths.

Indeed, moral disengagement strategies are evident in the justifications of sexually violent perpetrators. For example, in investigating anonymous online accounts ($N = 68$) of sexual violence perpetration, participants justified their actions through victim-blaming (e.g., for drinking and for not verbally or clearly saying “no”) and objectifying their victims (e.g., describing them as sexual objects or toys; Hipp et al., 2017). Moral disengagement strategies may also be related to why people do not pro-socially intervene in sexually violent situations;

however, research has yet to explore moral disengagement strategies and prosocial intervention in sexually violent situations.

Moral Disengagement and Prosocial Intervention in Bullying Situations

Although moral disengagement strategies and prosocial intervention in sexually violent situations have been relatively unexplored, research has investigated the association between moral disengagement and prosocial intervention in bullying situations. This research suggests that moral disengagement is associated with prosocial intervention. For instance, in surveying young people between the ages of 15 and 20 years old about bystander behaviour in bullying situations (i.e., verbal and physical peer victimization), moral sensitivity, and moral disengagement, Thornberg and Jungert (2013) found that moral disengagement was positively associated with pro-bully behaviour for both men and women participants. Similarly, a survey of high school students in Italy between the ages of 16 and 22 ($M_{age} = 18$) on prosocial reasoning, moral disengagement, and helping behaviour found that moral disengagement was negatively associated with the propensity to help in various hypothetical moral dilemma situations (Paciello et al., 2013). This research suggests that moral disengagement is related to intervention behaviours.

While individual moral disengagement is negatively associated with prosocial intervention in bullying situations, perceptions of peer moral disengagement may also be related to intentions to intervene. Indeed, in surveying adolescents on individual and collective moral disengagement, peer aggression, defending, and being a passive bystander, Gini et al. (2015) found that individual moral disengagement was a predictor of aggressive behaviour and that collective moral disengagement was positively related to aggression and defending behaviour. Interestingly, this evidence suggests that some youth may resist the pressure to morally

disengage and instead may have increased intentions to defend when they see peers' aggressive behaviour. However, this study was correlational and therefore longitudinal research is necessary to better understand the temporal relationships between moral disengagement and aggressive behaviour. Similarly, in surveying adolescents on moral disengagement, peer group beliefs, and bullying and defender roles, Almeida et al. (2010) found that moral disengagement and peer group beliefs predicted positive attitudes towards bullying roles. Additionally, moral disengagement was negatively associated with attitudes towards defender roles in bullying situations, while positive peer beliefs towards defending roles were positively associated with defending roles in bullying situations. This evidence suggests that perceptions of peers' moral disengagement are associated with both bullying behaviours and intervention in bullying situations.

Furthermore, if left unprevented, the use of moral disengagement mechanisms may only strengthen over time. In a longitudinal study, Doramajian and Bukowski (2015) surveyed adolescents (ages 9-13) at three time points over four months on moral disengagement and passive bystander behaviour in bullying situations. Results revealed that moral disengagement at time one predicted increased passive bystander behaviour in bullying situations at time two, which in turn predicted increased moral disengagement at time three (Doramajian & Bukowski, 2015). This evidence suggests that interventions that target moral disengagement may play an especially important role in increasing intentions to intervene in risky situations, at least for adolescents.

Moral Disengagement and Athletes

While athletic participation and moral disengagement have not yet been studied in conjunction with sexual violence perpetration, the use of moral disengagement mechanisms for

antisocial behaviour within competitive sports have been identified (Boardley & Kavussanu, 2009; Boardley & Kavussanu, 2010; Tractlet et al., 2011). For instance, moral disengagement was found to predict antisocial behaviour in both athletic and university settings in a survey of university athletes (Kavussanu et al., 2013). Moreover, university athletes who reported higher antisocial behaviours in an athletic context also reported exhibiting these behaviours in a general university setting, though to a lesser extent, in comparison to athletes who reported lower antisocial behaviours. This finding suggests that university athletes' behaviours on the playing field may transfer to other areas of life, albeit to a lesser extent. Consequently, considering moral disengagement mechanisms and situational factors may be useful in explaining the association between university athletics, sexual violence perpetration, and bystander intervention.

Theoretical Framework

The current study was guided by Bandura's (1990) Theory of Moral Disengagement and Wikstrom's (2005) Situational Action Theory. The Theory of Moral Disengagement was used to help explain how foundational education can be used to reduce sexual violence perpetration and increase intervention to prevent sexual violence. Furthermore, Situational Action Theory was used to help explain why sexual violence perpetration and bystander behaviours are more or less likely to occur within the context of university athletics and university-related settings. See Appendix A for a program logic model, which incorporates these theories to describe how change was expected to happen for university athlete participants.

Theory of Moral Disengagement

While many individuals know that sexual violence is wrong and believe it to be morally reprehensible, these individuals still may not act as prosocial bystanders in risky situations that could lead to sexual violence and could even be perpetrators of sexual violence. In these

instances, self-regulatory mechanisms may not be activated, thereby allowing individuals' moral reactions to be disengaged. Bandura (1990) argues that "self-sanctions can be disengaged by reconstruing conduct as serving moral purposes, by obscuring personal agency in detrimental activities, by disregarding or misrepresenting the injurious consequences of one's actions, or by blaming and dehumanizing the victims" (p. 161). Indeed, in surveying men on sexual aggression and dehumanization towards women, Bevens and Loughnan (2019) found that dehumanization was significantly related to rape proclivity and negative attitudes towards survivors of sexual violence.

It is possible that the prevention of dehumanization could be achieved through foundational education relating to sexual violence. While research has not explored the reduction of moral disengagement relating to sexual violence, there have been evaluations of interventions aimed at preventing moral disengagement for other social issues through the use of foundational education. For example, providing foundational education has shown promise in an intervention aimed at preventing dehumanization related to violent extremism (Aly et al., 2014). This intervention aimed to prevent terrorism by providing education on the harmful effects of violent extremism, impacts on the victims of violent extremism, and the social impacts of violent extremism. As well, this intervention utilized stories of bombing events to facilitate moral learning discussions and provided participants with concrete strategies for societies to respond to violent extremism. Focus group evaluations of this intervention revealed that the intervention engaged participants' self-sanctions in that they empathized with victims of violent extremism (Aly et al., 2014). Furthermore, participants emphasized that group discussions and interactive lessons in a supportive intervention environment were valuable for the formation of their moral values. Likewise, an evaluation of an intervention aimed at reducing moral disengagement

related to antisocial behaviours with adolescents found significant decreases in moral justification and moral disagreement towards stealing (Bustamante & Chaux, 2014). This intervention emphasized teaching participants to both identify moral disengagement behaviours of others and themselves and to create moral engagement strategies to counter moral disengagement that they could use in their everyday lives (Bustamante & Chaux, 2014). These moral disengagement interventions suggest that both providing foundational information regarding social issues and working with participants to create strategies to prevent these social issues is important in preventing moral disengagement.

Foundational education regarding sexual violence may work in similar ways as other moral disengagement interventions (Aly et al., 2014; Bustamante & Chaux, 2014) to reduce moral disengagement and increase moral engagement when encountering risky situations. For example, targeting self-sanctions and following methods of moral disengagement through the inclusion of foundational education on sexual consent, effects of alcohol use, and sexual violence with BIT may serve to increase the efficacy of this training. For example, similar to the intervention by Aly et al. (2014) where foundational education was provided on the harmful effects of violent extremism, foundational education relating to sexual violence (i.e., on consent and alcohol use) may make it easier for individuals to recognize risky situations and more difficult for individuals to shut off their self-sanctions and blame survivors of these situations. Furthermore, similar to Aly et al., (2014) and Bustamante and Chaux (2014) where individuals also worked through strategies to prevent moral disengagement and counteract social issues, BIT also works through sexual violence scenarios to aid participants in forming strategies to counteract moral disengagement relating to sexual violence. Targeting moral disengagement in this way may make it more difficult for individuals to justify sexually coercive behaviours or to

stand by when they encounter a situation that could lead to sexual violence thereby decreasing rates of perpetration and increasing prosocial bystander behaviours.

The impact of foundational education is evidenced in the Program Logic Model (see Appendix A), where those student athletes who receive all the modules (i.e., foundational education in addition to BIT) are better able to recognize sexual violence and less likely to experience moral disengagement. These athletes are therefore better placed to intervene in all situations of sexual violence. On the other hand, student athletes who only received BIT will still have training to intervene in situations of sexual violence; however, they did not receive foundational training and may consequently morally disengage and fail to act in *some* situations that are or could become sexually violent.

Situational Action Theory

Sexual violence does not occur within a vacuum, but instead often involves bystanders and is more likely to occur in certain environments. Wikstrom (2005) suggests that while crimes (like sexual assault) do involve moral rule breaking, they also involve situational factors that may or may not make crimes more likely to occur. Therefore, it is crucial to not only consider an individual's moral propensity but also how that propensity may intersect with situational factors. Thus, the likelihood of an individual standing by in sexually violent situations or perpetrating sexually violent behaviour may be attributed to the stability or change in a person's morality and also the stability or change of the settings or situations that person is a part of.

University is a time of change for many students, and university settings may be particularly conducive to sexual violence. For example, for many university students there is a dramatic transition from high school to university life that brings increased physical freedom, increased privacy, fewer external pressures preventing sexual behaviour (i.e., parents, religion,

and friends), and more openness and freedom over one's sexuality (Lindgren et al., 2009). As well, Canadian universities have been identified by students as environments where using alcohol is promoted as part of being social and belonging on campus (Henderson et al., 2018). These environments where excessive drinking is accepted and even encouraged have been identified as fostering situations where sexual violence is more likely to occur (Lorenz & Ullman, 2016). These changes in situational factors experienced by university students may lead to more opportunities to engage in sexually violent situations and more exposure to these situations, and these factors may even be amplified for university students who are also athletes.

As previously discussed, there are unique features present within athletic programs that are deemed as contributors to "rape-prone societies" (Crosset, 2016; Sanday, 1981). Moreover, excessive alcohol use may be particularly prevalent in university athletic programs. A review by Sonderlund et al. (2014) on sports participation, alcohol use, and violence found that sports teams are at an increased risk for excessive drinking as alcohol use or binge drinking is viewed as not only a means of team bonding but also a method of dealing with the pressure of being competitive athletes. Additionally, university athletes may have easier access to alcohol as university teams are often sponsored by local bars (Sonderlund et al., 2014). Further, there are unique situational factors that coincide with being a competitive athlete and a university student that may increase the likelihood of experiencing sexual violence as both a bystander and a potential perpetrator. These unique situational factors experienced by university athletes need to be considered when assessing the effectiveness of intervention strategies. In the Program Logic Model (see Appendix A), situational factors are represented at the bottom and have arrows that disperse throughout the model to show how situational factors may be related to and potentially impact program effects. Another challenging situational factor related to conducting in-person

interventions with university athlete samples is their demanding and often rigid schedules (Jolly, 2008).

Online Sexual Violence Prevention Interventions

Online sexual violence prevention interventions may be a suitable alternative to in-person programming for student athletes, given that there would be less difficulty in scheduling as each individual athlete would be able to complete the intervention in their own free time. As of yet, sexual violence prevention program evaluations with student athletes have exclusively focused on in-person interventions (Exner-Cortes & Cummings, 2017; Foubert & Cowell, 2004; Morean et al. 2018; Moynihan et al. 2010). However, there have been a few evaluations of online sexual violence prevention programs with university student samples (Hines & Reed, 2017; Kleinsasser et al., 2015; Salazar et al., 2019; Zapp et al., 2018).

Similar to in-person interventions, evaluations of online interventions show evidence for positive changes in bystander attitudes (Hines & Reed, 2017; Zapp et al., 2018) and behaviours (Kleinsasser et al., 2015). For example, in a pre- and post-test evaluation of an online sexual violence prevention course that included 80 institutions, Zapp et al. (2018) found significant increases in the intention and ability to intervene and significant increases in empathy and victim support for the majority of the institutions. However, this evaluation failed to include a control group and to measure changes in behaviour. Therefore, it is not known whether attitudinal changes were attributable to the intervention or whether the intervention led to changes in behaviour. Despite the majority of these evaluations failing to measure behavioural changes, these interventions may provide similar results to in-person interventions. Indeed, in an evaluation where first-year students were randomly assigned to an online bystander intervention program or an in-person program, Hines and Reed (2017) found significant increases in

bystander intentions for both groups from pre-to-post-test, but no significant differences between groups at a 6-month follow up. This evidence suggests that online interventions may be a useful alternative to in-person training.

The Current Study

Previous research suggests that athletic participation in university is associated with sexually coercive attitudes and behaviours (Crosset, 2016; Murnen & Kohlman, 2007; Young et al., 2017). This evidence suggests that it may be particularly important to direct sexual violence prevention efforts towards this group. Providing interventions in an online format may be a particularly suitable method for student athletes considering the challenges related to their demanding schedules (Jolly, 2008). While evaluations of online sexual violence prevention interventions have not been conducted with student athletes, evaluations of online interventions have shown promising results in improving bystander intentions (Hines & Reed, 2017; Zapp et al., 2018) and behaviours (Kleinsasser et al., 2015) in university student samples. This evidence suggests that online interventions may be a suitable alternative to in-person sexual violence prevention programming for student athletes.

Currently, the few in-person evaluations of BIT with university athletes have shown inconsistent evidence that this education can change student attitudes, beliefs, and behaviours regarding sexual violence on campus (Exner-Cortens & Cummings, 2017; Moynihan et al., 2010). Specifically, some evaluations have reported participant changes in bystander intentions and confidence, but not behaviours or rape myth acceptance, and others finding changes in bystander behaviours towards friends but not strangers, intentions, confidence or rape myth acceptance (Exner-Cortens & Cummings, 2017; Moynihan et al., 2010). Because BIT does not explicitly address where attitudes that are supportive of sexually violent behaviour originate,

students may lack foundational knowledge to becoming an effective prosocial bystander. For instance, education on consent, alcohol use, and sexual violence could help to prevent the development of attitudes supportive of sexually coercive behaviour and consequently promote prosocial bystander behaviours. However, the assumption that program participants already have this foundational knowledge related to recognizing sexual violence, understanding sexual consent, and understanding how alcohol use complicates consent may result in the inefficacy of BIT programming for participants who did not receive this education. Therefore, including this education in BIT programming may help to increase its effectiveness. The few sexual violence intervention programs that have included foundational education with university students have shown promising results (Rothman & Silverman, 2007; Salazar et al., 2019). However, they have either failed to include women (Salazar et al., 2019) or a control group (Rothman & Silverman, 2007). Moreover, the reviewed evaluations failed to measure which program aspects (e.g., bystander training or consent education) were associated with reductions in sexual violence. Furthermore, these evaluations failed to utilize a theoretical framework to conceptualize changes in behaviour regarding sexual violence.

As of yet, there are no online randomized controlled trials investigating whether foundational education on consent, alcohol use, and sexual violence improves the efficacy of BIT within university athletics. Furthermore, few studies have examined the efficacy of BIT for both university athlete men and women. These gaps in the literature result in two questions: (1) Can moral disengagement and situational action theory be used to explain bystander behaviours?; and (2) Does foundational education that targets moral disengagement and situational factors enhance the efficacy of BIT in increasing prosocial bystander attitudes for university athletic program participants?

To explore this relationship, participants were randomly assigned to one of three groups: 1) A group that received online BIT; (2) a group that received online foundational education plus online BIT; and (3) a control group that received neither online BIT nor online foundational education. Participants were surveyed over three waves: pre-test, post-test, and 2-month follow up on (1) demographics; (2) alcohol use and consent knowledge (Ward et al., 2012); (3) sexual violence knowledge (Frazier & Borgida, 1988); (4) moral disengagement (Bandura et al., 1996); (5) rape myth acceptance (Payne et al., 1999); (6) sexual consent beliefs and behaviours (Humphreys & Brousseau, 2010); and (7) bystander attitudes and behaviours (Banyard et al., 2014).

Pre-Intervention Hypotheses

At pre-test, it was expected that gender differences evident in past research on prosocial bystander behaviour would be replicated (Banyard 2008; Burn 2009; Exner & Cummings, 2011; Nicksa, 2014; Senn & Forrest, 2016). Thus, it was hypothesized that women would have higher prosocial bystander scores than men, regardless of their level of foundational knowledge. Additionally, consistent with situational action theory, as alcohol use has also been linked to harmful sexual behaviours (Abbey, 2002, Sonderlund et al., 2014; Testa & Livingston, 1999), it was hypothesized that those who reported higher drinking frequency and quantity levels would evidence higher rates of moral disengagement, and lower bystander scores than those whose drinking levels were lower. Furthermore, in line with situational action theory, and because younger, early-career students are more likely to be experiencing a life transition bringing increased freedoms that have been associated with sexual violence (Henderson et al., 2018; Lindgren et al., 2009; Lorenz & Ulman, 2016), it was predicted that younger students in earlier

years of their university career would have higher moral disengagement scores, higher drinking rates, and lower bystander scores than older, upper-year students.

Previous research also points to the use of moral disengagement mechanisms in justifying sexual violence (Hipp et al., 2017; Page et al., 2016; Scarpati & Pina, 2017). Furthermore, higher moral disengagement scores have been associated with lower bystander intentions and behaviours in bullying situations and moral dilemmas (Thornberg & Jungert, 2013; Paciello et al., 2013). Due to these findings, it was expected that those scoring higher on moral disengagement would also report lower bystander scores, while those scoring lower would report higher bystander scores.

As well, previous research on sexual violence prevention programming that included foundational education has shown promising results in reducing rape myth acceptance and increasing bystander behaviours (Morean et al., 2018). Therefore, it was predicted that above and beyond what is accounted for by gender, foundational knowledge (i.e., higher scores on sexual violence knowledge and alcohol and consent knowledge) would account for significant variance in prosocial bystander scores at pre-test, with having more foundational knowledge predicting higher prosocial bystander scores, and having less foundational knowledge predicting lower prosocial bystander scores. Furthermore, previous research shows that low comprehension of consent is correlated with low prosocial bystander behaviours (Demming et al., 2013; Hoxmeier et al., 2016) and higher perpetration of sexual aggression (Warren et al., 2015). Therefore, it was predicted that participants who report less foundational education at pre-test would be higher in rape myth acceptance and lower in positive sexual consent beliefs and behaviours than participants who report having received more foundational education. Additionally, it was predicted that moral disengagement scores would be associated with the level of foundational

knowledge and education participants have, with those reporting more foundational knowledge and education having lower moral disengagement scores than those who reported less. Last, it was expected that foundational knowledge would be a moderator of moral disengagement scores that would influence bystander scores, where having more foundational knowledge would lead to lower moral disengagement scores resulting in higher bystander scores. A summary of pre-test hypotheses are provided in Table 1.

Table 1

Summary of Pre-test Hypotheses

Pre-Test Hypotheses	
Gender differences	<ul style="list-style-type: none"> • Women ↑ bystander attitudes than men • Women ↑ bystander behaviours than men
Situational action theory	<ul style="list-style-type: none"> • ↑ drinking levels and frequency related to ↑ moral disengagement and ↓ bystander scores • Moral disengagement: Younger and lower-year students > older and upper-year students • Bystander scores: Younger and lower-year students < older and upper-year students • Drinking levels/frequency: Younger and lower-year students > older and upper-year students
Moral disengagement	<ul style="list-style-type: none"> • ↑ moral disengagement related to ↓ bystander scores
Foundational knowledge	<ul style="list-style-type: none"> • Above and beyond what is accounted for by gender, ↑ foundational knowledge would account for a significant portion of variance in bystander scores, with ↑ foundational knowledge related to ↑ bystander scores • ↓ foundational knowledge related to ↑ rape myth acceptance and ↓ bystander scores • Foundational knowledge would be a moderator of moral disengagement where ↑ foundational knowledge related to ↓ moral disengagement, which would be associated with ↑ bystander scores

Post-Intervention Hypotheses

Research reveals that BIT with university athletes has produced conflicting results in reducing rape myth acceptance (Exner-Cortes & Cummings, 2017; Morean et al., 2018; Moynihan et al., 2010) and suggests that foundational knowledge is associated with increased bystander behaviours (Banyard, 2008; Morean et al., 2018; Thiessen & Buchanan, under review). Based on these findings, it was predicted that students who participated in either online BIT (group 1) and online BIT that included additional foundational education (group 2) would evidence significantly higher bystander and consent belief and behaviours scores and their rape myth acceptance would be significantly lower than scores of participants who received no education (group 3) post-intervention. However, group 2 would have a significantly greater decrease in rape myth acceptance, and increase in bystander and consent belief and behaviour scores post-intervention than groups 1 and 3. Furthermore, group 2 would have significantly lower scores on rape myth acceptance, and higher bystander and consent belief and behaviours scores two-months post-intervention than groups 1 and 3. Additionally, it was expected that those who receive online sexual violence prevention training (i.e., groups 1 and 2) would evidence a decrease in moral disengagement scores, with those in group 2 showing the largest decrease in moral disengagement. Last, it was predicted that those who receive online sexual violence prevention training that includes foundational knowledge (i.e., group 2) would evidence an increase in foundational knowledge and that foundational knowledge would be a moderator of moral disengagement scores, where higher foundational knowledge lead to lower moral disengagement scores resulting in lower sexual violence perpetration scores and higher bystander scores. A summary of all the post-test hypotheses are provided in Table 2.

Table 2*Summary of Post-test Hypotheses*

Post-Test Hypotheses	
Group 1	<ul style="list-style-type: none"> • Group 1 would have ↑ bystander scores, ↑ consent beliefs and behaviours, and ↓ rape myth acceptance than group 3 • Group 1 > Group 3 in moral disengagement score reduction
Group 2	<ul style="list-style-type: none"> • Group 2 would have ↑ bystander scores, ↑ consent beliefs and behaviours, and ↓ rape myth acceptance than group 3 • Group 2 > Group 1 and Group 3 regarding improvements in bystander scores, consent beliefs and behaviours, and rape myth acceptance • Group 2 > Group 1 and 3 in moral disengagement score reductions • Group 2 ↑ in foundational knowledge related to ↓ moral disengagement scores and ↑ bystander scores
Group 3	<ul style="list-style-type: none"> • Group 3 scores would remain stable across timepoints

Methods**Participants**

All student athletes at the university were invited to participate (approximately 380 student athletes). Of invited student-athletes, 71 student-athletes participated with a mean age of 20.68 ($SD = 2.00$). The majority of participants reported that they were women ($n = 51$), followed by men ($n = 19$), and one participant reported that they were non-binary. The majority of participants indicated they were heterosexual ($n = 59$) and white ($n = 58$). For a detailed summary of participant demographics see Table 3. Participants were randomly assigned to one of three groups: (1) a group that received BIT; (2) a group that received foundational education plus BIT; and (3) a control group that received neither BIT nor consent training. Participants were surveyed over three waves: pre-test, post-test, and 2-month follow up. Participants were surveyed on all measures at each time point except for the bystander opportunities and behaviours measure, which participants only responded to at pre-test and 2-month follow up.

Table 3*Demographic Characteristics of Participants*

Characteristics	<i>n</i>	%
Gender		
Woman	51	71.8
Man	19	26.8
Non-binary	1	1.4
Sexual Orientation		
Asexual	3	4.2
Bicurious	1	1.4
Bisexual	3	4.2
Gay	2	2.8
Heterosexual	59	83.1
Prefer not to answer	3	4.2
Ethnicity		
Asian, African	1	1.4
African	2	2.8
African, Indigenous, Latino/Hispanic, European, White	1	1.4
First Nations, Inuit, Métis	1	1.4
First Nations, Inuit, Metis, White	1	1.4
Caribbean, White	1	1.4
European	1	1.4
European, White	4	5.6
European, Indigenous, White	1	1.4
White	58	81.7
Year of Study		
First Year	26	36.6
Second Year	11	15.5
Third Year	16	22.5
Fourth Year	8	11.3
Fifth Year +	9	12.7
Graduate Student	1	1.4
Residence		
Suburban community	15	21.1
City/urban community	34	47.9
Rural community	20	28.2
Other	1	1.4
Political ideology		
Very liberal	1	1.4
Liberal	13	18.3
Somewhat liberal	24	33.8
Somewhat conservative	20	28.2
Conservative	11	15.5
Religiosity		

Very religious/spiritual	5	7.0
Quite religious/spiritual	11	15.5
Somewhat religious/spiritual	33	46.5
Not at all religious/spiritual	22	31.0

Measures

The survey package for this project included a demographic survey, two items on drinking frequency (National Institute of Alcohol Abuse and Alcoholism, 2003), and measures on: (1) alcohol use and consent knowledge (Ward et al., 2012); (2) sexual violence knowledge (Frazier & Borgida, 1988); (3) moral disengagement (Bandura et al., 1996); (4) rape myth acceptance (Payne et al., 1999); (5) sexual consent beliefs and behaviours (Humphreys & Brousseau, 2010); and (6) bystander intentions, opportunities and behaviours (McMahon et al. 2014)

Demographic Survey

In the demographic survey, participants self-reported their age, gender, ethnicity, sexual orientation, athlete status, and year of study (see Appendix B). The demographic measure was used to measure these variables to determine how representative the sample is to the population of interest.

Alcohol Use

Drinking frequency and quantity of consumption were assessed using two items (see Appendix B). The first item was, “During the past 3 months, how often did you usually have any kind of drink containing alcohol? (by a drink we mean a 12 ounce can, bottle, or glass of beer, a 5-ounce glass of wine, or one shot of liquor).” The second item was: “Over the past 3 months, on how many days did you have four or more drinks containing alcohol?” Participants respond to both items by selecting from the following options: never (or less than once a month), 2-3 times a month, once a week, twice a week, 3-4 times a week, 5-6 times a week, and every day. These

items were used in previous research that evaluated a sexual violence and heavy drinking reduction program (Morean et al., 2018), where it was adapted from the National Institute on Alcohol Abuse and Alcoholism (2003) list of recommended alcohol questions. Scores were calculated separately for each item, with participants reporting a greater number of days spent drinking alcohol representing more problematic alcohol use than those reporting a fewer number of days.

Alcohol Use and Consent Knowledge

The Alcohol and Sexual Consent Scale (Ward et al., 2012) was used to measure participants' knowledge of consenting to sexual experiences that involve alcohol (See Appendix C). The Alcohol and Sexual Consent Scale consists of 12 items separated into two subscales: campus beliefs and myths and sexual assault programming messages. Participants responded to items on a 7-point Likert scale ranging from 1 (*not at all agree*) to 7 (*very much agree*). An example item from the campus beliefs subscale is "a person who is sexually assaulted after drinking alcohol should only blame themselves." An example item from the sexual assault programming messages subscale is "alcohol use makes a person more vulnerable to sexual assault." The pronouns used within items were changed so that the measure would be inclusive of gender-diverse participants (e.g., "he/she" was replaced with "they"). The Alcohol and Sexual Consent Scale has demonstrated acceptable internal consistency with a Cronbach's alpha of .76 overall, .72 for the campus beliefs subscale, and .73 for the sexual assault programming messages subscale (Ward et al., 2012). This measure has also demonstrated convergent validity, with scores on the scale being positively correlated with drinking levels, victimization levels, and the perpetration of sexual violence (Ward et al., 2012).

At pretest, the Cronbach's alpha was acceptable for the campus beliefs subscale at .62. The Cronbach's alpha for the sexual assault programming messages subscale indicated strong internal consistency at .81. For subscales one and two, scores on each item were averaged together to create a score for subscale one and subscale two. All items on the sexual assault programming messages subscale are reverse-scored. Higher scores on subscale one reflect less knowledge of alcohol involved consent and lower scores indicate greater knowledge of alcohol involved consent. Higher scores on subscale two reflects having lesser knowledge regarding alcohol involved sexual assault, whereas lower scores reflect having greater knowledge regarding alcohol involved sexual assault.

Sexual Violence Knowledge

The Sexual Violence Questionnaire (Frazier & Borgida, 1988) was used to measure participants' knowledge of sexual violence and the psychological after-effects for survivors of sexual violence (see Appendix D). The Sexual Violence Questionnaire consists of 18-items. Participants responded by indicating whether they believed the statement is true, false, or did not know. Participant scores were determined by calculating the percentage of correct responses given. If participants responded to a question with "do not know," it was coded as an incorrect response. An example item is "stranger rape is much more common than acquaintance rape." The Sexual Violence Questionnaire has content validity as it was developed based on a literature review of sexual violence research and then reviewed by directors of two rape crisis centres (Frazier & Borgida, 1988). The Sexual Violence Questionnaire has also demonstrated excellent internal consistency with a Cronbach's alpha of .94 in previous research (Ward et al., 2012). Again, the pronouns used within items were changed so that the measure would be inclusive of gender-diverse participants (e.g., "he/she" was replaced with "they"). Furthermore, this change

was also made to recognize that anyone, and not just women, can be victims of sexual violence. For example, in the item “if a rape victim blames herself for the assault, it often means she played some role in precipitating it,” “herself” was replaced with “themselves,” and “she” was replaced with “they.” Last, item 10 was removed as it was lengthy, and the response options for this item were unique from the other items. DeVellis (2017) notes that lengthy items should be avoided and that response options should remain similar within measures as participants may assume that they are consistent throughout and may not register that the response option has differed. At pre-test, the measure had acceptable internal consistency with a Cronbach’s alpha of .68. Higher scores on this measure indicate higher levels of sexual violence knowledge whereas lower scores indicate having less knowledge surrounding sexual violence.

Rape Myth Acceptance

The Illinois Rape Myth Acceptance Scale-Short Form (IRMA-SF; Payne et al., 1999) was used to measure levels of rape myth acceptance (see Appendix E). The IRMA-SF consists of 20 items where participants rated their endorsement of various rape myths on a seven-point Likert scale from 1 (*not at all agree*) to 7 (*very much agree*). An example of an item on the IRMA-SF is “if a woman is raped while she is drunk, she is at least somewhat responsible for letting things get out of control.” The IRMA-SF has demonstrated strong internal consistency with a Cronbach’s alpha of .87 in previous research (Payne et al., 1999). The IRMA-SF has also demonstrated construct validity, with the IRMA-SF being positively correlated with scores on traditional sex-role stereotypes, adversarial sexual beliefs, hostility towards women, and acceptance of interpersonal violence (Payne et al., 1999). At pre-test, the measure displayed strong internal consistency with a Cronbach’s alpha of .84. All items on the IRMA-SF were

averaged to create a score for each participant on this measure, where higher scores indicate greater rape myth acceptance.

Moral Disengagement

The Moral Disengagement Scale (Detert et al., 2008) was used to measure the ways individuals morally disengage to justify antisocial behaviour (see Appendix F). This measure is similar to the measure developed by Bandura et al. (1996); however, as Bandura et al.'s measure was developed for children, this measure is adapted for use with university student populations. This scale consists of 24 items covering eight mechanisms of justifying morally reprehensible behaviour: moral justification, euphemistic language, advantageous comparison, displacement of responsibility, diffusion of responsibility, distorting consequences, attribution of blame, and dehumanization. Participants responded on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). An example item from the moral disengagement scale is "people who are mistreated have usually done something to deserve it." Bandura et al.'s (1996) moral disengagement scale has demonstrated acceptable internal consistency in past research with adolescents and emerging adults on prosocial reasoning and helping behaviours with a Cronbach's alpha of .86 (Paciello et al., 2013). Furthermore, Detert et al.'s (2008) measure showed evidence of structural validity and good reliability ($\alpha = .87$). At pre-test, the measure showed strong internal consistency with a Cronbach's alpha of .88. Participant's responses to each item were averaged to create a score. High scores reflect higher levels of moral disengagement.

Sexual Consent Beliefs and Behaviours

The Sexual Consent Scale-Revised (SCS-R; Humphreys & Brousseau, 2010) measured participants' beliefs and behaviours regarding obtaining consent for sexual activities (see

Appendix G). The SCS-R consists of 38 items separated into five subscales: (lack of) perceived behavioural control, positive attitude toward establishing consent, indirect behavioural approach to consent, sexual consent norms, and awareness and discussion. Participants responded to each item on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The SCS-R has shown good internal consistency with a Cronbach's alpha of .87 overall, .86 for (lack of) perceived behavioural control, .84 for positive attitude toward establishing consent, .78 for indirect consent behaviours, .67 for sexual consent norms, and .71 for awareness of consent (Humphreys & Brousseau, 2010). As well, the SCS-R has demonstrated construct validity as the indirect sexual consent behaviours and awareness of consent were positively associated with sexual assertiveness but negatively associated with lack of perceived behavioural control. Furthermore, having a positive attitude toward establishing consent was negatively associated with sexual sensation seeking but positively associated with indirect consent behaviours (Humphreys & Brousseau, 2010).

At pre-test, the SCS-R showed good internal consistency with a Cronbach's alpha of .89 for (lack of) perceived behavioural control, .92 for positive attitudes towards establishing consent, .77 for indirect consent behaviours, .83 for sexual consent norms, and .66 for awareness of consent. Participant scores were averaged for each subscale. High scores on subscale one reflect a greater lack of perceived behavioural control surrounding practicing consent. Higher scores on subscale two reflect having more positive attitudes towards establishing consent. Higher scores on subscale three reflect a greater tendency to use indirect behavioural approaches to establishing consent. Higher scores on subscale four reflect greater support of negative norms regarding establishing consent. Higher scores on subscale five reflect greater awareness and discussion of consent.

Bystander Attitudes

In this 19-item measure, participants used a 5-point Likert scale (ranging from *unlikely* to *very likely*) to indicate how likely they were to engage in a range of bystander behaviours (McMahon et al., 2014; see Appendix H). This measure initially included five subscales: low-risk situations, high-risk situations, post-assault support for victims, post-assault reporting of perpetrators, and proactive opportunities. An example of one item from each subscale is as follows: (1) *Low-risk Situations* (e.g., “Challenge a friend who says that rape victims are usually to blame for being raped”); (2) *High-risk Situations* (e.g., “Confront a friend who is hooking up with someone who was passed out”); (3) *Post-assault Support for Victims* (e.g., “go with a female friend to the police department if she says she was raped”); (4) *Post-assault Reporting of Perpetrators* (e.g., “Tell an RA or other campus authority about information I might have about a rape case even if pressured by my peers to stay silent”); and (5) *Proactive Opportunities* (e.g., “Visit a website to learn more about sexual violence”). However, McMahon et al. (2014) removed low-risk situation items after an exploratory factor analysis as these items did not load onto any factors. Even though McMahon et al. (2014) removed these items, in the current study, the decision was made to keep these items in the measure as measuring attitudes towards low-risk situations was important for this study given that these situations fall under Stout’s (1991) continuum of sexual violence. Again, the pronouns used within items were changed so that the measure would be inclusive of gender-diverse participants (e.g., “he/she” was replaced with “they”). Higher scores on this measure reflect higher intent to perform bystander behaviours. The bystander behaviours scale has shown evidence of content validity as it was first created by developing items from examples in sexual violence-related literature and discussions with professionals working in sexual violence-related fields (McMahon et al., 2011). Furthermore,

McMahon et al. (2014) conducted meetings with undergraduate students who provided feedback, which helped refine the items.

Given that the decision was made to include items that were not in McMahon et al.'s (2014) refined measure, an exploratory factor analysis (EFA) was conducted to explore the factor structure. To determine whether data were suitable for factor analysis, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were used. The KMO was .81 and therefore meritorious by Kaiser's (1974) criteria. As well, Bartlett's test of sphericity was significant ($\chi^2(136) = 790.44, p < .001$), indicating that the null hypothesis that the correlation matrix is an identity matrix can be rejected (Ferguson & Cox, 1993). Consequently, these tests suggest that the data were factor analyzable (Ferguson & Cox, 1993; Worthington & Whittaker, 2006). Principal axis factoring (PAF) was chosen with the oblique orthogonal rotation and default delta value as this method does not assume multivariate normality (Costello & Osborne, 2005). The resulting eigenvalues produced a three-factor solution. However, this solution was not conceptually meaningful. As well, several items had factor loadings that fell below the cut-off value of .32 (i.e., items 1, 9, and 11; Worthington & Whittaker, 2006). These items were removed and another EFA was conducted. This analysis produced a two-factor solution that was conceptually meaningful. This analysis resulted in two subscales for the bystander attitudes measure: bystander intervention behaviour attitudes (items 2, 3, 4, 5, 6, 7, 8, 10, and 12), and bystander proactive behaviour attitudes (items 14, 15, 16, and 17). At pre-test, subscale one and two showed strong internal consistency with a Cronbach's alpha of .90 and .86, respectively. Additionally, the overall bystander attitudes measure (including all items) showed strong internal consistency with a Cronbach's alpha of .90.

Bystander Opportunities and Behaviours

In this 17-item measure, participants self-reported how many times within the last two years at pre-test and how many times within the last two months at post-test that they had the opportunity to act as a prosocial bystander to prevent sexual violence (i.e., their bystander opportunities; McMahon et al., 2014; see Appendix I). Response options for bystander opportunities were revised from “yes,” “no,” or “wasn’t in the situation” to “0, 1, 2, 3-5, 6-9, or 10 times or more”. If participants selected any option besides 0, they were then prompted to select how many times they intervened in that situation from 0, 1, 2, 3-5, 6-9, or 10 or more times (i.e., their bystander behaviours). This revision was made based McMahon et al.’s (2017) recommendations to better gauge the *number* of opportunities bystanders have to intervene. The bystander behaviours scale has shown evidence of content validity as it was first created by developing items from examples in sexual violence-related literature and discussions with professionals working in sexual violence-related fields (McMahon et al., 2011). Furthermore, McMahon et al. (2014) conducted meetings with undergraduate students who provided feedback, which helped refine the items. At pre-test, the bystander opportunities measure was sufficient with a Cronbach’s alpha of .61. The bystander behaviours and frequency measures had too few responses to obtain a Cronbach’s alpha. As such, these measures were dropped from analysis and only participants’ scores for bystander opportunities were used.

Procedure

Potential participants were contacted via email by the University Athletics program to participate in a study on sexual violence prevention. Interested participants were instructed to click the link in the email, which brought them to an incentive survey hosted on SurveyMonkey. This incentive survey asked participants to enter relevant contact information to be sent a \$5.00

Starbucks gift card. Participants were emailed the \$5.00 Starbucks gift card within two days of completing the incentive survey. Upon completing the incentive survey, participants were redirected to a new page to begin the pre-test survey, where they were provided a consent form. Participants were asked whether they consented to participate in the study and indicated their consent to participate by clicking “yes.” At the start of the pre-test survey, participants were asked to respond to four questions that were used to create an ID code. Participant responses to these questions were combined to create an ID code for each participant so that their data could be matched across time points. At the end of the pre-test survey, participants were notified that they were randomly assigned to either the group that received BIT (group 1), the group that received foundational education and BIT (group 2), or the control group (group 3).

Group 1

Upon completing the pre-test survey, participants assigned to group 1 were instructed to click a link that would bring them to an online course page that included a BIT module. Participants were instructed that they would have two weeks to complete this module, which would take approximately 20 minutes to complete. Once the module was completed, participants were provided an additional survey link to complete the post-test survey. After completing the post-test survey, interested participants were asked to provide their email to be contacted to participate in the 2-month follow up. Two months later, participants were contacted via email and were asked to provide their contact information if it had changed so that they could be provided an additional \$5.00 Starbucks gift card. If their contact information had not changed, they were instructed to click “yes” to indicate that their information had stayed the same. After completing this short incentive survey, participants were directed to a new page to begin the 2-month follow up.

Group 2

Once completing the pre-test survey, participants assigned to group 2 were instructed to click a link that would bring them to an online course page that included a ‘What is sexual violence?’ module, a sexual consent module, and a BIT module. Participants were instructed that they would have two weeks to complete these modules, which would take approximately one hour to complete. After finishing the modules, participants were provided an additional survey link to complete the post-test survey. After completing the post-test survey, interested participants were asked to provide their email to be contacted to participate in the 2-month follow up. Two months later, participants were contacted via email and were asked to provide their contact information if it had changed so that they could be provided an additional \$5.00 Starbucks gift card. If their contact information had not changed, they were instructed to click “yes” to indicate that their information had stayed the same. After completing this short incentive survey, participants were directed to a new page to begin the 2-month follow up.

Group 3

Once completing the pre-test survey, participants assigned to group 3 were asked to provide their email so that they could be contacted in two weeks to complete the post-test survey. In two weeks, participants were contacted by email to complete the post-test survey. After completing the post-test survey, interested participants were asked to provide their email once more to be contacted to participate in the 2-month follow up. Two months later, participants were contacted via email and were asked to provide their contact information if it had changed so that they could be provided an additional \$5.00 Starbucks gift card. If their contact information had not changed, they were instructed to click “yes” to indicate that their information had stayed

the same. After completing this short incentive survey, participants were directed to a new page to begin the 2-month follow up survey.

Module Development

All online modules used in this project were developed by the researcher in partnership with Teaching, Learning, and Student Experience Staff at the University of Saskatchewan (USask). The modules began as an online course created by Concordia University. Concordia University gave USask permission to use the modules and adapt them to better suit the USask campus community. A needs assessment survey was conducted with USask students, staff, and faculty to inform the adaptation of the course. Furthermore, several focus groups were conducted with undergraduate students to further inform the adaptation of the course, as well as consultations with USask campus groups and members. While the course includes four modules (what is sexual violence, sexual consent, bystander intervention, and responding to disclosures), only the first three modules were used in this project. The bystander intervention module follows a similar format to the in-person BITB® workshop, which was done to maintain symmetry with ongoing sexual violence prevention programming at USask.

Results

Data Screening

Data were uploaded into Statistical Package for the Social Sciences (SPSS) Version 24 for analysis. Variables were evaluated for missing data, skewness, and normality. Normality was evaluated using the Shapiro-Wilk and Kolmogorov-Smirnov tests. A scan of the data revealed that 15 participants had 55 or more missing data points, with seven participants having 142 missing data points. To evaluate missing data, a variable was created based on the last item of the bystander opportunities measure that separated participants with missing data from

participants with no missing data. Next, t -tests were completed to determine whether data were missing at random between participants who had missing data and who did not have missing data on the rape myth acceptance measure and the alcohol and sexual consent measure. The t -tests were not significant, indicating that the data were missing completely at random on these measures. Only these measures were tested because they had the largest number of participants that had missing data. On other measures, the groups were too small to conduct t -tests (i.e., the missing data group included less than seven participants). Given that participants with missing data overwhelmingly had a large number of missing data points on each measure, data imputation methods such as multiple imputation or maximum likelihood could not be utilized. Consequently, the decision was made to remove the participant data where the participant had 55 or more data points missing ($n = 15$).

Sexual Violence Knowledge

The items on the sexual violence knowledge measure had between 3.7%-4.9% of the data missing. The total score sexual violence knowledge variable was negatively skewed. Both the Shapiro-Wilk and Kolmogorov-Smirnov tests were significant indicating that variable was not normally distributed, $W(71) = .906, p < .001$; $D(71) = .152, p < .001$. Therefore, a log 10 transformation was applied to this variable, which corrected the skewness. However, tests of normality were still significant, $W(71) = .952, p = .008$; $D(71) = .165, p < .001$.

Rape Myth Acceptance

The items on the IRMA-SF measures had between 2.5%-7.4% of the data missing. This variable was positively skewed. As well, the Shapiro-Wilk and Kolmogorov-Smirnov tests of normality were significant, $W(71) = .877, p < .001$; $D(71) = .172, p < .001$. A log 10

transformation was applied to this variable, which helped to correct the skewness; however, tests of normality were still significant, $W(71) = .940, p = .002$; $D(71) = .128, p = .006$.

Alcohol and Sexual Consent

On the alcohol and sexual consent measure, there were 7.4% of missing data for each item. The average variable for the first subscale (campus beliefs and myths) met assumptions of normality. However, the average variable for the second subscale (sexual assault programming messages) was positively skewed and the Shapiro-Wilk and Kolmogorov-Smirnov tests of normality were significant, $W(71) = .839, p < .001$; $D(71) = .142, p = .001$. Therefore, a log 10 transformation was applied to this variable. The transformation worked to correct the skewness, and the Shapiro-Wilk and Kolmogorov-Smirnov tests were no longer significant, indicating that the variable now met assumptions of normality.

Moral Disengagement

On the moral disengagement measure, there was 13.6% of the data missing on each item. The average score variable for moral disengagement was not skewed, and the Shapiro-Wilk and Kolmogorov-Smirnov test were not significant, indicating that the variable met assumptions of normality.

Bystander Attitudes

On the bystander attitude scale, there was between 13.6-14.8% of the data missing for each item. The overall bystander attitude scale was negatively skewed and the Shapiro-Wilk and Kolmogorov-Smirnov tests of normality were significant, $W(71) = .880, p < .001$; $D(71) = .113, p = .027$. A log 10 transformation was applied to this variable, which corrected the skewness. However, test of normality were still significant, indicating that the variable did not meet assumptions of normality, $W(71) = .965, p = .046$; $D(71) = .119, p = .016$. The average score

variable for the first subscale (intervention behaviours) was negatively skewed, and the Shapiro-Wilk and Kolmogorov-Smirnov tests were significant, $W(71) = .801, p < .001$; $D(71) = .151, p < .001$. A log 10 transformation was applied to this variable, which corrected the skewness. The Kolmogorov-Smirnov test was no longer significant, indicating that the variable met one test of the assumption of normality. However, the Shapiro-Wilk test was still significant, $W(71) = .950, p = .007$. The average score variable for the second subscale (proactive behaviours) met assumptions of normality.

Bystander Opportunities and Behaviours

The bystander behaviours (opportunities) measures had between 13.6%-16.0% of the data missing on each item. The average score variable for bystander opportunities was not skewed; however, the Shapiro-Wilk and Kolmogorov-Smirnov tests of normality were significant, $W(67) = .911, p < .002$. A log 10 transformation was applied, which led to meeting the assumption of normality on the Kolmogorov-Smirnov test, but not the Shapiro-Wilk test $W(67) = .961, p = .035$.

More than 50% of participants did not report opportunities to engage in bystander behaviours on every item except one of the items (see Table 4). Furthermore, it is likely that the method used to measure the frequency of engaging in bystander behaviours was unreliable. For instance, in some cases, participants reported engaging in a higher number of bystander behaviours than the number they previously reported having the opportunities to engage in. As such, due to this reporting error, the indicated frequency of bystander behaviours may be artificially inflated on some of these items. For these reasons, the decision was made to drop the bystander behaviours measure from the analysis.

Table 4*Pre-test Opportunities and Frequency of Bystander Behaviours*

Items	Number of Opportunities to Engage in a Bystander behaviour						Average frequency of behaviours for participants with opportunities
	0	1	2	3-5	6-9	10 or more	Percentage
How many times have you had the opportunity to confront a friend who plans to give someone alcohol to get sex?	67	2	2	0	0	0	62.50%
How many times have you had the opportunity to confront a friend when you heard rumours that they had forced someone to have sex?	57	11	2	1	0	0	85.71%
How many times have you had the opportunity to check in with a friend who looks drunk when they go to a room with someone else at a party?	33	14	10	13	0	1	88.51%
How many times have you had the opportunity to say something to a friend who is taking a drunk person back to their room at a party?	54	9	6	1	1	0	100.00%
How many times have you had the opportunity to confront a friend who is hooking up with someone who was passed out?	67	4	0	0	0	0	75.00%
How many times have you had the opportunity to express concern if a friend makes a sexist joke?	14	6	10	21	5	15	66.05%
How many times have you had the opportunity to challenge a friend who said that rape victims are usually to blame for being raped?	52	10	3	3	1	2	102.46%

How many times have you had the opportunity to intervene when seeing a group of people bothering (e.g., catcalling, whistling at, etc.) another person in the parking lot?	48	10	8	0	3	2	49.42%
How many times have you had the opportunity to call for help when seeing a stranger go to a dorm room with a group of people and hear that person yelling for help?	71	0	0	0	0	0	N/A
How many times have you had the opportunity to tell an RA or other campus authority about information you might have about a rape case even if pressured by your peers to stay silent?	70	0	1	0	0	0	0%
How many times have you had the opportunity to go with a friend to the police department if they say they were raped?	69	2	0	0	0	0	50.00%
How many times have you had the opportunity to visit a website to learn more about sexual violence?	41	6	7	7	4	6	61.83%
How many times have you had the opportunity to join an organization that works to stop rape and abuse?	56	6	5	2	0	0	2.56%
How many times have you had the opportunity to participate in a rally on campus to stop rape and abuse?	68	0	0	1	0	0	0%
How many times have you had the opportunity to take a workshop to learn more about sexual violence?	48	13	4	4	0	0	59.52%

Pre-test hypotheses

Data were not normally distributed on most variables, as evidenced by the Kolmogorov-Smirnov test and the Shapiro-Wilk test, and data transformations were only marginally

successful in correcting the non-normal distribution. However, Field (2013) notes that caution should be used when interpreting these tests of normality as, in large samples, they may be significant even when the normality assumption is not violated while, in small samples, that they may fail to detect violations. Furthermore, Sainani (2012) notes that the assumption of normality is not critical for parametric tests unless the sample size is extremely small. Sainani (2012) suggests that parametric tests with non-normal data are not a cause for concern with sample sizes of approximately 80. As the sample size at pre-test was relatively close to 80, the non-normality may not be that concerning.

Beyond Sainani's (2012) assertion regarding sample sizes, attempts to correct non-normal data may cause more problems than they solve. For instance, parametric tests using log 10 transformed data can be challenging to interpret, particularly for regression models (Field, 2013; McCuen, 1990). Furthermore, Osborne (2002) notes that "data transformations can alter the fundamental nature of the data, such as changing the measurement scale from interval or ratio to ordinal, and creating curvilinear relationships, complicating interpretation" (p. 5). As such, the use of data transformations for parametric tests is cautioned (Field, 2013; Osborne, 2002). In fact, Field (2013) suggests that the consequences of using transformed data may be more damaging than conducting an analysis with untransformed data, such as changing the original hypothesis being tested and the very nature of the construct that was measured. For these reasons, the decision was made to conduct the pre-test analyses using untransformed data.

Gender

Given that only one participant indicated that they were non-binary, their data had to be excluded from any gender analyses for statistical purposes. As data were not normally distributed on multiple variables, Spearman's Rho correlations were conducted to explore the relationships

between key variables and gender as Spearman's Rho does not require the assumption of multivariate normality (Field, 2013). Correlations revealed some similarities in the relationships between key variables for men and women (see Table 5). For both men and women, higher levels of rape myth acceptance were significantly correlated with greater approval of alcohol involved consent, greater moral disengagement, and lower willingness to act as a bystander. However, it should be noted that the correlation between rape myth acceptance and moral disengagement was stronger for men than for women. Furthermore, greater approval of alcohol involved consent was significantly related to greater moral disengagement for men and women.

Spearman's Rho correlations also revealed marked differences between men and women on the relationships between key variables. For example, greater bystander attitudes were significantly correlated with lesser approval of alcohol involved consent alcohol and moral disengagement for men but not for women. Also, greater moral disengagement was significantly correlated with lower sexual violence knowledge for men, but not for women.

Table 5

Correlations Between Key Variables for Men and Women

Variables	Rape Myth Acceptance	Campus Beliefs and Myths	Sexual Assault Programming Messages	Sexual Violence Knowledge	Bystander Attitudes	Moral Disengagement
Rape Myth Acceptance		.548*	.328	-.194	-.553**	.749**
Campus Beliefs and Myths	.587**		.221	-.084	-.651**	.529*
Sexual Assault Programming Messages	.002	-.023		-.259	-.006	.298

Sexual Violence Knowledge	-.185	-.116	-.184		.321	-.487*
Bystander Attitudes	-.300*	-.073	-.185	.194		-.703**
Moral Disengagement	.425**	.317*	-.056	-.195	-.242	

Note. Intercorrelations of predictor and criterion variables for men are presented above the diagonal, and intercorrelations of predictor and criterion variables for women are presented below the diagonal.

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

Table 6 displays means and standard deviations for men and women on key variables.

Women had higher mean scores on sexual violence knowledge, attitudes towards alcohol involved consent (subscale 2), bystander attitudes, and bystander opportunities and lower scores on attitudes towards alcohol involved consent (subscale 1), rape myth acceptance, and moral disengagement than men. However, t -tests revealed that mean scores were only statistically significantly different between men and women on the first subscale of alcohol and consent knowledge (i.e., campus beliefs and myths, $t(68) = -2.48, p = .02$) and rape myth acceptance, ($t(23.89) = -2.15, p = .03$).

Table 6

Means and (Standard Deviations) for Men and Women on Key Variables

Variables	Women <i>M (SD)</i>	Men <i>M (SD)</i>	<i>p</i>
Sexual violence knowledge	10.14 (2.87)	9.00 (3.57)	.17
Attitudes towards alcohol involved consent (campus beliefs and myths subscale)	2.13 (.73)	2.64 (.83)	.02

Attitudes towards alcohol involved consent (sexual assault programming messages)	2.58 (1.24)	2.29 (.65)	.34
Rape myth acceptance	1.45 (.38)	1.83(.68)	.03
Moral disengagement	2.07 (.47)	2.13 (.37)	.61
Bystander attitudes	4.11 (.59)	3.95 (.48)	.30
Bystander attitudes (Intervention)	4.35 (.67)	4.26 (.46)	.56
Bystander attitudes (Proactive)	3.52 (.97)	3.25 (.17)	.27
Bystander behaviour opportunities	.53 (.39)	.49 (.26)	.69

It was expected that women would have significantly greater bystander attitudes and opportunities than men. This hypothesis was not supported as results revealed no significant differences between men and women on bystander attitudes or opportunities (see Table 6). Given the small sample size, a power analysis was conducted to determine if there was sufficient power to discern a difference between men and women on bystander attitudes and opportunities. For bystander attitudes, the power was 48%, indicating a 52% chance of failing to detect a difference in the larger population (a Type II error). For bystander opportunities, the power was 52%, indicating a 48% chance of making a Type II error.

Situational Action Theory

Consistent with situational action theory (Wikstrom, 2005), it was hypothesized that higher drinking levels and frequency would be associated with higher levels of moral disengagement and lower bystander attitudes and opportunities. Multiple regression analyses were conducted to determine whether drinking levels and frequency predicted moral disengagement and bystander attitudes and opportunities. The hypothesis that drinking levels and

frequency would predict moral disengagement was not supported as results indicated that drinking levels and frequency were not significant predictors for moral disengagement, $R^2 = .02$, $F(2, 68) = .66$, $p = .52$. Results also showed that drinking levels and frequency were not significant predictors for bystander attitudes overall ($R^2 = .02$, $F(2, 68) = .47$, $p = .46$), attitudes towards intervention ($R^2 = .003$, $F(2, 68) = .11$, $p = .89$), and bystander opportunities ($R^2 = .01$, $F(2, 68) = .32$, $p = .73$). However, the prediction that drinking levels and frequency would predict proactive bystander attitudes was partially supported, $R^2 = .09$, $F(2, 68) = 3.37$, $p = .04$ (See Table 7).

Table 7

Hierarchical Multiple Regressions for Alcohol Use in Predicting Bystander Attitudes (Proactive)

	Variables	<i>b</i>	SE <i>b</i>	β	<i>t</i>	Semi-partial <i>r</i>	<i>r</i>
Step 1	Constant	3.93	.21		18.82		
	Drinking	-.25	.15	-.31	-1.64	-.19	-.30
	Frequency						
	Binge	.01	.16	.01	.05	.01	-.23
	Drinking						
	Frequency						

* $p < .05$. ** $p < .01$. *** $p < .001$.

The frequency of alcohol use was found to significantly predict attitudes towards proactive bystander-related opportunities (e.g., attending a class on sexual violence), where those who reported less drinking also reported more positive proactive bystander attitudes.

It was also hypothesized that younger and lower-year students would score higher on moral disengagement and lower on bystander attitudes than older and upper-year students. Another set of multiple regression analyses were conducted to determine whether age and year of study predicted moral disengagement scores. This hypothesis was not supported as results

revealed that age and year of study were not significant predictors for moral disengagement ($R^2 = .01$, $F(2, 68) = .38$, $p = .69$), bystander attitudes ($R^2 = .002$, $F(2, 68) = .07$, $p = .93$), or bystander opportunities ($R^2 = .03$, $F(2, 68) = .98$, $p = .38$). Last, it was hypothesized that younger and lower-year students would score higher on drinking levels and frequency than older and upper-year students. Multiple regression analyses were conducted to determine whether age and year of study predicted drinking levels/frequency. The hypothesis was also not supported as age and year of study were not found to be significant predictors for drinking levels ($R^2 = .02$, $F(2, 68) = .84$, $p = .44$) or frequency ($R^2 = .01$, $F(2, 68) = .23$, $p = .80$).

The sample size was small for these analyses ($N = 70$), which may have led to an inability to detect variances that do exist in the broader population. Field (2013) notes that for a small effect ($R^2 = .02$) with two or fewer predictors, a sample size of 476 would be required to achieve Cohen's (1988) criteria of .80 for power. For a medium effect ($R^2 = .13$) with two or fewer predictors, a sample size of 68 would be required (Field, 2013). For a large effect ($R^2 = .26$) with two or fewer predictors, a sample size of 31 would be required (Field, 2013). Consequently, the sample size was large enough to achieve adequate power to detect a medium or large effect of the predictor variables on moral disengagement but not for a small effect. As such, it is possible that the regression analysis was unable to detect differences that exist in the larger population.

Foundational Knowledge

It was hypothesized that, above and beyond what was accounted for by gender, foundational knowledge would account for a significant portion of variance in bystander scores, with greater foundational knowledge being related to higher bystander scores. A multiple regression analysis was conducted to explore whether foundational knowledge (i.e., sexual violence knowledge and alcohol and consent knowledge) were significant predictors for

bystander attitudes and opportunities above and beyond what was accounted for by gender. Gender was added at step one, and foundational knowledge variables were entered at step two. The hypothesis was partially supported as the models at step one were not significant, indicating that being a woman did not account for a significant portion of variance in bystander attitudes ($R^2 = .02$, $F(1, 68) = 1.08$, $p = .30$) or opportunities ($R^2 = .002$, $F(1, 68) = .12$, $p = .74$). The model was also not significant at step two for bystander opportunities, $R^2 = .09$, $F(4, 65) = 1.66$, $p = .17$. However, the model was significant at step two for bystander attitudes overall, indicating that foundational knowledge was a significant predictor, $R^2 = .21$, $F(4, 65) = 4.35$, $p < .01$ (see Table 8).

Table 8

Hierarchical Multiple Regressions for Foundational Knowledge in Predicting Bystander Attitudes

	Variables	<i>b</i>	SE <i>b</i>	β	<i>t</i>	Semi-partial <i>r</i>	<i>r</i>
Step 1	Constant	4.11	.08		52.15		
	Gender	-.16	.15	-.13	-1.04	-.13	-.13
Step 2	Constant	4.14	.36		11.57		
	Gender	-.10	.15	-.08	-.70	-.08	-.13
	Sexual Violence Knowledge	.05	.02	.27*	2.37	.26	.35*
	Campus Beliefs and Myths	-.08	.08	-.11	-.92	-.10	-.14
	Sexual Assault	-.14	.06	-.28*	-2.50	-.28	-.32*

Programming
Messages

Note. ^a Women = 0 and Men = 1
* $p < .05$. ** $p < .01$. *** $p < .001$.

Furthermore, the model was significant at step two for bystander intervention attitudes, indicating that foundational knowledge was a significant predictor, $R^2 = .26$, $F(4, 65) = 5.56$, $p < .001$ (see Table 9).

Table 9

Hierarchical Multiple Regressions for Foundational Knowledge in Predicting Bystander Attitudes (Intervention)

	Variables	b	SE b	β	t	Semi-partial r	r
Step 1	Constant	4.36	.09		50.05		
	Gender	-.10	.17	-.07	-.58	-.07	-.07
Step 2	Constant	4.23	.38		11.07		
	Gender	-.03	.16	-.02	-.17	-.02	-.07
	Sexual Violence Knowledge	.07	.02	.35**	3.10	.33	.42**
	Campus Beliefs and Myths	-.08	.09	-.10	-.85	-.09	-.11
	Sexual Assault Programming Messages	-.16	.06	-.29*	-2.60	-.28	-.34*

Note. ^a Women = 0 and Men = 1
* $p < .05$. ** $p < .01$. *** $p < .001$.

Further exploration of the standardized beta weights revealed that sexual violence knowledge and the second subscale of alcohol and consent knowledge (i.e., sexual assault programming messages) were unique predictors of bystander intervention attitudes, where having more substantial sexual violence knowledge and greater understanding of alcohol involved consent were associated with greater intentions to intervene as a bystander.

It was also hypothesized that having less foundational knowledge would be associated with greater rape myth acceptance above and beyond what is accounted for by gender. A multiple regression analysis was conducted to explore whether foundational knowledge was a predictor for rape myth acceptance. Gender was added at step one, and the foundational knowledge variables were added at step two. This hypothesis was supported as, at step one, the model was significant, indicating that gender accounted for a significant portion of variance in rape myth acceptance, $R^2 = .12$, $F(1, 68) = 8.92$, $p = .004$ (see Table 10).

Table 10

Hierarchical Multiple Regressions for Foundational Knowledge in Predicting Rape Myth Acceptance

	Variables	<i>b</i>	SE <i>b</i>	β	<i>t</i>	Semi-partial <i>r</i>	<i>r</i>
Step 1	Constant	1.45	.07		21.78		
	Gender	.38	.13	.34**	2.99	.34	.34**
Step 2	Constant	.84	.28		3.04		
	Gender	.19	.11	.17	1.68	.16	.34
	Sexual Violence Knowledge	-.02	.02	-.11	-1.09	-.10	-.21

Campus Beliefs and Myths	.35	.06	.54***	5.43	.52	.60***
Sexual Assault Programming Messages	.02	.04	.04	.43	.04	-.01

Note. ^a Women = 0 and Men = 1
* $p < .05$. ** $p < .01$. *** $p < .001$.

Specifically, being a man was associated with greater rape myth acceptance than being a woman. The model was also significant at step two, indicating that foundational knowledge accounted for a significant portion of variance in rape myth acceptance, $R^2 = .41$, $F(4, 65) = 11.19$, $p < .001$ (see Table 10). Upon closer examination of the standardized beta weights, it was evident that gender was no longer a significant predictor, and only the campus beliefs subscale uniquely predicted rape myth acceptance, indicating that those who had less knowledge surrounding alcohol involved consent also had greater rape myth acceptance.

Last, it was hypothesized that foundational knowledge would be a moderator of moral disengagement, where foundational knowledge would be related to moral disengagement, which would be associated with higher bystander attitudes and opportunities. Multiple regression analyses were conducted to test this hypothesis. Following Jose's (2013) guidelines for exploring moderation in regression, interaction variables were created to explore whether there was a moderating effect of foundational knowledge on moral disengagement. The multiple regression was not significant for bystander opportunities, $R^2 = .17$, $F(7, 63) = 1.80$, $p = .10$. However, this hypothesis was supported for bystander attitudes, as results of the multiple regression analysis was significant for bystander attitudes overall, $R^2 = .33$, $F(7, 63) = 4.48$, $p < .001$ (see Table 11).

Table 11*Multiple Regression for the Moderating Effect of Foundational Knowledge on Moral**Disengagement in Predicting Bystander Attitudes*

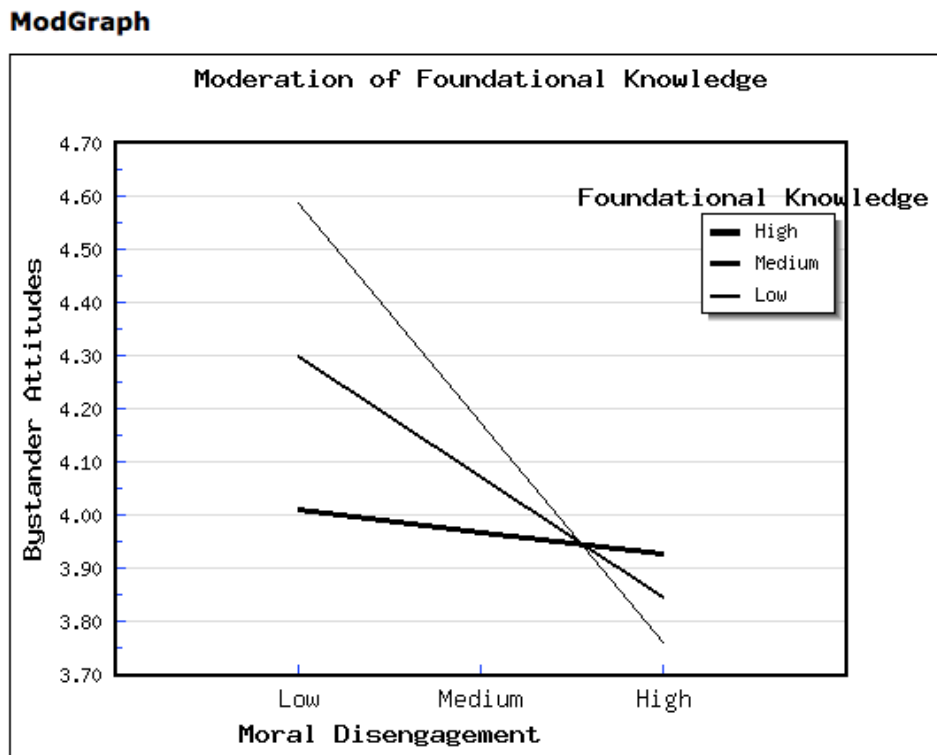
	Variables	<i>b</i>	SE <i>b</i>	β	<i>t</i>	Semi-partial <i>r</i>	<i>r</i>
Step 1	Constant	7.341	2.12		3.47		
	Sexual Violence Knowledge	-.08	.13	-.42	-.60	-.06	.35
	Campus Beliefs and Myths	-.004	.40	-.01	-.01	-.001	-.14
	Sexual Assault Programming Messages	-.88	.27	-1.75**	-3.30**	-.34	-.32**
	Moral Disengagement	-1.46	.93	-1.15	-1.57	-.16	-.19
	Sexual Violence Knowledge x Moral Disengagement	.05	.05	.62	.90	.09	.19
	Campus Beliefs and Myths X Moral Disengagement	-.05	.18	-.18	-.25	-.03	-.21
	Sexual Assault Programming Messages X Moral Disengagement	.38	.13	1.65**	2.95**	.30	-.27**

* $p < .05$. ** $p < .01$. *** $p < .001$.

When exploring the standardized beta weights, it was evident that the sexual assault programming messages were uniquely predictive of bystander attitudes. As well, there was a significant interaction effect between sexual assault programming messages and moral disengagement. Based on Jose's (2013) recommendations on mapping an interaction effect from a regression, a ModGraph was used. The ModGraph revealed that foundational knowledge did have a moderating effect on moral disengagement, where those who had more knowledge surrounding alcohol involved consent also had lower moral disengagement and higher bystander scores (See Figure 1).

Figure 1

The Moderating Effect of Moral Disengagement on Bystander Attitudes by Foundational Knowledge



Furthermore, results of the multiple regression analysis was significant for bystander attitudes towards intervention, $R^2 = .37$, $F(7, 63) = 5.38$, $p < .001$ (see Table 12).

Table 12

Multiple Regression for the Moderating Effect of Foundational Knowledge on Moral Disengagement in Predicting Bystander Attitudes (Intervention)

	Variables	<i>b</i>	SE <i>b</i>	β	<i>t</i>	Semi-partial <i>r</i>	<i>r</i>
Step 1	Constant	7.25	2.25		3.22		
	Sexual Violence Knowledge	-.10	.14	-.50	-.73	-.07	.41
	Campus Beliefs and Myths	.30	.42	.38	.71	.07	-.11
	Sexual Assault Programming Messages	-.94	.28	-1.70**	-3.30**	-.14	-.16**
	Moral Disengagement	-1.33	.99	-.96	-1.40	-.14	-.16
	Sexual Violence Knowledge x Moral Disengagement	.07	.06	.77	1.15	.12	.27
	Campus Beliefs and Myths X Moral Disengagement	-.18	.19	-.67	-.96	-.10	-.19
	Sexual Assault Programming Messages X	.40	.14	1.57**	2.92**	.29	-.28**

Moral Disengagement

* $p < .05$. ** $p < .01$. *** $p < .001$.

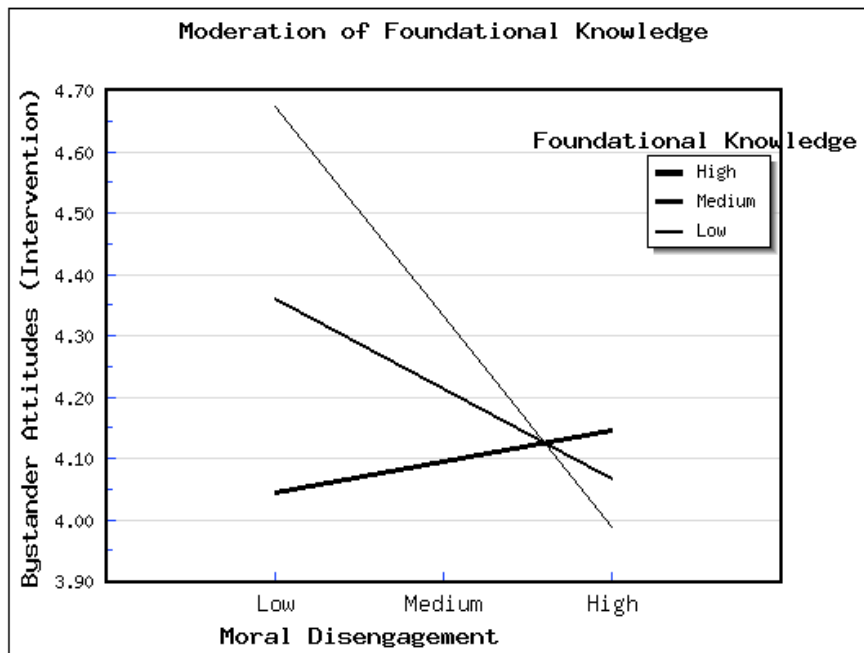
In exploring the standardized beta weights, it was revealed that the sexual assault programming messages were also uniquely predictive of bystander attitudes (intervention; see Figure 2). As well, there was a significant interaction effect between sexual assault programming messages and moral disengagement.

To map the interaction effect, a second ModGraph was used. The ModGraph revealed that foundational knowledge did have a moderating effect on moral disengagement, where those who had more knowledge surrounding alcohol involved consent also had lower moral disengagement and higher bystander scores.

Figure 2

The Moderating Effect of Moral Disengagement on Bystander Attitudes (Intervention) by Foundational Knowledge

ModGraph



Post-test hypotheses

Similar to the process at pre-test, post-test data were scanned for missing data. Following the same cut-off point as for the pre-test of 55 or more missing data points, three participants were not included in the following analysis. The sample size at immediate post-test was small ($n = 23$) and had an uneven distribution between groups (see Table 13), which made the use of parametric tests unsuitable for analysis (Pett, 2016).

Table 13

Group Frequencies Across Time Points

Time	Group 1	Group 2	Group 3
Pre-test	21	11	16
Post-test	9	5	9
2-month follow up	4	3	5

Note. Group 1 received bystander intervention training. Group 2 received foundational education and bystander intervention training. Group 3 did not receive any education.

Therefore, non-parametric tests were used for the following analyses. Furthermore, while the intention was to match participants across timepoints, the matching ID variable was not stable across timepoints as participants responses to the questions that generated the matching ID variable changed across timepoints. This issue made matching participants across timepoints impossible. As such, the decision was made to treat groups as independent rather than matched.

First, to determine whether groups significantly differed on key variables at pre-test, a Kruskal-Wallis test was conducted. At pre-test, there were no significant differences between groups on bystander scores, consent beliefs and behaviours, rape myth acceptance, moral disengagement, and sexual violence knowledge (see Table 14).

Table 14*Differences Between Groups on Key Variables at Pre-Test*

Variable	Mean Rank Group 1	Mean Rank Group 2	Mean Rank Group 3	<i>H</i>	<i>p</i>
Sexual Violence Knowledge	25.52	19.32	26.72	2.05	.36
Rape Myth Acceptance	27.57	23.00	21.50	1.88	.39
Campus Beliefs and Myths	25.79	24.18	23.03	.36	.84
Sexual Assault Programming Messages	31.07	24.00	16.22	10.32	.01
(Lack of) Perceived Behavioural Control	26.86	17.50	26.22	3.63	.16
Positive Attitudes Towards Establishing Consent	25.90	20.55	25.38	1.16	.56
Indirect Behavioural Approach to Consent	26.00	27.77	20.28	2.31	.32
Sexual Consent Norms	29.38	17.86	22.66	5.34	.07
Awareness and Discussion of Consent	23.60	23.50	26.38	.43	.81
Moral Disengagement	29.52	21.32	20.09	4.88	.09
Bystander Attitudes	24.00	20.18	28.12	2.15	.34
Bystander Attitudes (Intentions)	23.43	20.14	28.91	2.80	.25
Bystander Attitudes (Proactive)	27.12	21.23	23.31	1.47	.48

However, there was a significant difference between groups on subscale two of alcohol and consent knowledge (sexual assault programming messages), $H(2) = 10.32$, $p = .006$. Pairwise comparisons with adjusted p -values revealed a significant difference between groups 3 and 1 (p

=.004, $r = .757$), where group 1 had more supportive attitudes towards alcohol-involved consent than group 3.

Immediate Post-Test

At immediate post-test, it was predicted that group 1 and group 2 would have higher bystander scores, consent beliefs and behaviours, and lower rape myth acceptance than group 3. A Kruskal-Wallis test was conducted to compare differences between groups on these variables. This hypothesis was not supported as results indicated only one significant difference between groups on subscale four of sexual consent beliefs and behaviours (i.e., sexual consent norms), $H(2) = 6.34, p = .042$ (see Table 15).

Table 15

Differences Between Groups on Bystander Scores, Consent Beliefs and Behaviours, and Rape Myth Acceptance at Immediate Post-Test

Variable	Mean Rank Group 1	Mean Rank Group 2	Mean Rank Group 3	H	p
Rape Myth Acceptance	10.06	14.70	12.44	1.59	.45
(Lack of) Perceived Behavioural Control	12.39	10.30	12.56	.41	.82
Positive Attitudes Towards Establishing Consent	12.11	15.90	9.72	.71	.26
Indirect Behavioural Approach to Consent	13.06	10.80	11.61	.41	.82
Sexual Consent Norms	14.61	5.40	13.06	6.34	.04
Awareness and Discussion of Consent	9.50	12.40	14.28	2.27	.32
Bystander Attitudes	13.17	14.40	9.50	2.13	.35

Bystander Attitudes (Intentions)	11.22	12.40	12.56	.20	.91
Bystander Attitudes (Proactive)	14.72	14.70	7.78	5.83	.05

Pairwise comparisons with adjusted p -values indicated a significant difference between groups 2 and 1 ($p = .044$, $r = .655$), where group 1 had significantly higher scores on harmful consent norms than group 2.

It was also expected that group 2 would be higher in foundational knowledge than groups 3 and 1 and that foundational knowledge would be related to lower moral disengagement scores and higher bystander attitudes. However, this hypothesis was not supported as Kruskal-Wallis tests revealed no significant difference between groups on foundational knowledge or moral disengagement at immediate post-test (see Table 16).

Table 16

Differences Between Groups on Foundational Knowledge and Moral Disengagement at Immediate Post-Test

Variable	Mean Rank Group 1	Mean Rank Group 2	Mean Rank Group 3	H	p
Sexual Violence Knowledge	9.78	11.80	14.33	2.08	.35
Campus Beliefs and Myths	12.39	13.20	10.94	.41	.81
Sexual Assault Programming Messages	15.17	8.50	10.78	3.70	.16
Moral Disengagement	13.67	7.00	13.11	3.51	.17

Comparisons Over Time

Group 1. To explore whether there were significant changes in key variables from pre-test to post-test for group 1 (received BIT only), a series of Mann-Whitney tests were conducted (see Table 17).

Table 17

Group 1 Comparisons on Key Variables from Pre-Test to Post-Test

Variable	Mean Rank Pre-Test	Mean Rank Post-Test	<i>U</i>	<i>z</i>	<i>p</i>
Sexual Violence Knowledge	15.26	16.06	99.50	.23	.82
Rape Myth Acceptance	17.45	10.94	53.50	-1.87	.06
Campus Beliefs and Myths	16.38	13.44	76.00	-.84	.42
Sexual Assault Programming Messages	17.17	11.61	59.50	-1.60	.11
(Lack of) Perceived Behavioural Control	15.31	15.94	98.50	.18	.86
Positive Attitudes Towards Establishing Consent	14.57	17.67	114.00	.88	.40
Indirect Behavioural Approach to Consent	15.71	15.00	90.00	-.20	.86
Sexual Consent Norms	15.52	15.44	94.00	-.02	1.00
Awareness and Discussion of Consent	16.26	13.72	78.50	-.73	.48
Moral Disengagement	17.62	10.56	50.00	-2.02	.05
Bystander Attitudes	13.21	20.83	142.50	2.18	.03
Bystander Attitudes (Intervention)	14.21	18.50	121.50	1.22	.23
Bystander Attitudes (Proactive)	13.71	19.67	132.00	1.71	.09

Moral disengagement scores differed significantly between time 1 (Mean rank = 17.62) and time 2 (Mean rank = 10.56), $U = 50.00$, $z = -2.02$, $p = .045$, $r = -.37$, indicating that group 1 had significantly lower moral disengagement scores after the intervention in comparison to before the intervention. As well, bystander attitudes scores differed significantly between pre-test (Mean rank = 13.21) and post-test (Mean rank = 20.83), $U = 142.50$, $z = 2.18$, $p = .03$, $r = .40$, indicating that participants had significantly higher intentions to intervene after the intervention compared to before the intervention.

Mann-Whitney tests were conducted to explore whether moral disengagement and bystander attitude effects remained the same at 2-month follow-up from the pre-test. Results indicated that bystander attitudes scores differed significantly between post-test (Mean rank = 8.61) and two-month follow up (Mean rank = 3.38), $U = 3.50$, $z = -2.25$, $p = .02$, $r = -.62$ indicating that participants had significantly lower bystander intentions at two-month follow up in comparison to immediately post-intervention. While moral disengagement scores were higher at 2-month follow-up (Mean rank = 8.12) in comparison to post-test (Mean rank = 6.50), this difference was not statistically significant, $U = 22.50$, $z = .70$, $p = .50$, $r = .19$.

Group 2. To explore whether there were significant changes in key variables from pre-test to post-test for group 2 (received foundational education and BIT), a series of Mann-Whitney tests were conducted (see Table 18).

Table 18*Group 2 Comparisons on Key Variables from Pre-Test to Post-Test*

Variable	Mean Rank Pre-Test	Mean Rank Post-Test	<i>U</i>	<i>z</i>	<i>p</i>
Sexual Violence Knowledge	6.91	12.00	45.00	2.02	.052
Rape Myth Acceptance	8.36	8.80	29.00	.17	.91
Campus Beliefs and Myths	8.50	8.50	27.50	.00	1.00
Sexual Assault Programming Messages	10.82	3.40	2.00	-2.92	.002
(Lack of) Perceived Behavioural Control	8.09	9.40	32.00	.51	.66
Positive Attitudes Towards Establishing Consent	6.59	12.70	48.50	2.39	.01
Indirect Behavioural Approach to Consent	9.05	7.30	21.50	-.68	.51
Sexual Consent Norms	9.77	5.70	13.50	-1.60	.12
Awareness and Discussion of Consent	8.23	9.10	30.50	.34	.74
Moral Disengagement	10.00	5.20	11.00	-1.88	.07
Bystander Attitudes	6.86	12.10	45.50	2.05	.04
Bystander Attitudes (Intervention)	7.55	10.60	38.00	1.20	.27
Bystander Attitudes (Proactive)	7.18	11.40	42.00	1.66	.12

Alcohol and consent knowledge subscale two scores (sexual assault programming messages) differed significantly between pre-test (Mean rank = 10.82) and post-test (Mean rank = 3.40), indicating that participants had better knowledge of alcohol involved consent after the intervention in comparison to before the intervention, $U = 2.00$, $z = -2.921$, $p = .002$, $r = -.73$.

Sexual consent beliefs and behaviours subscale two scores (positive attitudes towards establishing consent) differed significantly between pre-test (Mean rank = 6.59) and post-test (Mean rank = 12.70), indicating that participants had significantly more positive attitudes towards establishing consent after the intervention in comparison to before the intervention, $U = 48.50, z = 2.39, p = .01, r = .60$. Last, overall bystander attitude scores differed significantly between pre-test (Mean rank = 6.86) and post-test (Mean rank = 12.10) indicating that participants had significantly greater intentions to intervene after the intervention in comparison to before the intervention, $U = 45.50, z = 2.05, p = .04, r = .51$.

To explore whether alcohol and consent knowledge, sexual consent attitudes, bystander attitude effects remained the same at 2-month follow-up from the post-test for group 2, Mann-Whitney tests were conducted. There was no significant difference between 2-month follow-up (Mean rank = 4.67) and post-test (Mean rank = 4.40) on alcohol and consent knowledge (sexual assault programming messages), $U = 8.00, z = .16, p = 1.00, r = .06$. There was also no significant difference between 2-month follow up (Mean rank = 4.00) and post-test (Mean rank = 4.80) on positive attitudes towards establishing consent, $U = 6.00, z = -.45, p = .79, r = -.16$. Last, there was no significant difference on bystander attitudes at 2-month follow-up (Mean rank = 3.00) in comparison to pre-test (Mean rank = 5.40), $U = 3.00, z = -1.35, p = .25, r = -.48$.

Group 3. It was hypothesized that group 3's scores would remain stable across timepoints. To explore whether there were significant changes in key variables from pre-test to post-test for group 3, a series of Kruskal-Wallis tests were conducted. This hypothesis was supported as there were no significant differences on any key variables across time points for group 3 (see Table 19).

Table 19*Group 3 Comparisons Across Time Points on Key Variables*

Variable	Pre-Test Mean Rank	Post-Test Mean Rank	2-Month Follow Up Mean Rank	<i>H</i>	<i>p</i>
Sexual Violence Knowledge	12.28	17.89	21.50	5.30	.07
Rape Myth Acceptance	16.78	16.28	10.00	2.41	.30
Campus Beliefs and Myths	17.19	15.78	9.60	2.87	.24
Sexual Assault Programming Messages	16.41	13.78	15.70	.52	.77
(Lack of) Perceived Behavioural Control	15.75	16.06	13.70	.26	.88
Positive Attitudes Towards Establishing Consent	15.31	14.72	17.50	.34	.85
Indirect Behavioural Approach to Consent	17.66	14.78	9.90	3.08	.22
Sexual Consent Norms	15.62	17.00	12.40	.89	.64
Awareness and Discussion of Consent	13.84	16.06	19.80	1.81	.41
Moral Disengagement	17.44	16.61	7.30	5.27	.07
Bystander Attitudes	14.94	14.94	18.30	.61	.74
Bystander Attitudes (Intentions)	13.75	16.56	19.20	1.66	.44
Bystander Attitudes (Proactive)	15.75	14.06	17.30	.47	.79

Discussion

This study represents one of the first online randomized controlled trials that explored whether foundational education on consent and sexual violence improved the efficacy of BIT

within university athletics. In particular, this study sought to explore the following questions: (1) Can moral disengagement and situational action theory be used to explain bystander attitudes?; and (2) Does foundational education that targets moral disengagement and situational factors enhance the efficacy of BIT in increasing prosocial bystander attitudes for men and women university athletes? Despite the aim to explore these questions, difficulties related to participant engagement and intervention implementation made the intent to rigorously investigate these questions a significant challenge. Therefore, this section begins with a discussion surrounding the limited analyses conducted. The discussion regarding the analyses is then followed by a reflection discussion of the “lessons learned” from the challenges encountered in this study and potential solutions that could be used to mitigate these challenges in future online evaluations.

Analyses Discussion

Women university athletes’ attitudes, beliefs, and behaviours regarding sexual violence have been relatively understudied as research surrounding athletics and sexual violence has primarily targeted men (e.g., Crosset, 2016; Murnen & Kohlman, 2007; Young et al., 2017). Consequently, the present study sought to explore differences between men and women university athletes on key factors related to sexual violence prevention. Pre-test correlational analyses revealed some expected similarities in the relationships between key variables for men and women. For example, greater rape myth acceptance was significantly correlated with greater acceptance of alcohol involved consent and moral disengagement, and lower bystander attitudes for both men and women. As well, there was a significant correlation between the acceptance of alcohol involved consent and moral disengagement for men and women. For the measure of alcohol involved consent, those who score higher have less knowledge and more permissive attitudes towards alcohol-involved consent, indicating that those with greater moral

disengagement also had less knowledge and more permissive attitudes surrounding alcohol-involved consent.

However, the relationship between moral disengagement and key variables differed between men and women. For instance, the relationship between higher rape myth acceptance and greater moral disengagement was stronger for men than for women. Furthermore, greater moral disengagement was significantly correlated with having lower sexual violence knowledge and less positive attitudes towards bystander intervention for men but not for women. Also, having less bystander intentions were significantly correlated with greater acceptance of alcohol-involved consent for men but not women. This evidence suggests that moral disengagement may work differently for men in comparison to women. Indeed, a survey of college students on moral disengagement and ethical decision-making found that men were more likely to morally disengage than women (Detert et al., 2008). Additionally, Detert et al. (2008) found that those with more empathy (i.e., those who were able to take the perspective of others) were less likely to morally disengage. In particular, women may have more empathy for victims than men regarding sexually violent situations because women are statistically more likely to be victims of sexual violence than men (Statistics Canada, 2017). Indeed, in a survey with undergraduate students, those who had been victimized in the past had greater empathy for rape victims than those who did not (Osman, 2014). Furthermore, women who had been victims reported the strongest empathy for rape victims in comparison to victims who were men or non-victims (Osman, 2014). As such, given the increased likelihood that women have been victims of some form of sexual violence in comparison to men, it may be that women are less likely to use moral disengagement mechanisms surrounding sexual violence and prosocial bystander behaviour.

It was expected that gender differences noted in past literature related to bystander attitudes and rape myth acceptance would be reproduced, where men tend to report greater rape myth acceptance than women (Arnowitz et al., 2012) and women report greater bystander attitudes than men (Banyard, 2008; Exner & Cummings, 2011). Consistent with past literature, in the present study, men had significantly higher rape myth acceptance scores than women (Arnowitz et al., 2012). Men also had significantly higher scores on campus beliefs and myths related to alcohol-involved consent than women. This finding is also in line with past literature where men reported greater endorsement of campus beliefs and myths than women (Ward et al., 2012). However, findings from previous research regarding differences between university athletes on rape myth acceptance reveal less distinct differences between men and women (Navarro & Tewksbury, 2019; Sawyer et al., 2002). For example, in surveys with university athletes on rape myth acceptance, Sawyer et al. (2002) found that athlete men scored higher than athlete women on rape myth acceptance, while Navarro and Tewksbury (2019) found no significant differences between men and women university athletes. Navarro and Tewksbury (2019) suggest that there were no significant differences between men and women in their study as participants in their study were Division I athletes, which is a highly competitive stream of university athletics. Therefore, Navarro and Tewksbury (2019) posit that this high level of competition is related to high levels of self-esteem and confidence, which may promote attitudes that sexual violence does not happen to women at their level of athletics. Navarro and Tewksbury's (2019) assertion may explain why differences were found between men and women athletes in the present study, as Canadian university athletics have been noted to be less intense or competitive than university athletics in the United States (Benrimoh & Smith, 2020).

In contrast to previous literature, there was no significant difference between men and women on bystander attitudes (Banyard, 2008; Exner & Cummings, 2011). Given that women consistently report higher scores than men on bystander attitudes, it is likely that the sample size was too small to detect differences that do exist in the wider population. There were only 71 participants and an especially low group of men ($n = 19$). Indeed, a power analysis indicated that there was over a 50% chance of failing to detect differences that do exist between men and women on bystander attitudes. Therefore, it is likely that there was not enough statistical power to detect this difference. It is also possible that there were no gender differences between men and women athletes. It may be that previous exposure to campus messaging surrounding being a prosocial bystander towards sexual violence prevention made an impact with men who are athletes, which resulted in no differences between men and women athletes on bystander attitudes. University athletes at this campus had been directly involved in a campaign (i.e., React to Sexual Assault) that shared messages on preventing sexual violence in past years. However, this campaign was not evaluated for its effect on bystander attitudes, so it is not known whether university athletes experienced attitudinal changes related to this campaign. Furthermore, it is not known whether the athletes that took part in that campaign were the same athletes who participated in the present evaluation. However, it is possible that the presence of a campaign such as this within the university athletic program created positive impacts on bystander attitudes for university athletes.

Following situational action theory (Wikstrom, 2005), it was expected that situation-related factors would be related to attitudes and behaviours regarding sexual violence. Given the newfound freedoms that often come with experiencing university life for the first time (Lindgren et al., 2009), it was expected that younger and lower-year students would score higher in moral

disengagement than older, upper-year students. Furthermore, as students have identified university environments as promoting alcohol use and these environments where excessive drinking is encouraged have been associated with fostering sexually violent situations (Henderson et al., 2018; Lorenz & Ullman, 2006), it was expected that those who reported higher drinking levels would have higher moral disengagement than those who did not. These hypotheses were not supported; however, it may be that situational factors have a small effect on moral disengagement. As Field (2013) notes that a much larger sample size would be needed to detect a small effect in regression analyses, it is possible that the impact that situational factors such as age, year of study, and alcohol use have on moral disengagement were not detected. Another possible explanation is that students were not engaging in high-risk patterns, such as heavy drinking that often coincides with experiencing university for the first time, due to the COVID-19 pandemic. For instance, in surveying university students about their drinking during the COVID-19 pandemic over three semesters and comparing their findings to national trends on college drinking, Jaffe et al. (2021) found that college students drank less than what the national trends would suggest during the pandemic and not more. Consequently, situational factors that may be related to moral disengagement for university students may not have occurred when this study took place.

It was also expected that alcohol use would significantly predict bystander attitudes and opportunities. This hypothesis was partially supported as the frequency of alcohol use was found to significantly predict attitudes towards proactive bystander-related opportunities (e.g., intentions to attend a class on sexual violence). Specifically, those who reported less drinking also reported more positive intentions towards proactive bystander behaviours. This finding aligns with situational action theory, which suggests that situational factors (e.g., drinking

environments) can influence whether crimes are more likely to occur (Wikstrom, 2005).

Likewise, past research with university students found that alcohol frequency use predicted intentions to intervene for men but not women (Fleming & Wiersma-Mosley, 2015). However, in the present study, the frequency of drinking alcohol did not predict intentions to intervene in situations of sexual violence but rather participants' intentions to engage in proactive bystander activities (e.g., attending a class on sexual violence). It may be that drinking frequency is related to being in drinking environments, which tend to normalize sexual violence (Abbey, 2002; Testa & Livingston, 1999). Indeed, in interviews surrounding bystander intervention and university drinking environments, university students reported believing that alcohol use was a part of being in university and that sexual encounters while drinking were just a part of the university environment (Pugh et al., 2016). In particular, participants described how alcohol-involved environments (i.e., parties or clubs) were used to seek out sexual partners, which lead them to discount situations that may be considered worthy of intervention in other environments (Pugh et al., 2016). Consequently, it is possible that people who drink more may be less able to recognize that sexual violence is a significant issue where they would need to engage in proactive behaviour to prevent it compared to those who drink less.

It was predicted that foundational knowledge (i.e., sexual violence and alcohol and consent knowledge) would be significant predictors for bystander attitudes and opportunities above and beyond what was accounted for by gender. This hypothesis was partially supported as foundational knowledge was a significant predictor of bystander intervention attitudes, but not bystander opportunities. Specifically, sexual violence knowledge and the sexual assault programming messages were unique predictors of bystander attitudes, where having stronger sexual violence knowledge and understanding of sexual assault programming messages related

to alcohol-involved consent were associated with higher bystander attitude scores. This finding is consistent with previous research, which found that programs that incorporated foundational education were significantly associated with reduced sexual violence perpetration (Rothman & Silverman, 2007) and improved bystander scores (Salazar et al., 2019). It is possible that foundational education does not predict bystander opportunities as to date this is one of the first explorations of the predictive value of foundational education. However, it is reasonable to assume that, if individuals had a better understanding of sexual violence, they would be able to recognize a greater number of intervention opportunities than those without foundational education. It may be more likely foundational knowledge was not a significant predictor of bystander opportunities as participants were likely not experiencing opportunities to intervene at the same rate as they normally would have had there not been a global pandemic where measures to stay at home were in place.

Additionally, it was hypothesized that having less foundational knowledge would be associated with greater rape myth acceptance above and beyond what is accounted for by gender. Gender was significant at the initial step and indicated that being a man was a significant predictor of rape myth acceptance. However, following the addition of foundational knowledge predictors to the model, gender was no longer significant. As such, this hypothesis was partially supported as campus beliefs and myths surrounding alcohol-involved consent was a significant predictor of rape myth acceptance. The campus beliefs and myths subscale measures knowledge of alcohol-involved consent. Those who score higher on this measure have less knowledge and more permissive attitudes towards alcohol-involved consent. As such, this finding suggests that those who hold more permissive attitudes towards alcohol-involved consent have greater rape myth acceptance. This finding aligns with past research, which consistently links alcohol use

with sexual violence (Abbey, 2002; Boyle & Walker, 2016; Testa & Livingston, 1999).

Consequently, education on alcohol use and consent may be crucial in preventing attitudes that support sexual violence particularly with university students and those involved in athletic programs.

It was also predicted that foundational knowledge would be a moderator of moral disengagement, where foundational knowledge would be related to moral disengagement, which would be associated with higher bystander attitudes. This hypothesis was partially supported as there was a significant interaction effect between knowledge of sexual assault programming messages and moral disengagement. Foundational knowledge (sexual assault programming messages) acted as a moderator of moral disengagement. Having stronger foundational knowledge appeared to buffer against the negative relationship between moral disengagement and bystander attitudes. Consequently, it may be that foundational education is one mechanism that could help to reduce moral disengagement and improve bystander attitudes and behaviours.

This finding is novel, as sexual violence research has only explored the relationship between moral disengagement and sexual harassment to date (Page et al., 2016) and had not explored the relationship between moral disengagement and sexual violence prevention. However, these results corroborate past research findings in different areas, which found that the use of foundational education helped prevent moral disengagement related to violent extremism (Aly et al., 2014) and antisocial behaviour (Bustamante & Chaux, 2014). This evidence suggests that foundational education may make it more challenging for individuals to morally disengage as foundational education can explicitly target mechanisms that perpetrators use to excuse sexual violence. For example, if athletes are taught drunk partners cannot consent, it would be particularly challenging to morally disengage by shifting the blame from themselves/others to the

victim (e.g., they were drunk, they did not say “no”). Therefore, the theory of moral disengagement may be a valuable theory to apply to sexual violence prevention programs, where moral disengagement mechanisms towards sexual violence are targeted to inhibit these mechanisms and boost the effects of BIT.

At immediate post-test, it was predicted that group 1 and group 2 (the intervention groups) would have higher bystander scores, consent beliefs and behaviours, and lower rape myth acceptance than group 3 (the control group). Results indicated only one significant difference between groups 1 and 2 on subscale four of sexual consent beliefs and behaviours (i.e., sexual consent norms). Group 1 had significantly higher scores on harmful consent norms than group 2. Group 2 received the extra modules on sexual violence and sexual consent, while group 1 only received a module on bystander intervention. This evidence suggests that the module did help to shift attitudes where participants in group 2 were less likely to endorse harmful sexual consent norms. However, the control group (who received none of the modules) did not significantly differ from Group 2.

It was also expected that group 2 would be higher in foundational knowledge than groups 3 and 1 and that foundational knowledge would be related to lower moral disengagement scores and higher bystander attitudes. However, this hypothesis was not supported as there were no significant differences between groups on foundational knowledge, moral disengagement, or bystander attitudes at immediate post-test. It is possible that there was not enough power to detect differences that did exist between groups due to the very small sample sizes. Comparisons across time provide one line of evidence that there may not have been enough power to detect differences, given that expected changes were experienced across time within groups.

Comparisons across time revealed significant changes for groups 1 and 2. In exploring whether there were significant changes in key variables from pre-test to post-test for group 1, it was found that moral disengagement scores differed significantly between pre-test and post-test. This finding indicated that group 1 had significantly lower moral disengagement scores after the intervention than before the intervention. Furthermore, bystander attitudes scores differed significantly between pre-test and post-test, indicating that participants had significantly higher intentions to intervene after the intervention than before. Participant scores moved in the expected direction for group 1 (who only received BIT).

However, it was evident that the effects of BIT were not long-lasting, as, at 2-month follow-up, participants had significantly lower scores on bystander intentions compared to immediate post-test. While moral disengagement scores increased at 2-month follow-up, this difference was not statistically significant. These findings are consistent with past evaluations of bystander intervention programs where effects of the intervention (i.e., improved intentions to intervene) were evident at immediate post-test but then faded in the following months (Exner-Cortens & Cummings, 2017; DeGue et al., 2014; Hines & Reed, 2017). Furthermore, this group only received one module on bystander intervention, and the length of programming received was short (i.e., approximately 20 minutes long). In their review of sexual violence prevention programs, DeGue et al. (2014) note that more effective programs tend to include multiple intervention components and are, on average, two to three times longer than less effective programs. Consequently, the intervention group 1 received likely was not long or comprehensive enough to produce lasting effects. The impact of a longer and more comprehensive intervention was apparent in the program effects experienced by group 2.

For group 2, sexual assault programming messages, positive attitudes towards establishing consent, and bystander intervention intentions differed significantly between pre-test and post-test. Participants had better knowledge of alcohol-involved consent, more positive attitudes towards establishing consent, and greater intentions towards bystander intervention after the intervention than before the intervention. Furthermore, these effects were sustained at two-month follow-up. This finding suggests that foundational education may be an important component to longer-lasting change towards sexual violence prevention and fits with DeGue et al.'s (2014) finding that longer and more comprehensive programs tend to be more effective than shorter, less comprehensive programs.

It was expected that intervention effects would be more pronounced for group 2 in comparison to other groups, given the additional foundational education this group received. While the intervention for this group appears to be more effective as there were more changes on key variables for participants in group 2 in comparison to group 1 and group 3 over time, as previously mentioned, there were no significant differences between groups on these variables. It may be that the sample sizes were too small to achieve enough power to detect differences that did exist between the groups. Furthermore, the small sample sizes coupled with the lower power inherent in non-parametric tests compared to parametric tests may have further increased the likelihood of making a Type II error (Grech & Calleja, 2018). Nonetheless, the sustained change over time for group 2 does provide some evidence that the intervention that included foundational education produced desired effects towards sexual violence prevention.

It was hypothesized that group 3's scores would remain the same across time-points as this group did not receive any intervention programming. This hypothesis was supported as there were no significant differences on any key variables between pre-test and post-test for group 3.

The fact that group 3 did not change over time is a second line of evidence that knowledge and attitudinal changes experienced by participants in group 1 and group 2 were attributable to the intervention programs and not to other influences. While some group differences were able to be explored, the low participation rates made running certain analyses impossible, and the analyses that were conducted had low power to detect differences. The following section discusses factors that may have been related to participation and engagement in the study, such as the COVID-19 pandemic.

Reflections and Lessons Learned

One reason for low participation rates may be due to the impact of COVID-19. On March 11, 2020, the World Health Organization declared COVID-19 a pandemic (Regina Leader-Post, 2021). The first case of COVID-19 arrived in Saskatchewan on March 12, 2020, and a state of emergency was declared in Saskatchewan on March 18, 2020, and restrictions were placed on work and social life (Government of Saskatchewan, 2021). On March 20, 2020, in-class learning was suspended, and as of June 2021, in-class learning had not resumed on the USask campus.

While USask maintained online classes, adverse effects have been experienced by students as a result of the pandemic. For example, in a survey with university students on their wellbeing during the pandemic, students reported fearing for their health and the health of their friends and family, difficulty sleeping, fewer social interactions, and worrying about their academics (Son et al., 2020). Similarly, in a comparison of pre-pandemic students and students in university during the pandemic, students in university during the pandemic reported significantly greater depressive symptoms, anger, mania, alcohol use, and stress (Charles et al., 2021). It may be that USask students experienced similar challenges, especially nearly a year into living during a pandemic, which is when this project took place.

On top of the mental health issues identified by students, students also reported challenges with online learning. In a survey of university students about the effects of online learning during COVID-19, students reported feeling less connected to their peers, feeling less motivated to complete online assignments, putting less time and effort into working on their assignments, and attending fewer classes in comparison to attending classes before COVID-19 and online learning (Boardman et al., 2020). It is possible that USask students had similar experiences with online learning. Given that participating in this study may have felt similar to taking an online class and completing an assignment (particularly for those assigned to intervention groups), it is possible that student participants felt a similar low motivation and desire to spend time and expend effort on this study. The COVID-19 pandemic may also have impacted other areas this study was posed to explore, such as bystander behaviours.

Potentially related to the COVID-19 pandemic (e.g., stay at home measures), participants may have had fewer opportunities to engage in bystander behaviours. However, even at pre-test, where participants were asked to think about the previous two years (which included pre-pandemic time), participants reported relatively few opportunities to engage in bystander behaviours noted in the bystander behaviour measure. For example, no participants indicated that they had ever had an opportunity to help a stranger in a dorm room. Furthermore, little to no participants reported that they had the opportunity to go with a friend to a police department to report, tell an RA about a rape case, or confront a friend who was planning to give someone alcohol to get sex or who was hooking up with someone passed out (see Table 1). However, given that the largest percentage of participants were first-year students (36.6%), they may have never had the opportunity to be in a dorm room or talk to an RA as the university had shut-down to student residences. Further, given that the bystander measures have primarily been developed

through research conducted with universities in the United States (e.g., Banyard et al., 2014; McMahon et al., 2014), the present items may not directly translate to bystander opportunities in Canadian contexts. McMahon et al. (2017) note that it would be valuable for future research to investigate whether there is a “core” group of bystander behaviours that are relevant across universities. Further, McMahon et al. (2017) suggest that it may be important to include open-ended questions regarding bystander behaviours to capture opportunities that may be unique to particular universities. Consequently, it is possible that the provided items did not translate to opportunities students do have in the Canadian university context.

Lower levels of bystander opportunities on these items that tend to be considered “more serious” are consistent with Stout’s (1991) notion of the continuum of sexual violence, where Stout notes that actions at the end of the continuum (e.g., rape) tend to occur less than actions at the start (e.g., sexist language, catcalling, harassment). Indeed, a larger number of participants reported that they had the opportunity to intervene when a friend made a sexist joke or in a catcalling situation. Importantly, Stout (1991) argues that actions at the start of the continuum (e.g., catcalling) create a culture where actions at the end of the continuum (e.g., rape) are more easily justified. Given that these situations seem to be encountered more often by students, it may be valuable for sexual violence prevention programs to spend a larger proportion of time teaching students how to intervene against actions at the start of the continuum. Nonetheless, there were challenges related to measuring bystander behaviours in this study that may have been an artifact of a global pandemic and/or issues related to the measure.

Another significant challenge in this study was intervention implementation. In discussing violence prevention programs, Orchowski (2019) suggests that programs may have mixed findings because they failed to fully address program implementation. In particular,

Orchowski (2019) shares that prevention programs may only reach the surface level of a community when a strategic plan to target program resistance within the community is not in place. Given that student athletes have been highlighted as an at-risk group for sexual violence (Crosset, 2016; Young et al., 2017), it is possible that there was high resistance to programs like this for student participants within this community. As such, strategic planning to produce successful program implementation should have been more carefully considered.

There are several factors regarding the community climate that are related to the successful implementation of a program. First, Noonan et al. (2009) note that a good environment for implementation includes evident support of the program from leaders within the community. This project did have support from staff leaders within the athletic community, who were committed to focusing on sexual violence prevention. In fact, staff had already completed the intervention program before encouraging student athletes to participate. Furthermore, communication about the study came from senior leaders and coaches who actively tried to encourage athletes to participate. However, the support of senior leaders and coaches may not have been expressed as clearly to athletes as it may have been under regular circumstances, due to restrictions in social interactions (e.g., limitations on practices and gathering in person).

Second, Noonan et al. (2009) identify that the objectives of the intervention program should be transparent to participants. While it may be obvious that the program's goal was to prevent sexual violence, there could have been increased clarity surrounding why athletes should participate in the program coming directly from senior leaders. The study recruitment notification that went out to student athletes framed the study objective as that taking the program would establish student athletes as highly visible leaders who could take up the mantle to prevent sexual violence on campus. However, senior leaders did not directly support this

message but rather encouraged athletes to participate as an important part of their continuing personal development. These differing messages surrounding intervention program objectives may have affected the successful implementation of the program. Furthermore, while the program was not mandatory for student athletes, leaders suggested that they intended to make the intervention program mandatory in future years. Had this information been communicated to student athletes, they may have been more likely to participate in the study, given that they may be required to take the intervention program in the future. Ultimately, clearer messaging about program objectives may have led to a more successful implementation of the intervention program and study.

Third, Noonan et al. (2009) indicate that there should be sufficient training and resources for using the intervention program. There was an assumption that the surveys and program intervention were self-explanatory; however, that may not have been the case. Running a training session with interested or potential participants may have been beneficial, particularly if participants encountered any issues accessing the intervention program or surveys or returning to them if they had decided to take a break. Running a training session may have reduced participant attrition if they knew how to address any challenges they encountered and would help ensure that they would be equipped to do so rather than opting to exit the study. Furthermore, more sufficient resources could have been provided to participants regarding the time to participate. As previously noted, participants may have been feeling strain related to the COVID-19 pandemic and may have already been struggling to complete their coursework and athletic training. Had the study and intervention program been able to take the place of one of their responsibilities rather than adding to them, more athletes may have had the capacity and desire to participate.

Fourth, Noonan et al. (2009) note that participants should have the opportunity to obtain support regarding the use of the intervention program. While participants were encouraged through email to contact the researcher if they were having any issues with the study and intervention program, this encouragement may not have been sufficient. Given that participants had never met the researcher, they may not have felt comfortable contacting the researcher for assistance. Indeed, throughout the study, only one participant contacted the researcher with questions. It may be that other participants encountered challenges but did not contact the researcher for assistance and ended up dropping off from the study instead. Ultimately, implementation issues may be one explanation for low participation rates and the high rate of participant attrition that occurred throughout the study.

Another critical aspect of program implementation that should have been more thoroughly considered was participant engagement. In the initial conception for this project, the intention was to run an in-person program; however, the presence of a global pandemic made that intention impossible. Although we adapted to this change by opting to evaluate an online program, online educational environments are inherently different from in-person ones, particularly in terms of participant engagement, and this factor should have been regarded more carefully. One aspect that was used to encourage participation was incentives. Incentives in the form of \$5.00 Starbucks gift cards were used in this project. The intention was to follow best practices for incentives as laid out by Dillman et al. (2014), who indicate to follow the principles of social exchange theory (Cropanzano & Mitchell, 2005). Social exchange theory suggests that “social exchange involves a series of interactions that generate obligations” (Cropanzo & Mitchell, 2005, p. 874). As such, Dillman et al. (2014) note that research incentives should be provided before a study is completed by participants rather than after. Dillman et al. (2014)

suggest that providing incentives at the onset of a study builds trust with participants and serves to encourage reciprocity in the study.

The current study sought to follow Dillman et al.'s (2014) best practices; however, this was challenging due to the online environment and university incentive guidelines. University guidelines required maintaining a list of participants' personal information (i.e., name and address) who had received incentives. Consequently, rather than instantly receiving their gift card at the start of the project, participants had to enter their information first, which was then recorded. Following that, participants would be sent a gift card. In some cases, participants may have completed the first part of the study prior to receiving their gift card. As such, it is likely that the notion of reciprocity was not activated for participants, given that they did not receive the gift cards at the intended time. Had the incentive process worked as intended, the notion of reciprocity should have been engaged, and this may have resulted in less participant attrition throughout the study.

Additionally, having to record participant personal information may have made participants less likely to want to participate. While it was made clear to participants that personal information was kept entirely separate from participant data, participants may have had concerns that their data would become identifiable by leaving their personal information. These challenges may have been avoided if the project had been able to be conducted in person. In-person research may have made it easier to build trust with participants and address any concerns about the confidentiality of their data. As well, if conducted in-person, participants would have likely been able to enter their information on a sign-in sheet and receive a gift card before participating in the study; therefore, better following social exchange theory and allowing for the

opportunity for reciprocity. In addition to the challenges related to providing incentives online, there were also challenges related to delivering a sexual violence prevention intervention online.

The intervention program was a similar format to a Massive Open Online Course (MOOC) format. Consistent with the high attrition rates in this project, MOOCs have been reported to have completion rates lower than 10% (Gütl et al., 2014). It should be noted that research with undergraduate students surrounding MOOC completion found that students who completed a MOOC scored higher in self-regulated learning and self-motivation than those who did not (Reparaz et al., 2020). As research has identified student learning challenges associated with the COVID-19 pandemic (Boardman et al., 2020), participants in this course may have had even lower self-regulated learning and self-motivation levels than they usually would have. Nonetheless, aspects related to participant engagement in online education should be taken into account.

Researchers have explored why there are such high attrition rates in MOOCs and have provided several solutions to mitigate this problem (Angelino et al., 2007; Gütl et al., 2014; Sunar et al., 2017). These solutions centre around increased instructor-student and student-student interactions (e.g., instructors introducing themselves via video, contacting students through phone calls, and building student learning communities; Angelino et al., 2007; Sunar et al., 2017). As previously noted, participants' only communication with the instructor (or researcher in this case) was through email. A more concerted effort to have a face-to-face virtual introduction of the researcher (e.g., through a taped video or video conferencing) with participants may have helped build rapport and foster engagement with the intervention program for participants.

Likewise, creating opportunities for participants who received the intervention program to interact with each other may be especially important for enhancing participant engagement. For instance, in conducting a social network analysis of nearly 10,000 MOOC learners, Sunar et al. (2017) found that those who followed and interacted with another MOOC learner were significantly more likely to complete the course than those who did not. As such, Sunar et al. (2017) and Angelino et al. (2007) recommend providing a discussion board or creating learning communities within the MOOC to foster participant engagement.

In particular, discussion groups may have been a valuable addition to the intervention program and may have also helped to foster communication and further learning between peers about program content. In fact, in evaluating a program focused on using discussion groups surrounding sexual violence prevention (i.e., Coaching Boys into Men [CBIM]) with high school athletes), Miller et al. (2012) found significant improvements in bystander intentions, recognition of abusive behaviour, and bystander behaviours for intervention participants in comparison to control group participants. CBIM is grounded in social norms theory, which suggests that one's behaviour is influenced by the perceptions and behaviours of peers (Miller et al., 2012). Therefore, having discussion groups may have helped foster participant engagement and improve group norms surrounding the prevention of sexual violence.

The perception of peers may be especially influential for men in university athletics. For instance, in surveying high school students on gender equity, rape myth acceptance, and peer support of violence, Bogen et al. (2020) found that boy athletes had lower scores on gender equity and higher scores on rape myth acceptance and peer support of violence than girl athletes and non-athletes. As well, Warren et al. (2015) found that peer support of abuse and masculine gender norms were associated with the perpetration of sexual assault. Indeed, masculine gender

norms may be another important factor to consider that may be related to peer support of abuse, especially for athletes who are men. In their meta-analysis of athletic participation, fraternity membership, and sexual aggression, Murnan and Kohlman (2007) found that hypermasculinity was the strongest differentiating factor between men who were athletes or fraternity members and those who were not. Considering ways of targeting peer perceptions and masculine gender norms may be particularly important in promoting sexual violence prevention for men who are university athletes.

While participation rates were low in general, they were especially low for men. Overall, approximately 18% of all university athletes at the university participated; however, of athletes who were men, only 7.95% participated. The low participation of men in sexual violence prevention programs is not a unique challenge to this study and has been well-documented (Newlands & O'Donohue, 2016; Rich et al., 2010). In surveying college men's attitudes towards sexual violence prevention education using open-ended questions, Rich et al. (2010) found that men were not interested in these programs due to a lack of personal relevance and a fear of being targeted as perpetrators. However, at the same time, the majority reported feeling supportive of men who volunteered in sexual violence prevention programs and embraced the masculine role of being protective of women (Rich et al., 2010). Interestingly, men in this study preferred a mixed-gender approach to prevention programs and indicated that they felt this environment would be less likely to feel like they were being targeted as perpetrators (Rich et al., 2020). This evidence suggests that sexual violence prevention educators need to work to increase personal relevance and direct men's interest in protecting women towards prevention efforts, such as being an effective bystander. Indeed, Flood (2019) notes that men who become interested in sexual violence prevention have some sort of "sensitizing experience," which increases the

personal relevance of sexual violence for them (p. 139). Flood (2019) indicates that one of the most influential sensitizing experiences is hearing the stories of survivors who are women.

Rather than having women share traumatic experiences to encourage engagement from men, sensitizing experiences could potentially be achieved through sharing media stories of prominent cases of sexual violence. The BITB® program already does this; though, it is used as a teaching tool to understand the many opportunities bystanders have in preventing sexual violence and coming up with ways bystanders could intervene in situations of sexual violence (Banyard et al., 2004). Instead, the sharing of a prominent media story could be used as a sensitizing experience to increase personal relevance and garner men's initial engagement in sexual violence intervention programs. Educators should also pay increased attention to the atmosphere they create and actively work towards relaying that everyone has a role to play in sexual violence prevention rather than singling out men in their efforts.

Despite men advocating for mixed-gender programs, evidence suggests that gender-specific programs may be more promising than mixed-gender programs (Newlands & O'Donahue, 2016; Piccigallo et al., 2012). For instance, Newlands and O'Donahue's (2016) review of sexual violence prevention on university campuses found that gender-specific interventions may be more effective than mixed-gender programs. Newlands and O'Donahue (2016) note that these more specific programs may be more effective given that only the information that is most relevant to the targeted gender can be included. Consequently, no time is wasted (as it may be in a mixed-gender program) on information that may be considered irrelevant to participants.

While gender-specific programs have been found to be more effective (Newlands & O'Donahue, 2016), it may be how men are approached for the program and what the program

atmosphere is that are the factors that encourage men to participate rather than the gender-specific aspect of the program. Indeed, Piccigallo et al. (2012) interviewed college men involved in sexual violence prevention programs for men to better understand why they got involved in these groups and found that the approach of the program and the person who recruited them impacted their decision to participate. Men noted the importance of a program that approached men as potential helpers rather than perpetrators and indicated feeling less defensive when this approach was used by programs (Piccigallo et al., 2012). Additionally, men reported that it was important for the person who approached them to be another man and suggested that they would feel more interested and comfortable conversing with a man than a woman. Furthermore, men indicated the importance of seeing influential peers that were men taking part in the program (Piccigallo et al., 2012).

The intervention program used in the current study was a mixed-gender program in the sense that all student members of the athletic community were approached to participate and not just men. Additionally, the program's premise was to approach men as potential helpers and leaders in the fight against sexual violence rather than perpetrators. However, given Piccigallo et al.'s (2012) finding, it may be necessary to identify leaders in the athletic community that were men and to engage them first so that they could work to engage their peers. This strategy is employed by another bystander intervention program (i.e., Green Dot Bystander Intervention), which has demonstrated promising results in reducing rates of sexual violence among men university students (Coker et al., 2015). Consequently, seeking out influential leaders within the athletic community may have been one strategy that could have been used in the current study to encourage the participation of men and promote participant engagement in the intervention program.

Limitations

There are several limitations to the current study. First, any findings should be interpreted with caution, given that the data violated assumptions on several of the statistical tests used at pre-test. There was a small sample size at the outset of the study, followed by a high attrition rate (68% from pre-test to post-test and 48% from post-test to 2-month follow-up). This attrition rate is much higher than previous evaluations on in-person sexual violence prevention programs (Exner-Cortens & Cummings, 2017; Morean et al., 2018; Moynihan et al., 2010). However, the attrition rate was closer to past evaluations of online sexual violence prevention programs (Hines & Reed, 2017; Salazar et al., 2019). The attrition rate was consistent with online education programs, such as MOOCs, which have a similar format to the intervention program used in this study (Gütl, 2014). While online formats may be a promising avenue for sexual violence prevention education, extra considerations may need to be taken regarding how to keep participants engaged in the program. In addition to the small sample size, there was a notably low proportion of men compared to women who participated in the program. As previously mentioned, low participation rates for men is not a new issue for sexual violence prevention education (Newlands & O'Donohue, 2016; Rich et al., 2010). However, similar to how extra consideration needs to be taken regarding participant engagement in online education, extra consideration should be taken to encourage the participation of men in this type of education.

Furthermore, while intervention-related effects were found over time points for groups 1 and 2, these effects were related to knowledge and attitudinal changes. A criticism of past evaluations of bystander intervention programs is the failure to measure behaviour change (DeGue et al., 2014). Even though the project's goal was to measure behavioural changes stemming from the intervention program, this was particularly challenging due to the study

taking place during a global pandemic where orders to stay at home were in place (see Government of Saskatchewan, 2021; Government of Canada, 2021). As many opportunities for bystander behaviours occur within social settings, it was unlikely that participants would have had the opportunity to practice bystander behaviours even if they had the desire to do so as a result of the intervention program they received. However, it is also possible that the opportunities listed in the bystander behaviours measure were not relevant to the experiences of university athletes in Canada as this measure was developed for American university contexts (McMahon et al., 2014). Nonetheless, while the current study could only measure attitudinal changes, previous research indicates that intentions predict behaviour (Ajzen & Fishbein, 1974; McMahon et al., 2015).

Future Research

This study was one of the first to explore whether the provision of foundational education has beneficial additive effects to BIT. The sustained attitudinal changes over time for group 2, which did not occur for group 1 or group 3, provides one line of evidence of the potential importance of foundational education. However, further investigation with a larger sample size is required to determine if and how the addition of foundational education to BIT impacts university athletes' attitudes and behaviours surrounding sexual violence. As the present study could not identify changes in behaviour due to low participant opportunities to engage in bystander behaviour, future research should also explore whether current measures of bystander behaviour that were developed in the United States are relevant to Canadian university athletes.

This study marks the novel exploration of moral disengagement as a mechanism related to bystander intervention in situations of sexual violence. At pre-test, findings indicated a relationship between foundational education and moral disengagement on bystander attitudes,

where higher bystander attitudes were associated with greater foundational education and lower moral disengagement. It may be that foundational education serves as a buffer to moral disengagement resulting in higher bystander scores than those who do not receive foundational education. However, due to the low sample size and the need to use non-parametric tests, temporal order of this relationship could not be established. Therefore, longitudinal research with a larger sample size is required to establish whether foundational education does reduce moral disengagement mechanisms surrounding bystander attitudes for university athletes. Furthermore, given that knowledge surrounding alcohol-involved consent was a significant predictor of rape myth acceptance and bystander attitudes for university athletes, it would be valuable to explore whether this is a significant predictor for different university subgroups (e.g., first-year students).

Despite the challenges experienced in this study, valuable lessons were learned that could inform future evaluations of online sexual violence prevention education with university athletes. Future research evaluating online sexual violence prevention programs with university athletes should consider the aforementioned implementation and participant engagement issues. In particular, future evaluations of online sexual violence prevention programs should carefully consider how to best mitigate the participant engagement barriers that naturally occur within online environments and apply evidence-informed strategies to address those barriers at the study's outset. Specifically, evaluation planning of online interventions can benefit from the findings of higher education research on student engagement challenges in MOOCs and apply these engagement strategies to their intervention implementation.

Moreover, careful attention should be paid regarding how to best reach the target intervention audience, particularly for subgroups that have been identified as less likely to participate. In the present study, there was low participation from athletes that were men, which

could potentially have been increased through first identifying leaders that were men that could work to encourage their peers to participate. Further, peer discussion groups may also have helped to encourage sustained engagement for participants, particularly for men. These strategies are not novel and have been employed in in-person BIT programs (Coker et al., 2015; Miller et al., 2012). As such, effective components of in-person interventions should be learned from and adapted for use in online interventions to improve participation rates for specific groups.

Conclusion

Notwithstanding methodological challenges, this study provided some evidence of the important information that foundational education contributes to BIT for student athletes. Furthermore, this study was one of the first to apply the theory of moral disengagement to bystander attitudes surrounding sexual violence. Although causal relationships and temporal order between foundational education, moral disengagement, and bystander attitudes could not be established, the present study suggests that this is a valuable line of inquiry for future investigation.

This study also contributed many lessons that can be taken into future evaluation research of online sexual violence prevention programs aimed at specific groups. Particularly, that strategic planning around intervention implementation and approaches to mitigating barriers to participation is vital even in the online environment. This study also highlighted the importance of considering how to adapt effective strategies for garnering participation used in in-person interventions to online ones. As a result, the outcome of this study and the lessons learned can help guide future research and practice for effective evaluation of sexual violence prevention programming in online environments with specific groups such as university athletes. Effective

program implementation and evaluation are crucial to developing programs that can prevent sexual violence and support safe campus cultures.

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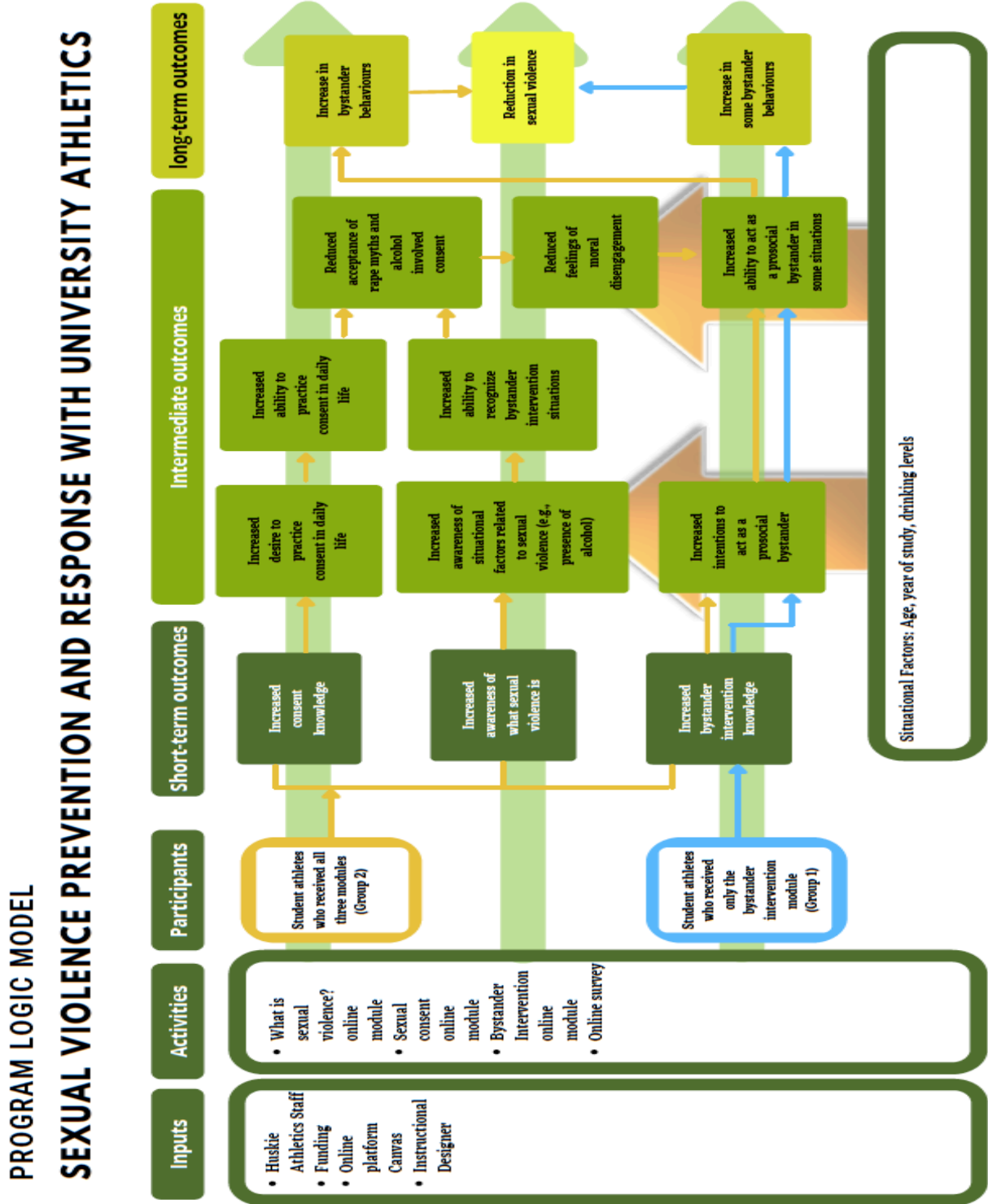
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Appendix A

Program Logic Model



Appendix B

Demographic Survey

There are no incorrect answers. Take your time in reading the instructions and statements on each page. Remember you are free to leave any questions unanswered.

Are you a University Athlete?

- ☐ Yes
- ☐ No

If participants answer “No” they will be taken to the debriefing form

Select your response to the following statements.

Select each of the following:

Last letter of your first name: (choose from dropdown menu including letters A-Z)

First letter of your middle name (if none, use x): (choose from dropdown menu including letters A-Z)

Day of birth: (choose from dropdown menu including 1-31)

Number of older siblings (if none, use 0):

What is your gender? (Select all that apply.):

- ☐ Bigender
- ☐ Cisgender man
- ☐ Cisgender woman
- ☐ Gender-fluid
- ☐ Gender-neutral
- ☐ Gender-nonconforming
- ☐ Genderqueer
- ☐ Man
- ☐ Nonbinary
- ☐ Transgender
- ☐ Transgender man
- ☐ Transgender woman
- ☐ Two-Spirit
- ☐ Woman
- ☐ Prefer not to disclose
- ☐ Specify if you want to:

What is your age in years?:
(Type in the textbox your age.)

What is your year of study?:

- ☐ 1st year undergraduate student
- ☐ 2nd year undergraduate student
- ☐ 3rd year undergraduate student
- ☐ 4th year undergraduate student
- ☐ 5th + year undergraduate student
- ☐ Graduate student

Do you have a long-lasting or chronic condition (physical, visual, auditory, cognitive or mental, emotional, or other) that substantially limits one or more of your major life activities (your ability to see, hear, or speak; to learn, remember, or concentrate)?

- ☐ Yes
- ☐ No
- ☐ Prefer not to answer

Branching question if participant answers “Yes”:

- ☐ Please specify:

- ☐ Prefer not to answer

If participants answer “No” they will be taken to the next question:

What is your ethnicity?:

(Select all that apply)

- ☐ Asian
- ☐ African
- ☐ Caribbean
- ☐ First Nations, Inuit, Métis
- ☐ Latino/Hispanic
- ☐ White
- ☐ European
- ☐ Specify if you want to:

What is your sexual orientation (select all that apply):

- ☐ Asexual
- ☐ Bicurious
- ☐ Bisexual
- ☐ Gay
- ☐ Heterosexual
- ☐ Lesbian
- ☐ Pansexual
- ☐ Queer
- ☐ Sexually fluid
- ☐ Questioning
- ☐ Demisexual
- ☐ Prefer not to answer
- ☐ Specify if you want to:

By my own definition, I am:

- ☐ Very liberal
- ☐ Liberal
- ☐ Somewhat liberal
- ☐ Somewhat conservative
- ☐ Conservative
- ☐ Very conservative

By my own definition, I am:

- ☐ Very religious/spiritual
- ☐ Quite religious/spiritual
- ☐ Somewhat religious/spiritual
- ☐ Not at all religious/spiritual

How do you describe your religion, spiritual practice, or existential worldview? (Please specify in the textbox below.)

Where have you lived for the majority of your life?:

- ☐ Suburban community
- ☐ City/urban community
- ☐ First Nations community
- ☐ Rural community
- ☐ Other

Were you born in Canada?

- ☐ Yes
- ☐ No

If participant answers “No”:

What year did you arrive in Canada?

(Type in the textbox below what year you arrived in Canada.)

If participant answers “Yes” they will be taken to the next set of questions:

Have you taken any sexual violence prevention training before (*besides the training you recently took as part of this project*)?

- ☐ Yes
- ☐ No

If participant answers “Yes” they will be taken to this question:

Please describe what type of training you have taken:

(Type in the textbox below what type of training you have taken.)

If participant answers “no” they will be taken to this question:

During the past 3 months, how often did you usually have any kind of drink containing alcohol? (by a drink we mean a 12 ounce can, bottle or glass of beer, a 5-ounce glass of wine, or one shot of liquor).

- ☐ Never
- ☐ Less than once a month
- ☐ 2-3 times a month
- ☐ Once a week
- ☐ Twice a week
- ☐ 3-4 times a week
- ☐ 5-6 times a week
- ☐ Every day

Over the past 3 months, on how many days did you have four or more drinks containing alcohol?

- ☐ Never
- ☐ less than once a month
- ☐ 2-3 times a month
- ☐ Once a week
- ☐ Twice a week
- ☐ 3-4 times a week
- ☐ 5-6 times a week
- ☐ Every day

Appendix C

Alcohol and Sexual Consent Scale (Ward et al., 2012)

Item	Very much disagree 1	2	3	4	5	6	Very much agree 7
Subscale 1: Campus Beliefs and Myths							
1. A person who is drinking heavily can still give legal consent to sexual activity.	1	2	3	4	5	6	7
2. A person who is sexually assaulted after drinking alcohol should only blame themselves.	1	2	3	4	5	6	7
3. Consensual drunk sex is a normal and harmless part of college life.	1	2	3	4	5	6	7
4. When a person is drinking alcohol, they are implying interest in engaging in sexual activity.	1	2	3	4	5	6	7
5. If both partners are drunk and have sex, there is no way one of the partners can be accused of sexual assault or rape.	1	2	3	4	5	6	7
6. As a general rule, alcohol makes sexual situations easier and more enjoyable.	1	2	3	4	5	6	7
Subscale 2: Sexual Assault Programming Messages							
7. Alcohol is the most common date rape drug (or substance).	1	2	3	4	5	6	7
8. The more alcohol a person has consumed, the less able they are to consent to sexual activity.	1	2	3	4	5	6	7
9. If a person who has been drinking becomes sleepy or unconscious, they cannot give consent to any sexual activity.	1	2	3	4	5	6	7

10. When alcohol is involved in a sexual situation, communication signals are easily misinterpreted.	1	2	3	4	5	6	7
11. Alcohol use makes a person more vulnerable to sexual assault.	1	2	3	4	5	6	7

*Subscale 2 is reverse-scored.

Appendix D

Sexual Violence Knowledge (Frazier & Borgida, 1988)

Item	True	False	Don't Know
1. "Stranger rape is much more common than "acquaintance" rape	True	False	Don't Know
2. The percentage of false rape reports is about equal to that of false reports of other crimes.	True	False	Don't Know
3. Women between the ages of 15 and 24 are most likely to be raped.	True	False	Don't Know
4. Women of all races and socioeconomic levels are equally likely to be raped.	True	False	Don't Know
5. Victims of attempted rape are generally much less traumatized than victims of completed rapes.	True	False	Don't Know
6. Anger is the most common initial reaction to being raped.	True	False	Don't Know
7. Most victims have recovered from their initial symptoms about one month after a rape.	True	False	Don't Know
8. The existence of prior stress and psychological problems can interfere with the ability of a rape victim to cope.	True	False	Don't Know
9. The severity of an assault is probably the most important factor in predicting how traumatized a rape victim will be.	True	False	Don't Know
10. Most rapes are planned in advance rather than occurring spontaneously.	True	False	Don't Know
11. If a rape victim blames themselves for the assault, it often means they played some role in precipitating it.	True	False	Don't Know
12. It is not rare for a rape victim to have experienced more than one sexual assault during their lifetime.	True	False	Don't Know
13. Most victims report rapes to the police and want to see their assailant punished.	True	False	Don't Know
14. There is little consensus as to whether it is better to submit to a rape attempt or to try and resist and risk further harm.	True	False	Don't Know
15. It is not uncommon for a victim to delay in reporting a sexual assault.	True	False	Don't Know
16. Because of the trauma of the rape experience, victims seek stability and tend not to make any sudden life changes, such as moving or changing jobs.	True	False	Don't Know

17. When victims delay in reporting a rape, there is reason to suspect that a rape did not really occur.	True	False	Don't Know
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*Correct answers bolded.

Appendix E

Illinois Rape Myth Acceptance Scale – Short Form (Payne et al., 1999)

Item	Not at all agree 1	2	3	4	5	6	Very much agree 7
SA 1. If a woman is raped while she is drunk, she is at least somewhat responsible for letting things get out of control.	1	2	3	4	5	6	7
WI 2. Although most women wouldn't admit it, they generally find being physically forced into sex a real "turn-on."	1	2	3	4	5	6	7
TE 3. If a woman is willing to "make out" with a guy, then it's no big deal if he goes a little further and has sex.	1	2	3	4	5	6	7
WI 4. Many women secretly desire to be raped.	1	2	3	4	5	6	7
FI 5. Most rapists are not caught by the police.	0	0	0	0	0	0	0
NR 6. If a woman doesn't physically fight back, you can't really say that it was rape.	1	2	3	4	5	6	7
DE 7. Men from nice middle-class homes almost never rape.	1	2	3	4	5	6	7
LI 8. Rape accusations are often used as a way of getting back at men.	1	2	3	4	5	6	7
FI 9. All women should have access to self-defence classes.	0	0	0	0	0	0	0
DE 10. It is usually only women who dress suggestively that are raped.	1	2	3	4	5	6	7
NR 11. If the rapist doesn't have a weapon, you really can't call it rape.	1	2	3	4	5	6	7
DE 12. Rape is unlikely to happen in the woman's own familiar neighborhood.	1	2	3	4	5	6	7
TE 13. Women tend to exaggerate how much rape affects them.	1	2	3	4	5	6	7
LI 14. A lot of women lead a man on and then they cry rape.	1	2	3	4	5	6	7
FI 15. It is preferable that a female police officer conduct the questioning when a woman reports a rape.	0	0	0	0	0	0	0

SA 16. A woman who “teases” men deserves anything that might happen.	1	2	3	4	5	6	7
SA 18. When women are raped, it’s often because the way they said “no” was ambiguous.	1	2	3	4	5	6	7
MT 19. Men don’t usually intend to force sex on a woman, but sometimes they get too sexually carried away.	1	2	3	4	5	6	7
SA 20. A woman who dresses in skimpy clothes should not be surprised if a man tries to force her to have sex.	1	2	3	4	5	6	7
MT 21. Rape happens when a man’s sex drive gets out of control.	1	2	3	4	5	6	7

SA: She asked for it. NR: It wasn’t really rape. MT: He didn’t mean to. WI: She wanted it. LI: She lied. TE: Rape is a trivial event. DE: Rape is a deviant event. FI: filler item.

Appendix F

Moral Disengagement Scale (Bandura et al., 1996; Detert et al., 2008)

Item	Strongly Disagree 1	2	3	4	Strongly Agree 5
Subscale 1: Moral Justification					
1. It is alright to fight to protect your friends.	1	2	3	4	5
2. It's ok to steal to take care of your family's needs.	1	2	3	4	5
3. It's ok to attack someone who threatens your family's honour.	1	2	3	4	5
Subscale 2: Euphemistic Labelling					
4. Sharing test questions is just a way of helping your friends.	1	2	3	4	5
5. Talking about people behind their backs is just part of the game.	1	2	3	4	5
6. Looking at a friend's homework without permission is just "borrowing it."	1	2	3	4	5
Subscale 3: Advantageous Comparison					
7. Damaging some property is no big deal when you consider that others are beating up people.	1	2	3	4	5
8. Stealing some money is not too serious compared to those who steal a lot of money.	1	2	3	4	5
9. Compared to other illegal things people do, taking something from a store without paying for them is not very serious.	1	2	3	4	5
Subscale 4: Displacement of Responsibility					
10. If people are living under bad conditions, they cannot be blamed for behaving aggressively.	1	2	3	4	5

11. If someone is pressured into doing something, they shouldn't be blamed for it.	1	2	3	4	5
12. People cannot be blamed for misbehaving if their friends pressured them to do it.	1	2	3	4	5
Subscale 5: Diffusion of Responsibility					
13. A member of a group or team should not be blamed for the trouble the team caused.	1	2	3	4	5
14. If a group decides together to do something harmful, it is unfair to blame any one member of the group for it.	1	2	3	4	5
15. You can't blame a person who plays only a small part in the harm caused by a group.	1	2	3	4	5
Subscale 6: Distortion of Consequences					
16. People don't mind being teased because it shows interest in them.	1	2	3	4	5
17. Teasing someone does not really hurt them.	1	2	3	4	5
18. Insults don't really hurt anyone.	1	2	3	4	5
Subscale 7: Attribution of Blame					
19. If someone leaves something lying around, it's their own fault if it gets stolen.	1	2	3	4	5
20. People who are mistreated have usually done things to deserve it.	1	2	3	4	5
21. People are not at fault for misbehaving at work if their managers mistreat them.	1	2	3	4	5
Subscale 8: Dehumanization					
22. Some people deserve to be treated like animals.	1	2	3	4	5
23. It is ok to treat badly someone who behaved like an animal.	1	2	3	4	5

24. Someone who is obnoxious does not deserve to be treated like a human being.	1	2	3	4	5
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Appendix G

Sexual Consent Scale-Revised (Humphreys & Brousseau, 2010)

Item	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
Subscale 1: (Lack of) Perceived behavioral control							
I would have difficulty asking for consent because it would spoil the mood.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I am worried that my partner might think I'm weird or strange if I asked for sexual consent before starting any sexual activity.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I would have difficulty asking for consent because it doesn't really fit with how I like to engage in sexual activity.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I would worry that if other people knew I asked for sexual consent before starting sexual activity, that they would think I was weird or strange.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I think that verbally asking for sexual consent is awkward.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I have not asked for sexual consent (or given my consent) at times because I felt that it might backfire and I wouldn't end up having sex.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I believe that verbally asking for sexual consent reduces the pleasure of the encounter.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I would have a hard time verbalizing my consent in a sexual encounter because I am too shy.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I feel confident that I could ask for consent from a new sexual partner. R	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I would not want to ask a partner for consent because it would	Strongly disagree 1	2	3	4	5	6	Strongly agree 7

remind me that I'm sexually active.							
I feel confident that I could ask for consent from my current partner. R	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
Subscale 2: Positive attitude toward establishing consent.							
I feel that sexual consent should always be obtained before the start of any sexual activity.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I believe that asking for sexual consent is in my best interest because it reduces any misinterpretations that might arise.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I think it is equally important to obtain sexual consent in all relationships regardless of whether or not they have had sex before.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I feel that verbally asking for sexual consent should occur before proceeding with any sexual activity.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
When initiating sexual activity, I believe that one should always assume they do not have sexual consent.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I believe that it is just as necessary to obtain consent for genital fondling as it is for sexual intercourse.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
Most people that I care about feel that asking for sexual consent is something I should do.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I think that consent should be asked before any kind of sexual behaviour, including kissing or petting.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I feel it is the responsibility of both partners to make sure sexual consent is established before sexual activity begins.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
Before making sexual advances, I think that one should assume "no" until there is a clear indication to proceed.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7

Not asking for sexual consent some of the time is okay. R	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
Subscale 3: Indirect behavioural approach to consent.							
Typically, I communicate sexual consent to my partner using nonverbal signals and body language.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
It is easy to accurately read my current (or most recent) partner's nonverbal signals as indicating consent or non-consent to sexual activity.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
Typically, I ask for consent by making a sexual advance and waiting for a reaction, so I know whether or not to continue.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I don't have to ask or give my partner sexual consent because my partner knows me well enough.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I don't have to ask or give my partner sexual consent because I have a lot of trust in my partner to "do the right thing."	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I always verbally ask for consent before I initiate a sexual encounter	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
Subscale 4: Sexual consent norms							
I think that obtaining sexual consent is more necessary in a new relationship than in a committed relationship.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I think that obtaining sexual consent is more necessary in a casual sexual encounter than in a committed relationship.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I believe that the need for asking for sexual consent decreases as the length of an intimate relationship increases.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I believe it is enough to ask for consent at the beginning of a sexual encounter.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7

I believe that sexual intercourse is the only sexual activity that requires explicit verbal consent.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I believe that partners are less likely to ask for sexual consent the longer they are in a relationship.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
If consent for sexual intercourse is established, petting and fondling can be assumed.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
Subscale 5: Awareness and discussion							
I have discussed sexual consent issues with a friend.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I have heard sexual consent issues being discussed by other students on campus.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I have discussed sexual consent issues with my current (or most recent) partner at times other than during sexual encounters.	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I have not given much thought to the topic of sexual consent. R	Strongly disagree 1	2	3	4	5	6	Strongly agree 7

*items with an R are reverse-scored.

Appendix H

Bystander Attitudes (McMahon et al., 2014)

Please indicate how likely you are to engage in the following behaviours:

Item	Unlikely 1	2	3	4	Very Likely 5
1. Use the words “ho,” “bitch,” or “slut” to describe girls when I was with my friends.	1	2	3	4	5
2. Confront a friend who plans to give someone alcohol to get sex.	1	2	3	4	5
3. Confront a friend if I hear rumours that they had forced someone to have sex.	1	2	3	4	5
4. Check in with a friend who looks drunk when they go to a room with someone else at a party.	1	2	3	4	5
5. Say something to a friend who is taking a drunk person back to their room at a party.	1	2	3	4	5
6. Confront a friend who is hooking up with someone who was passed out.	1	2	3	4	5
7. Express concern if a friend makes a sexist joke.	1	2	3	4	5
8. Challenge a friend who says that rape victims are usually to blame for being raped.	1	2	3	4	5
9. Call for help (i.e., call 911) if I saw a group of people bothering another person in the parking lot.	1	2	3	4	5
10. Call for help if I saw someone that I do not know go to a dorm room with a group of people and hear that person yelling for help.	1	2	3	4	5
11. Tell an RA or other campus authority about information I might have about a rape case even if pressured by my peers to stay silent.	1	2	3	4	5
12. Go with a female friend to the police department if she says she was raped.	1	2	3	4	5

13. Go with a male friend to the police department if he says he was raped.	1	2	3	4	5
14. Visit a website to learn more about sexual violence.	1	2	3	4	5
15. Join an organization that works to stop rape and abuse.	1	2	3	4	5
16. Participate in a rally on campus to stop rape and abuse.	1	2	3	4	5
17. Take a class to learn more about sexual violence and abuse.	1	2	3	4	5

Appendix I

Bystander Opportunities and Behaviours (McMahon et al., 2014)

Branching questions if participant responds with any answer besides “I have never...” they will be asked how many times they engaged in the behaviour.

If participant answers “I have never...” they will be taken to the next question.

For the next set of questions, please indicate how many times **in the past two years/in the past 2 months** you have had the following experiences.

1. How many times have you had the opportunity to confront a friend who plans to give someone alcohol to get sex?
 - ☐ I have never had a friend tell me that they were planning to give someone alcohol to get sex.
 - ☐ 1 time
 - ☐ 2 times
 - ☐ 3-5 times
 - ☐ 6-9 times
 - ☐ 10 or more

How many times did you intervene?

- ☐ 0 times
 - ☐ 1 time
 - ☐ 2 times
 - ☐ 3-5 times
 - ☐ 6-9 times
 - ☐ 10 or more
2. How many times have you had the opportunity to confront a friend when you heard rumours that they had forced someone to have sex?
 - ☐ I have never heard a rumour that a friend had forced someone to have sex.
 - ☐ 1 time
 - ☐ 2 times
 - ☐ 3-5 times
 - ☐ 6-9 times
 - ☐ 10 or more

How many times did you intervene?

- ☐ 0 times
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

3. How many times have you had the opportunity to check in with a friend who looks drunk when they go to a room with someone else at a party?

- ☐ I have never seen a friend who looks drunk go to a room with someone else at a party.
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

How many times did you intervene?

- ☐ 0 times
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

4. How many times have you had the opportunity to say something to a friend who is taking a drunk person back to their room at a party?

- ☐ I have never seen a friend take a drunk person back to their room at a party.
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

How many times did you intervene?

- ☐ 0 times
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

5. How many times have you had the opportunity to confront a friend who is hooking up with someone who was passed out?

- ☐ I have never seen a friend hooking up with someone who was passed out.
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

How many times did you intervene?

- ☐ 0 times
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

6. How many times have you had the opportunity to express concern if a friend makes a sexist joke?

- ☐ I have never heard a friend make a sexist joke.
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

How many times did you intervene?

- ☐ 0 times
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

7. How many times have you had the opportunity to challenge a friend who said that rape victims are usually to blame for being raped?
- ☐ I have never heard a friend give the impression that rape victims are usually to blame for being raped.
 - ☐ 1 time
 - ☐ 2 times
 - ☐ 3-5 times
 - ☐ 6-9 times
 - ☐ 10 or more

How many times did you intervene?

- ☐ 0 times
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

8. How many times have you had the opportunity to intervene when seeing a group of people bothering (e.g., catcalling, whistling at, etc.) another person in the parking lot?
- ☐ I have never seen a group of people bothering (e.g., catcalling, whistling at, etc.) another person in the parking lot.
 - ☐ 1 time
 - ☐ 2 times
 - ☐ 3-5 times
 - ☐ 6-9 times
 - ☐ 10 or more

How many times did you intervene?

- ☐ 0 times
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

9. How many times have you had the opportunity to call for help when seeing a stranger go to a dorm room with a group of people and hear that person yelling for help?
- ☐ I have never seen someone that I didn't know go to their dorm room with a group of people and hear them yelling for help.
 - ☐ 1 time
 - ☐ 2 times
 - ☐ 3-5 times
 - ☐ 6-9 times
 - ☐ 10 or more

How many times did you intervene?

- ☐ 0 times
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

10. How many times have you had the opportunity to tell an RA or other campus authority about information you might have about a rape case even if pressured by your peers to stay silent?

- ☐ I have never had information about a rape case that I could share with an RA or other campus authority.
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

How many times did you intervene?

- ☐ 0 times
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

11. How many times have you had the opportunity to go with a friend to the police department if they say they were raped?
- ☐ I have never been asked by a friend to accompany them to the police department.
 - ☐ 1 time
 - ☐ 2 times
 - ☐ 3-5 times
 - ☐ 6-9 times
 - ☐ 10 or more

How many times have you gone?

- ☐ 0 times
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

12. How many times have you had the opportunity to visit a website to learn more about sexual violence?
- ☐ I have never heard of a website that I could visit to learn more about sexual violence.
 - ☐ 1 time
 - ☐ 2 times
 - ☐ 3-5 times
 - ☐ 6-9 times
 - ☐ 10 or more

How many times have you visited?

- ☐ 0 times
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

13. How many times have you had the opportunity to join an organization that works to stop rape and abuse?

- ☐ I have never heard of an organization that works to stop rape and abuse that I could join.
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

How many times did you join an organization?

- ☐ 0 times
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

14. How many times have you had the opportunity to participate in a rally on campus to stop rape and abuse?

- ☐ I have never heard of a rally happening on campus to stop rape and abuse.
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

How many times have you participated?

- ☐ 0 times
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

15. How many times have you had the opportunity to take a workshop to learn more about sexual violence?

I have never heard of a workshop that I could take where I could learn more about sexual violence.

- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more

How many times have you taken a class?

- ☐ 0 times
- ☐ 1 time
- ☐ 2 times
- ☐ 3-5 times
- ☐ 6-9 times
- ☐ 10 or more